Gedik Welding

General Product Catalogue

GeKa®
Welding Consumables

GeKaTec®
Repair & Maintenance and Special Welding Products

GeKaMac®
Welding & Cutting Machines

GeKaRobotics®
Robotic Welding & Automation Systems

www.gedikwelding.com

Gedik Welding

Product Categories

- Welding Electrodes
- Gas Shielded Welding Wires
- Flux Cored Welding Wires
- Submerged Arc Welding Wires & Fluxes
- Repair & Maintenance Products
- Brazing Rods & Fluxes

Our Registered Trademarks

GeKa®
Welding Wires & Electrodes

GeKaTec®
Repair & Maintenance and Special Welding Products

GeKaMac®
Welding & Cutting Machines

GeKaRobotics®
Robotic Welding & Automation Systems

Welding Electrodes

GeKa®

ELIT

Standards :

TS EN ISO 2560-A	:	E 42 0 RR 12
EN ISO 2560-A	:	E 42 0 RR 12
AWS A5.1	:	E 6013

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.07	0.3	0.5

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/0°C)	Elongation ($L_o=5d_o$)(%)
min. 420	510-610	min. 47 J	min. 22

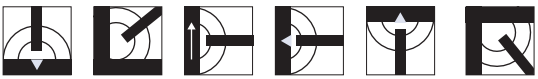
Typical Base Material Grades :

* S 235JR,S275JR, S235J2G3-S355J2G3, P235 GH, P265 GH, P255NH, P235T1-P355T1,P235T2-P355T2, P235G1TH, P255G1TH, L210-L360NB, S235JRS1-S235J2S1, S235JRS2-S235J2S2

Features and Applications :

* The mostly-used type among the rutile electrodes.
* Electrode coating of high thickness.
* Spatter and fume formation in low amounts.
* Good welding beads.
* Easy striking.

Welding Positions :



Current Type :

D.C.(-)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300620	2.00 x 300	5/64 x 12``	45 - 80	1050
300622	2.50 x 350	3/32 x 14``	60 - 110	2000
300623	3.20 x 350	1/8 x 14``	100 - 140	3250
300625	4.00 x 350	5/32 x 14``	140 - 180	4800
300627	4.00 x 450	5/32 x 18``	140 - 180	6200
300628	5.00 x 350	3/16 x 14``	170 - 240	7430
300629	5.00 x 450	3/16 x 18``	170 - 240	9680

Approvals :

TSE, CE, TL, DNV-GL, BV, ABS, LR, NK, RINA, CWB, TÜV, DB, GOST-R

GeKa®

PANTERA

Standards :

TS EN ISO 2560-A	:	E 42 0 RR 12
EN ISO 2560-A	:	E 42 0 RR 12
AWS A5.1	:	E 6013

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.08	0.4	0.5

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/0°C)	Elongation ($L_o=5d_o$)(%)
min. 420	510-610	min. 47 J	min. 22

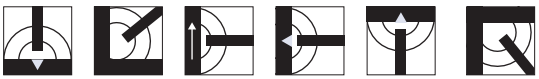
Typical Base Material Grades :

* S 235JR,S275JR, S235J2G3-S355J2G3, P235 GH, P265 GH, P255NH, P235T1-P355T1,P235T2-P355T2, P235G1TH, P255G1TH, L210-L360NB, S235JRS1-S235J2S1, S235JRS2-S235J2S2

Features and Applications :

* Resistance to high current
* Soft and stable welding
* Spatter and fume formations in low amounts
* Formation of self-removable slags

Welding Positions :



Current Type :

D.C.(-)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300645	2.50 x 350	3/32 x 14``	60 - 110	2120
300646	3.20 x 350	1/8 x 14``	90 - 150	3520
300648	4.00 x 350	5/32 x 14``	130 - 200	5210
300649	4.00 x 450	5/32 x 18``	130 - 200	6680
300650	5.00 x 350	3/16 x 14``	170 - 250	8090
300651	5.00 x 450	3/16 x 18``	170 - 250	10410

Approvals :

TSE, CE, TL, DNV-GL, BV, ABS, LR, GOST-R

GeKa®

LOTUS

Standards :

TS EN ISO 2560-A	:	E 42 0 RC 11
EN ISO 2560-A	:	E 42 0 RC 11
AWS A5.1	:	E 6013

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.07	0.3	0.4

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/0°C)	Elongation ($L_o=5d_o$)(%)
min. 420	510-610	min. 47 J	min. 22

Typical Base Material Grades :

* S 235JR,S275JR, S235J2G3-S355J2G3, P235 GH, P265 GH, P255NH, P235T1-P355T1,P235T2-P355T2, P235G1TH, P255G1TH, L210-L360NB, S235JRS1-S235J2S1, S235JRS2-S235J2S2

Features and Applications :

* Electrode coating of medium-thickness
* Electrode coating of flexible type, providing electrode bendability
* Usability in welding of materials at hardly-reachable places
* Suitability for welding at vertical-down welding position

Welding Positions :

Current Type :

D.C.(-)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300637	2.50 x 350	3/32 x 14``	60 - 110	1760
300638	3.20 x 350	1/8 x 14``	90 - 140	2920
300639	4.00 x 350	5/32 x 14``	130 - 180	5510
300640	4.00 x 450	5/32 x 18``	130 - 200	4290
300641	5.00 x 350	3/16 x 14``	170 - 240	6955
300642	5.00 x 450	3/16 x 18``	170 - 250	8800

Approvals :

TSE, CE, TL, LR, TÜV, DB, GOST-R

GeKa®

EGE

Standards :

TS EN ISO 2560-A	:	E 38 0 RC 12
EN ISO 2560-A	:	E 38 0 RC 12
AWS A5.1	:	E 6013

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.08	0.4	0.5

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/0°C)	Elongation ($L_o=5d_o$)(%)
min. 380	470-550	min. 47 J	min. 22

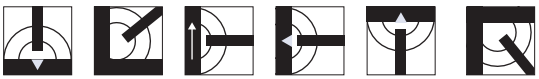
Typical Base Material Grades :

* S 235JR,S275JR, S235J2G3-S355J2G3, P235 GH, P265 GH, P255NH, P235T1-P355T1,P235T2-P355T2, P235G1TH, P255G1TH, S235JRS1-S235J2S1, S235JRS2-S235J2S2

Features and Applications :

* Easily striking
* Suitability to spot welding
* Suitability for use in iron

Welding Positions :



Current Type :

D.C.(-)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300617	2.50 x 350	3/32 x 14``	60 - 110	1991
300618	3.20 x 350	1/8 x 14``	90 - 140	3160
300619	4.00 x 350	5/32 x 14``	130 - 180	4700

Approvals :

TSE, CE, GOST-R

GeKa

GRANIT

Standards :

TS EN ISO 2560-A	:	E 38 2 RB 12
EN ISO 2560-A	:	E 38 2 RB 12
AWS A5.1	:	~E 6013

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.08	0.2	0.5

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-20°C)	Elongation ($L_o=5d_o$)(%)
min. 380	470-570	min. 47 J	min. 24

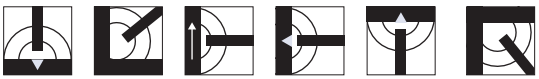
Typical Base Material Grades :

* S 235JR,S275JR, S235J2G3-S355J2G3, P235 GH, P265 GH, P255NH, P235T1-P355T1,P235T2-P355T2, P235G1TH, P255G1TH, L210-L360NB, S235JRS1-S235J2S1, S235JRS2-S235J2S2

Features and Applications :

* Electrode of rutile-basic character
* Electrode coating with high thickness
* Suitability for welding of pressure pipes
* Smooth welding bead without under cuts

Welding Positions :



Current Type :

D.C.(-)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300630	2.50 x 350	3/32 x 14"	60-110	1930
300631	3.20 x 350	1/8 x 14"	90-140	3315
300632	4.00 x 350	5/32 x 14"	110-200	4730
300633	4.00 x 450	5/32 x 18"	110-200	6075

Approvals :

TSE, CE, GOST-R

GeKa®

STEP

Standards :

TS EN ISO 2560-A	:	E 42 0 RC 11
EN ISO 2560-A	:	E 42 0 RC 11
AWS A5.1	:	E 6012

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.06	0.35	0.45

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/0°C)	Elongation ($L_o=5d_o$)(%)
min. 420	510-610	min. 47 J	min. 22

Typical Base Material Grades :

* S 235JR,S275JR, S235J2G3-S355J2G3, P235 GH, P265 GH, P255NH, P235T1 - P355T1,P235T2-P355T2, P235G1TH, P255G1TH, L210-L360NB, S235JRS1-S235J2S1, S235JRS2-S235J2S2

Features and Applications :

* Electrode coating with medium-thickness
* Electrode coating of flexible type, providing electrode bendability
* Usability in welding of materials at hardly-reachable places
* Suitability for welding at vertical down position

Welding Positions :

Current Type :

D.C.(-)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300652	2.50 x 350	3/32 x 14”	60 - 110	1730
300653	3.20 x 350	1/8 x 14”	90 - 140	2900
300654	4.00 x 350	5/32 x 14”	130 - 180	4275

Approvals :

TSE, CE, GOST-R

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INTER

Standards :

TS EN ISO 2560-A	:	E 38 0 RC 11
EN ISO 2560-A	:	E 38 0 RC 11
AWS A5.1	:	E 6013

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.06	0.3	0.5

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/0°C)	Elongation ($L_o=5d_o$)(%)
min. 390	470-590	min. 47 J	min. 22

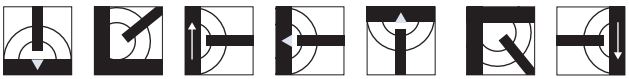
Typical Base Material Grades :

* S 235JR,S275JR, S235J2G3-S355J2G3, P235 GH, P265 GH, P255NH, P235T1-P355T1,P235T2-P355T2, P235G1TH, P255G1TH, L210-L360NB, S235JRS1-S235J2S1, S235JRS2-S235J2S2

Features and Applications :

* Electrode coating of flexible type, providing electrode bendability
* Suitability for welding at vertical-down position
* Deep penetration

Welding Positions :



Current Type :

D.C.(-)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300634	2.50 x 350	3/32 x 14"	60 - 110	1850
300635	3.20 x 350	1/8 x 14"	90 - 140	2940
302304	4.00 x 350	5/32 x 14"	110 - 180	4250
303895	4.00 x 450	5/32 x 18"	110 - 200	5460

Approvals :

TSE, CE, GOST-R

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ELIT ARMCO

Standards :

TS EN ISO 2560-A	:	E 35 A RR 12
EN ISO 2560-A	:	E 35 A RR 12

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.05	max. 0.2	0.3

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 355	440-560	min. 47 J	min. 22

Features and Applications :

* Soft and stable welding
* Spatter formation in low amounts
* Formation of easily-removable slags
* Suitability for use in welding of Armco Iron and mild steels with very low carbon and silicon contents
* Applicability in welding of galvanizing tanks made of Armco Iron

Welding Positions :

Current Type :

D.C.(-)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300681	3.20 x 350	1/8 x 14"	110 - 140	3590
300682	4.00 x 350	5/32 x 14"	140 - 180	5170
300683	5.00 x 350	3/16 x 14"	180 - 220	8120

Approvals :

TSE, CE, GOST-R

GeKa®

ELIT R 110

Standards :

TS EN ISO 2560-A	:	E 42 0 RR 33
EN ISO 2560-A	:	E 42 0 RR 33
AWS A5.1	:	E 7014

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.07	0.4	0.6

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/0°C)	Elongation ($L_o=5d_o$)(%)
min. 420	520-600	min. 47 J	min. 22

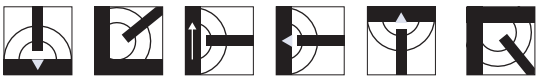
Typical Base Material Grades :

* S 235JR,S275JR, S235J2G3-S355J2G3, P235 GH, P265 GH, P255NH,S235JRS1-S235J2S1, S235JRS2-S235J2S2

Features and Applications :

* Usability in welding at all positions
* Resistance to high current
* Soft and stable welding
* Spatter formation in low amounts
* Welding effincency of about 110%

Welding Positions :



Current Type :

D.C.(-)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300680	3.20 x 350	1/8 x 14"	120 - 160	3558
304119	4.00 x 350	5/32 x 14"	150 - 220	5910
302691	5.00 x 450	3/16 x 18"	180 - 280	11500

Approvals :

TSE, CE, GOST-R

GeKa®

CEM

Standards :

TS EN ISO 2560-A	:	E 42 0 RR 53
EN ISO 2560-A	:	E 42 0 RR 53
AWS A5.1	:	E 7024

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.07	0.4	0.7

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/0°C)	Elongation ($L_o=5d_o$)(%)
min. 420	510-610	min. 47 J	min. 22

Typical Base Material Grades :

* S 235JR,S275JR, S235J2G3-S355J2G3, P235 GH, P265 GH, P295 GH S235JRS1-S235J2S1, S235JRS2-S235J2S2,

Features and Applications :

* Resistance to high current
* High welding efficiency (about 160%)
* Cost-saving in groove welding and in flat fillet welding

Welding Positions :

Current Type :

D.C.(-)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300692	3.20 x 350	1/8 x 14”	120 - 180	4710
300693	4.00 x 450	5/32 x 18”	160 - 240	9830
300694	5.00 x 450	3/16 x 18”	200 - 320	14950

Approvals :

TSE, ABS, RS, RINA, NK, BV, CE, DNV-GL, GOST-R

GeKa®

LINK 6010

Standards :

TS EN ISO 2560-A	:	E 38 3 C 21
EN ISO 2560-A	:	E 38 3 C 21
AWS A5.1	:	E 6010

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.12	0.2	0.6

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-30°C)	Elongation ($L_o=5d_o$)(%)
min. 380	470-540	min. 47 J	min. 22

Typical Base Material Grades :

* S235JR, S275JR, S235J2G3, S275J2G3, S355J2G3, P235GH, P265GH,P235T1-P355T1, P235T2-P355T2, L210-L360NB, L290MB-L360MB,S235JRS1-S235J2S2, P235G1TH, P255G1TH, X42-X56, for root pass X60-X80.

Features and Applications :

* Suitability for use in welding large-diameter pipelines for crude oil, natural gas, and water as well as in root-pass welding or surfacing of ships, tanks, boilers, and steel constructions
* Usability in sour gas - involving applications (acc. HIC Test NACE TM-0284)
* Deep penetration obtained in welding at all positions
* Most suitability for welding at vertical down position

Welding Positions :

Current Type :

D.C. (+)
D.C. (-) for root pass

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300660	2.50 x 350	3/32 x 14”	40 - 80	1650
300661	3.20 x 350	1/8 x 14”	65 - 125	2646
300662	4.00 x 350	5/32 x 14”	90 - 175	3980
300663	5.00 x 350	3/16 x 14”	140 - 220	6080

Approvals :

TSE, DNV-GL, TÜV, DB, CE, NACE, GOST-R

GeKa®

LINK 7010 - G

Standards :

TS EN ISO 2560-A	:	E 42 2 Mo C 25
EN ISO 2560-A	:	E 42 2 Mo C 25
AWS A5.5	:	E 7010 - G

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo
0.10	0.15	0.4	0.3

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-20°C)	Elongation ($L_o=5d_o$)(%)
min. 420	510-590	min. 47 J	min. 22

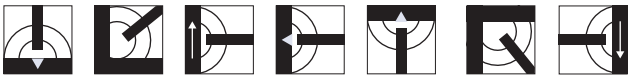
Typical Base Material Grades :

* S235JR, S275JR, S235J2G3, S275J2G3, S355J2G3, P235GH, P265GH,P355T1, P235T2-P355T2, L210-L415NB, L290MB-L415MB,S235JRS1-S235J4S2, P235G1TH, P255G1TH, X42-X65
Kök paso için L485MB, X70'e kadar.

Features and Applications :

* Suitable for use in welding large-diameter pipelines made of high-strength steels as well as in all positions root-pass welding or surfacing of boilers and steel constructions
* Deep penetration, especially (obtained) at vertical-down position

Welding Positions :



Current Type :

D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300670	2.50 x 350	3/32 x 14"	40 - 80	1700
300671	3.20 x 350	1/8 x 14"	65 - 125	2735
300672	4.00 x 350	5/32 x 14"	90 - 175	3990
300673	5.00 x 350	3/16 x 14"	140 - 220	6135

Approvals :

TSE, CE, GOST-R

GeKa®

LINK 7010 - P1

Standards :

TS EN ISO 2560-A	:	E 42 3 C 25
EN ISO 2560-A	:	E 42 3 C 25
AWS A5.5	:	E 7010 - P1

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.15	0.2	1.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-30°C)	Elongation ($L_o=5d_o$)(%)
min. 420	500-640	min. 47 J	min. 22

Typical Base Material Grades :

* S235JR, S275JR, S235J2G3, S275J2G3, S355J2G3, P235GH, P265GH,P355T1, P235T2-P355T2, L210-L415NB, L290MB-L415MB,S235JRS1-S235J4S, P235G1TH, P255G1TH, X42-X60

Features and Applications :

* Suitability for use in welding large-diameter high-strength steel pipelines and expecially use in hot, filler and cap passes. (For root-pass welding, GeKa electrode LINK 6010 is recommended.)
* Deep penetration, especially (obtained) at vertical-down position

Welding Positions :

Current Type :

D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
301158	2.50 x 350	3/32 x 14”	40 - 80	1700
300674	3.20 x 350	1/8 x 14”	65 - 125	2735
300675	4.00 x 350	5/32 x 14”	90 - 175	3990
301159	5.00 x 350	3/16 x 14”	140 - 220	6135

Approvals :

TSE, CE, GOST-R

GeKa®

LINK 8010 - G

Standards :

TS EN ISO 2560-A	: E Z 46 3 Mo C 25
EN ISO 2560-A	: E Z 46 3 Mo C 25
AWS A5.5	: E 8010 - G

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Mo
0.14	0.2	0.9	0.2	0.15

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-30°C)	Elongation ($L_o=5d_o$)(%)
min. 460	550-650	min. 47 J	min. 20

Typical Base Material Grades :

* L290NB-L415NB, L290MB-L415MB, -L485MB, S235JRS1-S235J4S, X42-X70

Features and Applications :

* Suitability for use in all-positions of welding high-strength low alloyed steel pipelines for root and filler passes.
* Suitability for use in welding all positions, particularly vertical down position
* Usability in sour gas - involving applications (acc. HIC Test NACE TM-0284)

Welding Positions :

Current Type :

D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300676	2.50 x 350	3/32 x 14"	40 - 80	1635
305368	3.20 x 350	1/8 x 14"	65 - 125	2640
305360	4.00 x 350	5/32 x 14"	90 - 175	4000
305361	5.00 x 350	3/16 x 14"	140 - 220	6340

Approvals :

TSE, CE, GOST-R, NACE

GeKa®

LINK 8010 - P1

Standards :

TS EN ISO 2560-A	:	E 46 3 1 Ni C 25
EN ISO 2560-A	:	E 46 3 1 Ni C 25
AWS A5.5	:	E 8010 - P1

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni
0.14	0.2	0.9	0.6

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-30°C)	Elongation ($L_o=5d_o$)(%)
min. 460	550-650	min. 47 J	min. 20

Typical Base Material Grades :

* L290NB-L415NB, L290MB-L415MB, -L485MB, S235JRS1-S235J4S, X42-X70

Features and Applications :

* Suitability for use in all-positions of welding high-strentgh low alloyed steel pipelines for root and filler passes.
* Suitability for use in welding all positions, particularly vertical down position.
* Can be used in sour gas applications.

Welding Positions :

Current Type :

D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
304904	2.50 x 350	3/32 x 14”	40 - 80	1635
300677	3.20 x 350	1/8 x 14”	65 - 125	2640
300678	4.00 x 350	5/32 x 14”	90 - 175	4000
300679	5.00 x 350	3/16 x 14”	140 - 220	6340

Approvals :

BV, DNV-GL, CE, TSE, GOST-R

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LASER B 43

Standards :

TS EN ISO 2560-A	:	E 38 4 B 42 H5
EN ISO 2560-A	:	E 38 4 B 42 H5
AWS A5.1	:	E 7016-1 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.06	0.5	0.7

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-50°C)	Elongation ($L_o=5d_o$)(%)
min. 400	490-600	min. 47 J	min. 24

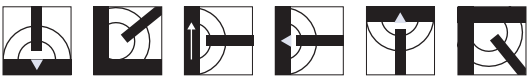
Typical Base Material Grades :

* S235JR-E295, S235J2G3-S355J2G3, C22, C35, P235T1-P355T1, P235T2,P355T2, L210-L320, L290MB-L320MB, P235G1TH, P255G1TH, P235GH,P265GH, P295GH, S235JRS1-S235J4S, S315G1S-S355G3S, S255N-S355N, P255NH-P355NH, S255NL-S355NL,GE200-GE240
* API 5L : A, B, X42, X46, X52, X56

Features and Applications :

* Suitability for use in welding at all positions except for vertical down position
* Weld metal recovery of about 110%
* Weld deposits with very low hydrogen content
* High-quality and ductile, crack-resistant weld metals, mostly forming rigid weldments with beads of large cross-sections
* D.C. (-) is recommended for the root pass
* Requirement of re-drying for minimum 2 hours at the temperatures between 300°C and 350°C

Welding Positions :



Current Type :

D.C. (-) for root pass / D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300388	2.50 x 350	3/32 x 14"	80 - 110	2215
300389	3.20 x 350	1/8 x 14"	100 - 140	3545
300390	4.00 x 450	5/32 x 18"	130 - 190	6565
300391	5.00 x 450	3/16 x 18"	190 - 240	10125

Approvals :

TSE, CE, GOST-R, ABS

GeKa®

LASER B 47

Standards :

TS EN ISO 2560-A	:	E 42 4 B 42 H5
EN ISO 2560-A	:	E 42 4 B 42 H5
AWS A5.1	:	E 7018-H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.07	0.5	1.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-40°C)	Elongation ($L_o=5d_o$)(%)
min. 420	510-600	min. 47 J	min. 24

Typical Base Material Grades :

* S235JR-E295, E335, S235J2G3-S355J2G3, C22, C35, P235T1-P355T1, P235T2,P355T2, L210-L360, L290MB-L360MB, P235G1TH, P255G1TH, P235GH-P295GH, S235JRS1-S235J4S, S315G1S-S355G3S, S255N-S355N, P255NH-P355NH, S255NL-S355NL,GE200-GE300
* API 5L : A, B, X42, X46, X52, X56, X60

Features and Applications :

* Suitability for use in out-of-position welding except for welding at vertical down position. * Excellent strength and toughness. * Suitability for use in the fields of steel constructions, boiler, container, machine manufacturing and shipbuilding as well as for use in welding low-purity and high-carbon steels
* Suitability for the formation of welding buffer layers when building up high-carbon steels. * Weld deposits with very low hydrogen content. * Weld metal recovery of about 120%
* Requirement of re-drying for minimum 2 hours at the temperatures between 300°C and 350°C

Welding Positions :

Current Type :

D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300392	2.50 x 350	3/32 x 14”	80 - 100	2410
300393	3.20 x 350	1/8 x 14”	100 - 140	3790
300395	4.00 x 450	5/32 x 18”	130 - 190	6850
300396	5.00 x 450	3/16 x 18”	190 - 240	10715

Approvals :

BV, DNV-GL, TL, DB, ABS, LR, RS, RINA, NK, TSE, TÜV, CWB, CE, GOST-R

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LASER B 47-A

Standards :

TS EN ISO 2560-A	:	E 42 4 B 32 H5
EN ISO 2560-A	:	E 42 4 B 32 H5
AWS A5.1	:	E 7016-1 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.07	0.6	1.0

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/-30°C)	Elongation ($L_o=5d_o$)(%)
min. 420	500-610	min. 47 J	min. 24

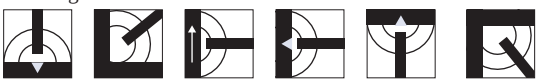
Typical Base Material Grades :

* S235JR-E295, E335, S235J2G3-S355J2G3, C22, C35, P235T1-P355T1, P235T2,P355T2, L210-L360, L290MB-L320MB, P235G1TH, P255G1TH, P235GH-P295GH, S235JRS1-S235J4S, S315G1S-S355G3S, S255N-S355N, GE200-GE300
* API 5L : A, B, X42, X46, X52, X56, X60

Features and Applications :

* Suitability for welding with AC power * Suitability for use in out-of-position welding except for welding at vertical down position * Excellent strength and toughness * Suitability for use in the fields of steel constructions, boiler, container, machine manufacturing, and shipbuilding construction as well as for use in welding low-purity and high-carbon steels * Suitability for the formation of welding buffer layers when building up high-carbon steels * Weld deposits with very low hydrogen content * Weld metal recovery of about 125% * Requirement of re-drying for minimum 2 hours at the temperatures between 300°C and 350°C

Welding Positions :



Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300906	2.50 x 350	3/32 x 14”	80 - 100	2290
300910	3.20 x 350	1/8 x 14”	100 - 140	3750
303747	4.00 x 350	5/32 x 14”	130 - 190	5780
300908	4.00 x 450	5/32 x 18”	130 - 190	7232

Approvals :

TSE, ABS, GOST-R

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LASER B 50

Standards :

TS EN ISO 2560-A	:	E 42 5 B 42 H5
EN ISO 2560-A	:	E 42 5 B 42 H5
AWS A5.1	:	E 7018 - 1 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.08	0.5	1.1

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-50°C)	Elongation ($L_o=5d_o$)(%)
min. 420	510-630	min. 47 J	min. 24

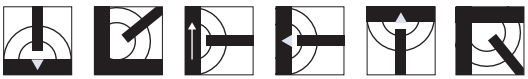
Typical Base Material Grades :

* S235JR-E295, E335, S235J2G3-S355J2G3, C22, C35, P235T1-P355T1, P235T2,P355T2, L210-L360, L290MB-L360MB, P235G1TH, P255G1TH, P235GH-P355GH, S235JRS1-S235J4S, S315G1S-S355G3S, S255N-S355N, P255NH-P355NH, S255NL-S355NL,GE200-GE300
* API 5L : A, B, X42, X46, X52, X56, X60

Features and Applications :

* Suitability for use in out-of-position welding except for welding at vertical down position * Excellent strength and toughness *Suitability for use in the fields of steel constructions, boiler, container, machine manufacturing and vertical construction as well as for use in welding low-purity and high-carbon steels *Suitability for the formation of welding buffer layers when building up high-carbon steels * Weld deposits with very low hydrogen content * Weld metal recovery of about 110% *Requirement of re-drying for minimum 2 hours at the temperatures between 300°C and 350°C

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300398	2.50 x 350	3/32 x 14”	80 - 100	2220
300399	3.20 x 350	1/8 x 14”	100 - 140	3645
300401	4.00 x 450	5/32 x 18”	130 - 190	6765
300402	5.00 x 450	3/16 x 18”	190 - 240	10220

Approvals :

TSE, ABS, CE, GOST-R, HAKC (3.20 mm), DNV-GL

GeKa®

LASER B 55

Standards :

TS EN ISO 2560-A	:	E 46 5 B 42 H5
EN ISO 2560-A	:	E 46 5 B 42 H5
AWS A5.1	:	E 7018 - 1 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.08	0.4	1.4

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-50°C)	Elongation ($L_o=5d_o$)(%)
min. 460	530-650	min. 47 J	min. 24

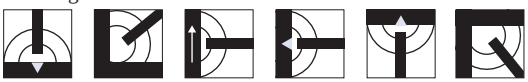
Typical Base Material Grades :

* S235JR-E295, E335, S235J2G3-S355J2G3, P235T1-P355T1, P235T2,P355T2, L210NB-L415NB, L290MB-L360MB, P235G1TH, P255G1TH, P235GH-P355GH, S235JRS1-S235J4S, S315G1S-S355G3S, S255N-S380N, P255NH-P355NH, S255NL-S460NL1, GE200-GE300
* API 5L : X42, X46, X52, X56, X60, X65

Features and Applications :

* Suitability for use in out-of-position welding except for welding at vertical down position
* High ductility at low temperatures down to -50 °C
* Suitability for use in welding low-purity and high-carbon steels
* Weld deposits with very low hydrogen content
* High-quality weld metals with higher strength values
* Requirement of re-drying for minimum 2 hours at the temperatures between 300 °C and 350 °C

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300403	2.50 x 350	3/32 x 14"	80 - 100	2198
300404	3.20 x 350	1/8 x 14"	100 - 140	3570
300405	4.00 x 450	5/32 x 18"	130 - 190	6660
300406	5.00 x 450	3/16 x 18"	190 - 240	10225

Approvals :

TSE, ABS, CE, GOST-R

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LASER B 55-S

Standards :

TS EN ISO 2560-A	:	E 46 6 B 42 H5
EN ISO 2560-A	:	E 46 6 B 42 H5
AWS A5.1	:	E 7018 - 1 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.08	0.4	1.4

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-60°C)	Elongation ($L_o=5d_o$)(%)
min. 460	530-650	min. 47 J	min. 24

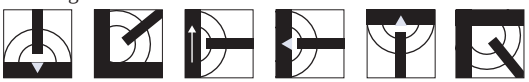
Typical Base Material Grades :

* S235JR-E295, E335, S235J2G3-S355J2G3, P235T1-P355T1, P235T2,P355T2, L210NB-L415NB, L290MB-L360MB, P235G1TH, P255G1TH, P235GH-P355GH, S235JRS1-S235J4S, S315G1S-S355G3S, S255N-S380N, P255NH-P355NH, S255NL-S460NL1, GE200-GE300
* API 5L : X42, X46, X52, X56, X65

Features and Applications :

* Suitability for use in welding of high-strength, fine-grained steels
* High ductility at low temperatures down to -60 °C
* It is used for joining thick materials safely
* Weld metal recovery of approx. 120%.
* Requirement of re-drying for minimum 2 hours at the temperatures between 300 °C and 350 °C

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
305045	2.50 x 350	3/32 x 14”	80 - 100	2198
305047	3.20 x 350	1/8 x 14”	100 - 140	3570
305048	4.00 x 450	5/32 x 18”	130 - 190	6660

Approvals :

TSE, BV, ABS, CE, GOST-R, CWB

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LASER B 60

Standards :

TS EN ISO 2560-A	:	E 42 4 B 42 H5
EN ISO 2560-A	:	E 42 4 B 42 H5
AWS A5.1	:	E 7018 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.08	0.6	1.2

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/-40°C)	Elongation ($L_o=5d_o$)(%)
min. 420	520-630	min. 47 J	min. 24

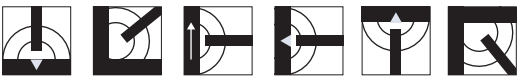
Typical Base Material Grades :

* S235JR-E295, E335, S235J2G3-S355J2G3, C22, C35, P235T1-P355T1, P235T2,P355T2, L210-L360, L290MB-L360MB, P235G1TH, P255G1TH, P235GH-P355GH, S235JRS1-S235J4S, S315G1S-S355G3S, S255N-S355N, P255NH-P355NH, S255NL-S355NL,GE200-GE300
* API 5L : A, B, X42, X46, X52, X56, X60

Features and Applications :

* Suitability for use in out-of-position welding except for welding at vertical down position.* Excellent strength and toughness. * Suitability for use in the fields of steel constructions, boiler, container, machine manifacturing and shipbuilding as well as for use in welding low-purity and high-carbon steels
* Suitability for the formation of welding buffer layers when building up high-carbon steels.
* Weld deposits with very low hydrogen content.
* Requirement of re-drying for minimum 2 hours at the temperatures between 300 °C and 350 °C

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300407	2.50 x 350	3/32 x 14”	60 - 90	2340
300408	3.20 x 350	1/8 x 14”	100 - 140	3700
300410	4.00 x 450	5/32 x 18”	150 - 210	6800
300411	5.00 x 450	3/16 x 18”	200 - 260	10220

Approvals :

TSE, CE, GOST-R

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LASER B 160

Standards :

TS EN ISO 2560-A	:	E 42 3 B 63 H5
EN ISO 2560-A	:	E 42 3 B 63 H5
AWS A5.1	:	E 7028 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.07	0.6	1.1

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/-30°C)	Elongation ($L_o=5d_o$)(%)
min. 420	510-610	min. 47 J	min. 24

Typical Base Material Grades :

* S235JR, S275JR, S235J2G3,S275J2G3, S355J2G3,P235GH, P265GH,P295GH, S235JRS1-S235J4S, S315G1S-S355G3S, S255N-S355N, P255NH-P355NH, GE200-GE300, S255NL-S355NL
* API 5L : X42, X46, X52, X56, X60

Features and Applications :

* High efficiency of appx. 160% weld metal recovery.
* Preferred use in fillet and butt welding at horizontal position
* High rates of deposition. * Deposition in proper length provides cast saving
* Weld deposits of low hydrogen content
* Requirement of re-drying for minimum 2 hours at the temperatures between 300 °C and 350 °C

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300699	3.20 x 350	1/8 x 18”	120 - 180	5434
300700	4.00 x 450	5/32 x 18”	160 - 240	9420
300701	5.00 x 450	3/16 x 18”	200 - 330	15990

Approvals :

TSE, CE, GOST-R

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TEMPO B 48

Standards :

TS EN ISO 2560-A	: E 42 6 1Ni B32 H5
EN ISO 2560-A	: E 42 6 1Ni B32 H5
AWS A5.5	: E 7018-G H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni
0.06	0.5	1.0	0.8

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-60°C)	Elongation ($L_o=5d_o$)(%)
min. 460	530-640	min. 50 J	min. 22

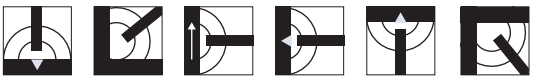
Typical Base Material Grades :

* EN 10205: S355J2G3, S355JR, S355JO, S355J2G4, S355K2G3, S355K2G4, ASTM A 572 Gr.50, A709Gr.50, A678Gr.50, A633Gr.D
* API 5L : A, B, X42, X46, X52, X60

Features and Applications :

* This is AC/DC basic-coated electrode that has a weld metal recovery of 120% which can be used at all welding positions except for the vertical-down position.
* Usable with short arc in (-) pole for root pass welding with excellent penetration, especially at vertical-up position.
* Weld deposit with high low temperature toughness
* Re-drying : 350°C - 400°C / 2h

Welding Positions :



Current Type :

D.C.(+) D.C.(-)
AC

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
304014	2.50 x 350	3/32 x 14"	60 - 100	2197
303903	3.20 x 350	1/8 x 14"	80 - 130	3509
304020	4.00 x 350	5/32 x 14"	120 - 180	5210

Approvals :

CE, ABS, TSE, GOST-R

GeKa®

TEMPO B 60

Standards :

TS EN ISO 2560-A	:	E 46 6 1 Ni B 42 H5
EN ISO 2560-A	:	E 46 6 1 Ni B 42 H5
AWS A5.5	:	E 8018 - G H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni
0.07	0.3	1.3	0.9

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-60°C)	Elongation ($L_o=5d_o$)(%)
min. 460	580-680	100 J	min. 24

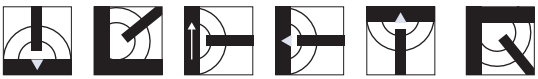
Typical Base Material Grades :

* E295, E335, S355J2G3, L210-L360NB, L210MB-L360MB,P310GH, P355GH, S380N-S460N, P380NH-P460NH, S380NL-S460NL,S255NL1-S420NL1, GE260-GE300
* API 5L : X42, X46, X52, X56, X60, X65

Features and Applications :

* Content with Mn-Ni alloy * High toughness and high resistance to cracking * Suitability for use in welding high-strength, fine-grained structural steels * Suitability for use in welding of materials with service temperatures between -60 °C and +350 °C * Very high values of impact resistance after aging * Convenience of welding at all positions except for vertical down position * Weld deposits with very low contents of hydrogen * Requirement of re-drying for minimum 2 hours at the temperatures between 350 °C and 400 °C

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300412	2.50 x 350	3/32 x 14”	80 - 110	2197
300413	3.20 x 350	1/8 x 14”	100 - 140	3509
300414	4.00 x 450	5/32 x 18”	130 - 190	6660
300415	5.00 x 450	3/16 x 18”	190 - 240	10320

Approvals :

TSE, DNV-GL, CE, GOST-R

GeKa®

TEMPO B 63

Standards :

TS EN ISO 2560-A	:	E 50 3 B 42 H5
EN ISO 2560-A	:	E 50 3 B 42 H5
AWS A5.5	:	E 8018 - G H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn
0.06	0.7	1.6

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-60°C)	Elongation ($L_o=5d_o$)(%)
min. 500	610-730	min.80 J	min. 22

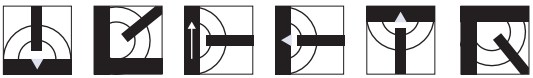
Typical Base Material Grades :

* S355J2G3,E295-E360, C35-C60, S315N-S500N, P315NH-P500NH, GE240-GE340
Resistance of the rail steels up to 785 N/mm^2 are used.
* API 52 : X52, X56, X60, X65, X70

Features and Applications :

* Suitability for use in welding carbon and low-alloyed high-strength steels with carbon contents up to 0.6%
* Suitability for use in rail-joint welding
* Ductile and crack-resistant weld metals
* Recovery of weld metals about 115%
* Weldability at all positions except for vertical down positions
* Weld deposits with very low contents of hydrogen
* Requirement of re-drying for minimum 2 hours at the temperatures between 350 °C and 400 °C

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300416	2.50 x 350	3/32 x 14"	80 - 110	2325
300417	3.20 x 350	1/8 x 14"	100 - 140	3620
300418	4.00 x 450	5/32 x 18"	130 - 190	6710
300419	5.00 x 450	3/16 x 18"	190 - 240	10500

Approvals :

TSE, CE, GOST-R

GeKa®

TEMPO B 65

Standards :

TS EN ISO 18275-A	: E 55 6 1 NiMo B 42 H5
EN ISO 18275-A	: E 55 6 1 NiMo B 42 H5
AWS A5.5	: E 8018 - G H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Mo
0.06	0.3	1.2	0.8	0.35

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-60°C)	Elongation ($L_o=5d_o$)(%)
min. 550	630-750	100 J	min. 22

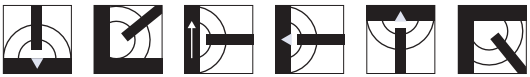
Typical Base Material Grades :

* E295-E360, 20MnMoNi5-5,22NiMoCr4-7, S380N-S500N, S380NH-S500NH,S380NL-S500NL, S380NL1-S500NL1, 15NiCuMoNb5S, 17MnMoV6-4,C35-C60, GS60,
* API 5L: X52, X56, X60, X65, X70

Features and Applications :

* Suitability for use in welding high-strength, fine-grained steels. * Consistent high ductility and crack-resistance at low working temperatures down to -60 °C. * Resistance to aging. * Convenience of welding at all positions except for the vertical down position. * Possibility of applying same heat treatments temperatures at pre- and post-welding as well as at transition stages as those of base metal. * Very low contents of hydrogen * Requirement of re-drying for minimum 2 hours at the temperatures between 350 °C and 400 °C

Welding Positions :



Current Type :

D.C.(+) / D.C. (-) for root pass

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300420	2.50 x 350	3/32 x 14"	80 - 110	2100
300421	3.20 x 350	1/8 x 14"	100 - 140	3610
300422	4.00 x 450	5/32 x 18"	130 - 190	6800
300423	5.00 x 450	3/16 x 18"	190 - 240	9915

Approvals :

CE, GOST-R, ABS

GeKa®

TEMPO B 70 M

Standards :

TS EN ISO 18275-A	:	E 55 6 Z(1NiMo) B 42 H5
EN ISO 18275-A	:	E 55 6 Z(1NiMo) B 42 H5
AWS A5.5	:	E 9018 - MH4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Mo
0.05	0.3	1.1	1.4	0.35

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-60°C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 550	620-780	80 J	min. 24	AW

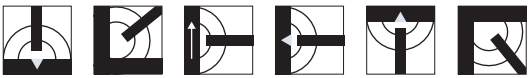
Typical Base Material Grades :

* S380N-S500N, S355NH-S460NH, S380NL-500NL
* Fine grained, high strength steels and steel castings
* API 5L : X52, X56, X60, X65, X70

Features and Applications :

* High resistance to cracking.
* Low amounts of Hydrogen (4 ml / 100 g).
* Operability at temperatures between - 60 °C and + 350 °C. * Low content of moisture absorbed during long-term storage.
* Requirement of re-drying for minimum 2 hours at the temperatures between 350 °C and 400 °C.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
305544	2.50 x 350	3/32 x 14”	80 - 110	2220
305118	3.20 x 350	1/8 x 14”	100 - 140	3640
305120	4.00 x 450	5/32 x 18”	130 - 190	6790
305545	5.00 x 450	3/16 x 18”	190 - 240	10130

Approvals :

CE, GOST-R

GeKa®

TEMPO B 70 S

Standards :

TS EN ISO 18275-A	:	E 55 6 2 NiMo B 42 H5
EN ISO 18275-A	:	E 55 6 2 NiMo B 42 H5
AWS A5.5	:	E 9018 - G H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Mo
0.07	0.2	0.6	2.4	0.4

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-60°C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 550	620-780	90 J	min. 20	600 °C / 1h / 300 °C (hava)

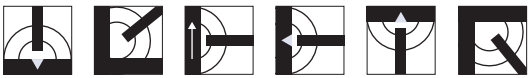
Typical Base Material Grades :

* S380N-S500N, S355NH-S460NH, S380NL-500NL
* Fine grained, high alloyed steels and steel castings
* API 5L: X52, X56, X60, X65, X70

Features and Applications :

* Suitability for use in welding of high-strength, fine-grained steels.
* High ductility and high resistance to cracking obtained in Welding fine-grained steels
* Suitability for use in welding of materials with service temperatures between -60 °C and +350 °C.
* Requirement of re-drying for minimum 2 hours at the temperatures between 350 °C and 400 °C.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
305426	2.50 x 350	3/32 x 14"	80 - 110	2220
304794	3.20 x 350	1/8 x 14"	100 - 140	3640
304795	4.00 x 450	5/32 x 18"	130 - 190	6790
304937	5.00 x 450	3/16 x 18"	190 - 240	10130

Approvals :

CE, GOST-R, ABS

GeKa®

TEMPO B 70 Mo

Standards :

TS EN ISO 18275-A	:	E 55 5 MnMo B 42 H5
EN ISO 18275-A	:	E 55 5 MnMo B 42 H5
AWS A5.5	:	~E 9018 - D1 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo
0.075	0.40	1.60	0.45

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-50°C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 550	610-780	min. 47 J	min. 20	620 °C / 2h / 300 °C (air)

Typical Base Material Grades :

* E295-E360, P355GH, 17MnMoV6-4, 15NiCuMoNb5S,S380N-S500N, P380NH-S500NH, GE300-GE340,G22Mo4
* API 5L: X52, X56, X60, X65, X70

Features and Applications :

* Suitability for use in welding high-strength, fine-grained constructional steels and high-temperature steels
* Use in welding rail steels with strength values up to 785 N/mm^2
* Content including MnMo alloy
* Resistance to cracking as well as to aging, high toughness
* Requirement of re-drying for minimum 2 hours at the temperatures between 350 - 400 °C

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
301117	2.50 x 350	3/32 x 14"	80 - 110	2220
301110	3.20 x 350	1/8 x 14"	100 - 140	3640
301111	4.00 x 450	5/32 x 18"	130 - 190	6790
301113	5.00 x 450	3/16 x 18"	190 - 240	10130

Approvals :

CE, GOST-R

GeKa®

TEMPO B 75

Standards :

TS EN ISO 18275-A	: E Z 62 6 1 NiMo B 42 H5
EN ISO 18275-A	: E Z 62 6 1 NiMo B 42 H5
AWS A5.5	: E 10018 - G H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Mo	Ni
0.05	0.5	1.3	0.3	0.5	1.3

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-60°C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 630	720-850	120 J	min. 20	580 °C / 2h / 300 °C (air)

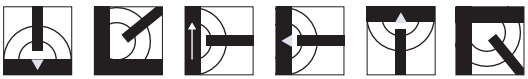
Typical Base Material Grades :

* The yield strength of 620 N/mm^2 up to the quenched and tempered fine grain steels
* The tensile strength of the 780 N/mm^2 heat treating steels

Features and Applications :

* Content of Mn-Mo-Ni alloy * High ductility and high resistance to cracking obtained in welding high-strength, quenched and tempered, fine-grained structural steels. * Suitability for use in welding of materials with service temperatures between -60 °C and +400 °C. * Very high values of impact resistance after aging * Convenience of welding at all positions except for the vertical down position. * Possibility of applying same heat treatment temperatures at pre- and post-welding as well as at transition stagesas those of base metal * Weld deposits with very low contents of hydrogen
* Requirement of re-drying for minimum 2 hours at the temperatures between 350°C and 400°C.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300428	2.50 x 350	3/32 x 14"	80 - 110	2280
300429	3.20 x 350	1/8 x 14"	100 - 140	3630
300430	4.00 x 450	5/32 x 18"	130 - 190	6880
300431	5.00 x 450	3/16 x 18"	190 - 240	10230

Approvals :

CE, GOST-R

GeKa®

TEMPO B 85 M

Standards :

TS EN ISO 18275-A	: E 69 5 Mn 2 NiCrMo B 4 2 H5
EN ISO 18275-A	: E 69 5 Mn 2 NiCrMo B 4 2 H5
AWS A5.5	: E 11018 - M H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Cr	Mo	Ni	Mn
0.05	0.2	0.35	0.45	2.2	1.6

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-50°C)	Elongation ($L_o=5d_o$)(%)
min. 700	min. 760	min. 47 J	min. 20

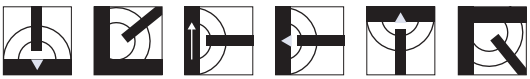
Typical Base Material Grades :

* S620QL-S690QL, S690QL1,HY100
* API 5L : X60, X65, X70, X80

Features and Applications :

* Basic-type -coated and Ni-Cr-Mo -alloyed electrode character
* Applicability in welding of casting steels and high-strength fine-grained steels
* Weld metals with high resistance to cracking
* Low amounts of hydrogen (4 ml per 100 g of weld metal)
* Low amounts of moisture absorbed during long-term storage
* Requirement of re-drying for minimum 2 hours at the temperatures between 350°C and 400°C.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
303733	2.50 x 350	3/32 x 14''	80 - 110	2250
303739	3.20 x 350	1/8 x 14"	100 - 140	3640
303745	4.00 x 450	5/32 x 18"	130 - 190	6730
303746	5.00 x 450	3/16 x 18"	190 - 240	10520

Approvals :

ABS, CE, GOST-R

GeKa®

TEMPO B 90

Standards :

TS EN ISO 18275-A :	E 69 5 Mn 2 NiCrMo B H5
EN ISO 18275-A :	E 69 5 Mn 2 NiCrMo B H5
AWS A5.5 :	E 12018 - G H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Cr	Mo	Ni	Mn
0.06	0.4	0.9	0.5	2.5	1.6

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-50°C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 740	830-950	min. 28 J	min. 17	650 °C / 2h / 300 °C (air)

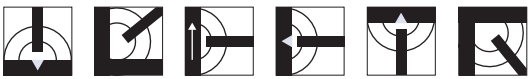
Typical Base Material Grades :

* HY 100, S690QL, S690QU, N-AXTRA 70
* API 5L : X60, X65, X70, X80

Features and Applications :

* Suitability for use in welding fine-grained steels, cementation steels, tempered steels, cast steels etc.
* Suitability for use of applications requiring a minimum tensile strength value of 830 N/mm^2
* Requirement of re-drying for minimum 2 hours at the temperatures between of 350-400 °C

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302737	3.20 x 350	1/8 x 14"	90 - 140	3509
301203	4.00 x 450	5/32 x 18"	130 - 190	6740
302738	5.00 x 450	3/16 x 18"	170 - 240	10525

Approvals :

CE, GOST-R

GeKa®

TEMPO Ni Cu

Standards :

TS EN ISO 2560-A	:	E 42 3 Z (NiCrCu) B 42 H5
EN ISO 2560-A	:	E 42 3 Z (NiCrCu) B 42 H5
AWS A5.5	:	E 7018-G / 7018-W1(mod.) H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Cr	Ni	Cu	Mn
0.06	0.5	0.3	0.4	0.4	1.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-30°C)	Elongation ($L_o=5d_o$)(%)
min. 420	510-630	60 J	min. 25

Typical Base Material Grades :

* S235JR, S235JRW, S325J2W, S355J2G1W, S355JRW, S355J2G 3 Cu, COR-TEN A

Features and Applications :

* Content of Ni-Cu-Cr alloy
* Suitability for use in welding structural steels exposed to weathering, such as COR-TEN.
* High mechanical properties with excellent crack resistance
* Convenience of welding at all positions except for vertical down position
* Weld deposits with very low contents of hydrogen
* Requirement of re-drying for minimum 2 hours at the temperatures between of 350 - 400 °C

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300448	2.50 x 350	3/32 x 14"	80 - 110	2340
300449	3.20 x 350	1/8 x 14"	130 - 150	3480
300450	4.00 x 450	5/32 x 18"	150 - 190	6685
300451	5.00 x 450	3/16 x 18"	200 - 250	10115

Approvals :

TSE, CE, GOST-R

GeKa®

TEMPO B W2

Standards :

TS EN ISO 2560-A	: E 46 6 Z (NiCrCu) B 42 H5
EN ISO 2560-A	: E 46 6 Z (NiCrCu) B 42 H5
AWS A5.5	: E 8018 W2 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Cr	Ni	Cu	Mn
0.06	0.45	0.5	0.5	0.4	0.7

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-60°C)	Elongation ($L_o=5d_o$)(%)
min. 460	550-680	min. 47 J	min. 20

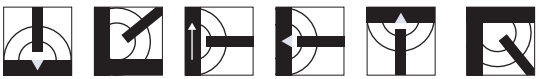
Typical Base Material Grades :

* S235JR, S235JRW, S325J2W, S355J2G1W, S355JRW, S355J2G 3 Cu, Patinax 37, 9CrNiCuP3-2-4 S255-S460, COR-TEN A,B,C

Features and Applications :

* Content of Ni-Cu-Cr alloy
* Suitability for use in welding structural steels exposed to weathering, especially for COR-TEN B Type steels.
* High mechanical properties with excellent crack resistance
* Convenience of welding at all positions except for vertical down position
* Weld deposits with very low contents of hydrogen
* Requirement of re-drying for minimum 2 hours at the temperatures between 350°C and 400°C.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
305694	2.50 x 350	3/32 x 14"	80 - 110	2340
305695	3.20 x 350	1/8 x 14"	130 - 150	3480
305696	4.00 x 450	5/32 x 18"	150 - 190	6685

Approvals :

CE, GOST-R

GeKa®

TEMPO B 1

Standards :

TS EN ISO 2560-A	:	E 46 6 1 Ni B 42 H5
EN ISO 2560-A	:	E 46 6 1 Ni B 42 H5
AWS A5.5	:	E 8018 - C3 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Ni
0.07	0.3	1.0	0.15	1.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-60°C)	Elongation ($L_o=5d_o$)(%)
min. 480	580-700	min. 47 J	min. 24

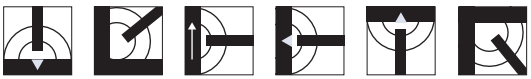
Typical Base Material Grades :

* 11MnNi53, 13MnNi63, TTSt35N, TTSt35V, TTSt41, TTSt45, S255N-S500N,S255NL-S500NL

Features and Applications :

* Suitability for use in welding low-alloyed steels resistant to lower service temperatures
* Serviceability of weld metals at temperatures down to -60 °C
* Weld metal recovery of approx. 120%
* Requirement of re-drying for minimum 2 hours at the temperatures between 350°C and 400°C.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300437	2.50 x 350	3/32 x 14"	70 - 100	2150
300438	3.20 x 350	1/8 x 14"	110 - 140	3610
304021	4.00 x 350	5/32 x 14"	140 - 180	5280
300439	4.00 x 450	5/32 x 18"	140 - 190	6800
306249	5.00 x 450	3/16 x 18"	190 - 240	10125

Approvals :

TSE, CE, GOST-R

GeKa®

TEMPO B 2

Standards :

TS EN ISO 2560-A	:	E 46 6 2 Ni B 42 H5
EN ISO 2560-A	:	E 46 6 2 Ni B 42 H5
AWS A5.5	:	E 8018 - C1 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni
0.05	0.3	0.8	2.4

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-80°C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 460	550-690	min. 47 J	min. 24	605 °C / 2h / 300 °C (air)

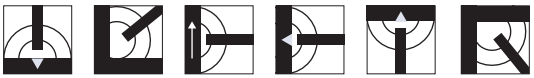
Typical Base Material Grades :

* 12Ni14, 14Ni6, 13MnNi6-3, G12Ni14, S255N-S460N, S255NH-S460NH, S255NL-S460NL, S255NL1-S460NL1,TTSt35/N/V, TTSt45N/V

Features and Applications :

* Suitability for use in welding fine-grained, Ni-alloyed and carbon steels as well as cryogenic steels. * High ductility and crack resistance in weld deposits. * Serviceability of weld metals at temperatures down to -80 °C
* Weld metal recovery of approx. 120%. * Convenience of welding at all positions except for vertical down position
* Possibility of applying same heat treatment temperatures at pre- and post-welding as well as at transition stages as those of base metal. * Weld deposits with very low contents of hydrogen
* Requirement of re-drying for minimum 2 hours at the temperatures between 350°C and 400°C

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300440	2.50 x 350	3/32 x 14"	70 - 100	2175
300441	3.20 x 350	1/8 x 14"	110 - 140	3700
300442	4.00 x 450	5/32 x 18"	140 - 180	6440
300443	5.00 x 450	3/16 x 18"	190 - 230	10125

Approvals :

TSE, CE, GOST-R, HAKC (3.20 mm)

GeKa®

TEMPO B 3

Standards :

TS EN ISO 2560-A	:	E 46 6 3 Ni B 42 H5
EN ISO 2560-A	:	E 46 6 3 Ni B 42 H5
AWS A5.5	:	E 8018 - C2 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni
0.05	0.3	0.7	3.2

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-100°C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 460	550-700	min. 47 J	min. 24	605 °C / 2h / 300 °C (air)

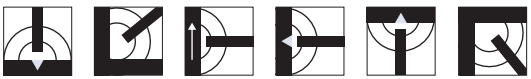
Typical Base Material Grades :

* Cold-tough steels: 10 Ni14, 16Ni16, S 255NL1-S500NL1, S275NL2-P460NL2

Features and Applications :

* Suitability for use in welding Ni-alloyed construction steels for cryogenic applications
* High ductility and crack resistance in weld deposits
* Serviceability of weld metals at temperatures down to -110 °C
* Weld metal recovery of approx. 120%
* Convenience of welding at all positions except for vertical down position
* Weld deposits with very low contents of hydrogen
* Requirement of re-drying for minimum 2 hours at the temperatures between 350°C and 400°C

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300444	2.50 x 350	3/32 x 14"	70 - 100	2220
300445	3.20 x 350	1/8 x 14"	110 - 140	3650
300446	4.00 x 450	5/32 x 18"	140 - 180	6600
300447	5.00 x 450	5/32 x 18"	190 - 230	8250

Approvals :

TSE, CE, GOST-R

GeKa®

OPUS MOR

Standards :

TS EN ISO 3580-A	:	E Mo R 12
EN ISO 3580-A	:	E Mo R 12

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo
0.07	0.4	0.6	0.5

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 420	530-670	min. 47 J	min. 22	620 °C / 2h / 300 °C (air)

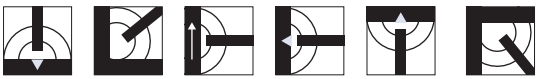
Typical Base Material Grades :

* S355J2G3, E295, P255G1TH, L320- L415NB, 16Mo3, L290MB -L415MB,16Mo3, S255N, P295GH, P355GH, P255-P355N, P255NH-P355NH

Features and Applications :

* Welding of heat-resistant Mo-alloyed, fine-grained or unalloyed steels used for construction of boilers and pipes.
* Weld metal is resistant to working temperatures up to +550 °C.

Welding Positions :



Current Type :

D.C.(-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300727	2.50 x 350	3/32 x 14”	80 - 110	2080
300728	3.20 x 350	1/8 x 14”	110 - 140	3310
300729	4.00 x 350	5/32 x 14”	140 - 190	4900
300730	5.00 x 350	3/16 x 18”	190 - 240	7540

Approvals :

CE, GOST-R

GeKa®

OPUS MOB

Standards :

TS EN ISO 3580-A	:	E Mo B 42 H5
EN ISO 3580-A	:	E Mo B 42 H5
AWS A5.5	:	E 7018-A1 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo
0.07	0.4	0.9	0.5

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-50°C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 460	530-680	min. 47 J	min. 20	620 °C / 2h / 300 °C (air)

Typical Base Material Grades :

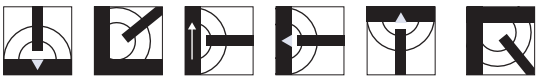
* S355J2G3, E295, E335, P255G1TH,16Mo3, L320-L415NB, L290MB-L415MB,S255N-S460N, P295GH P355GH,15NiCuMoNb5S, 20MnMoNi4-5,17MnMoV6-4, S255NH-S460NH, S255NL-S460NL, GE240-GE300, GS22Mo4

Features and Applications :

* Basic-coated stick electrode.
* Welding of heat-resisting, Mo-alloyed, thin-walled and unalloyed steels used for construction of boilers and pipes.
* Weld metal is resistant to working temperatures from -50 °C to +550 °C.

Re-drying : 350-400 °C min. 2 h.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300721	2.50 x 350	3/32 x 14”	80 - 110	2270
300722	3.20 x 350	1/8 x 14”	100 - 140	3510
300724	4.00 x 450	5/32 x 18”	140 - 190	6660
300726	5.00 x 450	3/16 x 18”	190 - 240	10160

Approvals :

DB, TÜV, CE, GOST-R

GeKa

OPUS C

Standards :

TS EN ISO 3580-A	:	E Cr Mo 1 R 12
EN ISO 3580-A	:	E Cr Mo 1 R 12
AWS A5.5	:	E 8013-G

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Cr
0.06	0.4	0.6	0.5	1.1

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 490	590-740	min. 47 J	min. 20	690 °C / 2h / 300 °C (air)

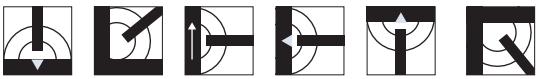
Typical Base Material Grades :

* 13CrMo4-5, 15CrMo5, 16CrMoV4, S355NH

Features and Applications :

* Welding of steam production plant equipments, steam pipes and similar kinds of heat-resistant joints, all of which are made of Cr-Mo alloy steels.
* Electrode coating of rutile character.
* Resistance of weld metal to operating temperatures of values up to 570 °C.

Welding Positions :



Current Type :

D.C.(-)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300731	2.50 x 350	3/32 x 14"	80 - 110	2150
300732	3.20 x 350	1/8 x 14"	110 - 140	3350
300733	4.00 x 350	5/32 x 14"	140 - 190	4760

Approvals :

CE, GOST-R

GeKa

OPUS CM

Standards :

TS EN ISO 3580-A	:	E Cr Mo 1 B 42 H5
EN ISO 3580-A	:	E Cr Mo 1 B 42 H5
AWS A5.5	:	E 8018-B2 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Cr
0.07	0.5	0.8	0.5	1.1

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 480	580-740	min. 47 J	min. 20	690 °C / 2h / 300 °C (air)

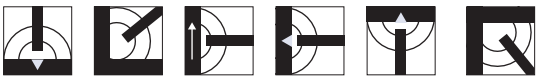
Typical Base Material Grades :

* 13CrMo4-5, 15CrMo5, 16CrMoV4, G17CrMo5-5, GS22Mo4, G22CrMo5-4, A193 Gr.B7, A335 Gr.P11, P12

Features and Applications :

* Steam boilers and steam pipes made of Cr-Mo-alloyed heat-resistant steels.
* Cementation steels, nitrided steels.
* Electrode coating of basic character.
* Requirement of re-drying for 2 hours at the temperatures between of 350-400 °C.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300716	2.50 x 350	3/32 x 14"	80 - 110	2300
300717	3.20 x 350	1/8 x 14"	100 - 140	3580
300719	4.00 x 450	5/32 x 18"	140 - 190	6790
300720	5.00 x 450	3/16 x 18"	190 - 240	10020

Approvals :

CE, GOST-R

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OPUS CM-15

Standards :

TS EN ISO 3580-A	:	E Cr Mo 1 B 42 H5
EN ISO 3580-A	:	E Cr Mo 1 B 42 H5
AWS A5.5	:	E 8015-B2 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Cr
0.07	0.5	0.8	0.5	1.1

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-30 °C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 480	580-740	min. 47 J	min. 20	690 °C / 2h / 300 °C (air)

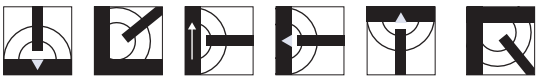
Typical Base Material Grades :

* 13CrMo4-5, 15CrMo5, 16CrMoV4, G17CrMo5-5, GS22Mo4, G22CrMo5-4, A193 Gr.B7, A335 Gr.P11, P12

Features and Applications :

* Welding of steam boilers and steam pipes made of Cr-Mo alloyed heat resistant steels, cementation steels, nitrided steels.
* Resistance of weld metal to operating temperatures of values up to 570 °C.
* Weld metal recovery of approx. 125%.
* It can be used in position welding with lower heat input
* Usable with short arc in (-) pole for root pass welding with excellent penetration.
* Requirement of re-drying for minimum 2 hours at the temperatures between of 350-400 °C.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
305833	2.50 x 350	3/32 x 14"	80 - 110	2300
305595	3.20 x 350	1/8 x 14"	100 - 140	3580
305413	4.00 x 450	5/32 x 18"	140 - 190	6790

Approvals :

CE, GOST-R

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OPUS CML

Standards :

TS EN ISO 3580-A	:	E Cr Mo 1 L B 42 H5
EN ISO 3580-A	:	E Cr Mo 1 L B 42 H5
AWS A5.5	:	E 7018 - B2 L H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Cr
<0.05	0.6	0.8	0.5	1.1

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 460	550-700	min. 47 J	min. 20

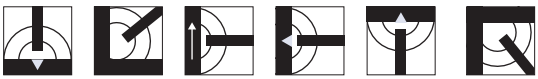
Typical Base Material Grades :

13CrMo4-5, 15CrMo5, 16CrMoV4, G17CrMo5-5, GS-22Mo4, GS-22 CrMo5-4 , A 193 Gr B7, A335 Gr P11, P12

Features and Applications :

* Applicability in welding heat-resisting, low-alloyed steels.
* Suitability to use against corrosion in sour crude, and against stress corrosion in petrochemical industry.
* Requirement of re-drying at the temperatures between of 350-400 °C for 2 hours.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302729	2.50 x 350	3/32 x 14”	80 - 110	2220
302730	3.20 x 350	1/8 x 14”	110 - 140	3520
302731	4.00 x 450	5/32 x 18”	140 - 190	6790
302732	5.00 x 450	3/16 x 18”	190 - 240	10020

Approvals :

CE, GOST-R

GeKa®

OPUS CMV

Standards :

TS EN ISO 3580-A	:	E Mo V B 42 H5
EN ISO 3580-A	:	E Mo V B 42 H5
AWS A5.5	:	E 9018-G H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Cr	V
0.06	0.3	1.2	1.0	0.45	0.5

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 530	610-710	min. 47 J	min. 18	710 °C / 2h / 300 °C (air)

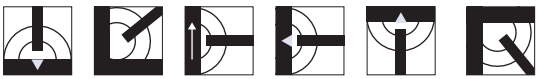
Typical Base Material Grades :

* 14MoV6-3, 24CrMoV5-5, 21CrMoV5-7, 21CrMoV5-11, G17CrMoV5-11

Features and Applications :

* V-alloyed steels such as 14 MoV6 - 3.
* Electrode coating of basic character.
* Serviceability at temperatures up to 580 °C.
* Pre-heating and interpass temperatures : 200 - 300 °C
* Re-drying : 350-400 °C min. 2h.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
301056	2.50 x 350	3/12 x 10”	65 - 90	2265
301057	3.20 x 350	1/8 x 14”	90 - 130	3550
301058	4.00 x 350	5/32 x 14”	140 - 180	5160

Approvals :

CE, GOST-R

GeKa®

OPUS 2 CM

Standards :

TS EN ISO 3580-A	:	E Cr Mo 2 B 42 H5
EN ISO 3580-A	:	E Cr Mo 2 B 42 H5
AWS A5.5	:	E 9018-B3 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Cr
0.07	0.4	0.8	1.0	2.2

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 530	620-800	min. 47 J	min. 22	720 °C / 2h / 300 °C (air)

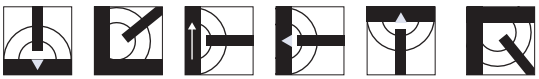
Typical Base Material Grades :

* 10CrMo9-10, 10CrSiMoV7, G-18CrMo9-10, A335 Gr. P22

Features and Applications :

* Welding of steam boilers, steam pipes made of Cr-Mo-alloyed steels, nitrided steels, not-heat treated cementation steels.
* Resistance of weld metal to working temperatures up to 600 °C.
* Requirement of re-drying at temperatures between of 350-400 °C for at least 2 hours.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300706	2.50 x 350	3/32 x 14”	80 - 110	2280
300707	3.20 x 350	1/8 x 14”	100 - 140	3490
300708	4.00 x 450	5/32 x 18”	130 - 180	6860
300709	5.00 x 450	3/16 x 18”	190 - 240	10010

Approvals :

CE, GOST-R

GeKa®

OPUS 2 CM-15

Standards :

TS EN ISO 3580-A	:	E Cr Mo 2 B 42 H5
EN ISO 3580-A	:	E Cr Mo 2 B 42 H5
AWS A5.5	:	E 9015-B3 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Cr
0.07	0.5	0.8	1.0	2.2

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 530	620-800	min. 47 J	min. 20	720 °C / 2h / 300 °C (air)

Typical Base Material Grades :

* 10CrMo9-10, 10CrMo5MoV7, G-18CrMo9-10, A335 Gr. P22

Features and Applications :

* Welding of steam boilers, steam pipes made of Cr-Mo-alloyed steels, nitrided steels, not-heat treated cementation steels.
* Resistance of weld metal to working temperatures up to 600 °C.
* Requirement of re-drying at temperatures between of 350-400 °C for at least 2 hours.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
305819	2.50 x 350	3/32 x 14”	80 - 110	2280
305820	3.20 x 350	1/8 x 14”	100 - 140	3490
305821	4.00 x 450	5/32 x 18”	130 - 180	6860

Approvals :

CE, GOST-R

GeKa

OPUS 2 CML

Standards :

TS EN ISO 3580-A	:	E Cr Mo 2 L B 42 H5
EN ISO 3580-A	:	E Cr Mo 2 L B 42 H5
AWS A5.5	:	E 8018-B3 L H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Cr
0.04	0.6	0.6	1.1	2.2

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 530	min. 730	min. 47 J	min. 18	690 °C / 1h / 300 °C (air)

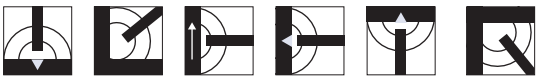
Typical Base Material Grades :

* 2% Cr - 1% Mo Steels, A335 Gr. P22

Features and Applications :

* Applicability in welding of heat-resisting steels containing 2% Cr - 1% Mn and similar alloys
* Electrode with basic-type coating
* Formation of more ductile and less hard weld metal due to low carbon content
* Serviceability at temperatures of values up to 600 °C (max.)
* Recommended pre-heating and post-heat treatment during welding processes
* Requirement of re-drying at temperatures between of 350-400 °C for at least 2 hours

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
301155	2.50 x 350	3/32 x 14”	80 - 110	2200
301156	3.20 x 350	1/8 x 14”	100 - 140	3680
301157	4.00 x 450	5/32 x 18”	130 - 180	6680

Approvals :

CE, GOST-R

GeKa

OPUS 5 CM

Standards :

TS EN ISO 3580-A :	E Cr Mo 5 B 42 H5
EN ISO 3580-A :	E Cr Mo 5 B 42 H5
AWS A5.5 (A5.4) :	E 8018-B6 (E 502-15) H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Cr
0.06	0.4	0.8	0.5	5.2

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 460	590-740	min. 47 J	min. 19	740 °C / 2h / 300 °C (air)

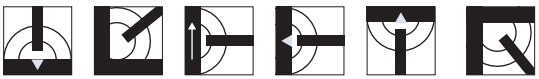
Typical Base Material Grades :

* X12CrMo5, GX12CrMo5

Features and Applications :

* High-heat-resistant steels
* In petro chemical industry and on pressured-hydrogen tanks
* Serviceability of weld metal at working temperature up to 650 °C
* Requirement of re-drying for at least 2 hours at temperatures between of 350-400 °C

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300710	2.50 x 350	3/32 x 14"	65 - 90	2265
300711	3.20 x 350	1/8 x 14"	110 - 130	3580
300712	4.00 x 450	5/32 x 18"	140 - 180	6675
300713	5.00 x 450	3/16 x 18"	190 - 240	9935

Approvals :

CE, GOST-R

GeKa®

OPUS 9 CM

Standards :

TS EN ISO 3580-A	:	E CrMo9 B 4 2 H5
EN ISO 3580-A	:	E CrMo9 B 4 2 H5
AWS A5.5	:	E 8018-B8 H4
AWS A5.4	:	E 505-15

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Cr
0.07	0.4	0.7	1.0	9.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 600	720-760	80 J	21	760 °C / 2h / 300 °C (air)

Typical Base Material Grades :

* X12CrMo9-1, X7CrMo9-1, GX12CrMo10.

Features and Applications :

* Welding of boilers, pressure vessel steels, pipe steels and cast steels.
* Electrode coating of basic character.
* Electrode content of 9 Chromium 1 Molybdenum.
* Serviceability at temperatures of values up to 650 °C.
* Re-drying : 350-400 °C min. 2 h

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300714	2.50 x 350	3/32 x 14”	60 - 90	2200
300715	3.20 x 350	1/8 x 14”	90 - 130	3450
301161	4.00 x 450	5/32 x 18”	120 - 160	6685

Approvals :

CE, GOST-R

GeKa®

OPUS 9 CM-15

Standards :

TS EN ISO 3580-A	:	E CrMo9 B 42 H5
EN ISO 3580-A	:	E CrMo9 B 42 H5
AWS A5.5	:	E 8015 B8

Composition of Weld Metal %(Typical):

C	Si	Mn
0.07	0.40	0.80

Cr	Mo
9.0	1.0

Mechanical Properties %(Typical) :

Heat Treatment	Yield Strength (N/mm²)	Tensile Stregth (N/mm²)	Impact Strength (ISO-V/+20°C)	Elongation (L_o=5d_o)(%)
760°C/1h/300° C air	min. 460	min. 600	min. 47 J	min. 19

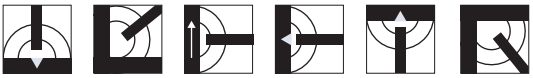
Typical Base Material Grades :

X12CrMo9-1, X7CrMo9-1, A335 Gr. P9

Features and Applications :

*Heat resistance and low hydrogen electorde with basic-type coating.
*Resistance of weld metal to working temperatures up to 650 °C.
*Welding of pressurized boiler steels, pipe steel and steel castings.
*Requirement of re-drying at temperatures between 350-400 °C for at least 2 hours.

Welding Positions :



Current Type :

D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)	Welding Current (A)	Weight g/100 pcs
306335	3.20 x 350	90 - 130	3450
306336	4.00 x 350	120 - 160	5200

Approvals :

GeKa®

OPUS 9 CMV

Standards :

TS EN ISO 3580-A	:	E CrMo91 B 42 H5
EN ISO 3580-A	:	E CrMo91 B 42 H5
AWS A5.5	:	E 9018-B9 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Mo	Ni	V	Nb	N
0.09	0.2	0.5	9.0	1.0	0.6	0.2	0.04	+

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 530	min. 620	min. 47 J	17	760°C/2h/300°C air

Typical Base Material Grades :

* X10CrMoVNb 9-1, A213 Gr. T91, A 335 Gr. P91 (T91), A 139Gr.T91, % 9-12 Cr type martensitic stainless steels.

Features and Applications :

* High-alloyed low-hydrogen electrode with basic-type coating.
* Resistance to heat and creep, high resistance to creeping and high toughness values under long-term stress.
* Weld metal's resistance to high temperatures up to 620 °C.
* Pre-heating and inter-pass welding temperature : 200 - 300 °C, Re-drying conditions : 350-400 °C, 2 h.

Welding Positions :

Current Type :

D.C.(+) / D.C.(-) for root pass

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302476	2.50 x 350	3/32 x 14”	80 - 110	2300
302478	3.20 x 350	1/8 x 14”	110 - 140	3580
302484	4.00 x 350	5/32 x 14’’	140 - 190	5180

Approvals :

CE, GOST-R

GeKa®

OPUS 9 CMV-15

Standards :

TS EN ISO 3580-A	:	E CrMo91 B 42 H5
EN ISO 3580-A	:	E CrMo91 B 42 H5
AWS A5.5	:	E 9015-B9 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Mo	Ni	V	Nb	N
0.09	0.3	0.5	9.0	1.0	1.0	0.2	0.04	+

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 530	min. 620	min. 47 J	min. 17	760 °C / 2h / 300 °C (air)

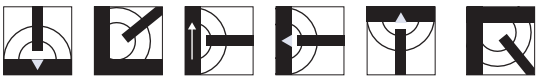
Typical Base Material Grades :

* X10CrMoVNb 9-1, A213 Gr. T91, A 335 Gr. P91 (T91), A 139Gr.T91, % 9-12 Cr type martensitic stainless steels.

Features and Applications :

* High-alloyed low-hydrogen electrode with basic-type coating.
* Resistance to heat and creep, high resistance to creeping and high toughness values under long-term stress.
* Weld metals' resistance to high temperatures up to 620 °C.
* Pre-heating and inter-pass welding temperature: 200-300 °C, Re-drying conditions: 350-400 °C/2h.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
306106	2.50 x 350	3/32 x 14"	80 - 110	2300
306107	3.20 x 350	1/8 x 14"	110 - 140	3580
306108	4.00 x 350	5/32 x 14"	140 - 190	5180

Approvals :

CE

GeKa

OPUS P92

Standards :

AWS A5.5 : E 9018-B9(mod.)

Composition of Weld Metal %(Typical):

C	Si	Mn
0.08	0.25	0.65

Ni	Cr	Mo	W
0.75	8.50	0.50	1.80

Mechanical Properties %(Typical) :

Heat Treatment	Yield Strength (N/mm^2)	Tensile Stregth (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
760°C/4h	≥550	≥650	min. 47 J	≥19

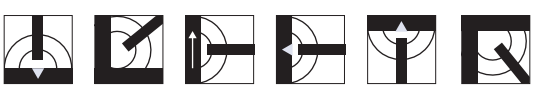
Typical Base Material Grades :

T/P92, 9%Cr1.7%W0.5%Mo, creep resisting martensitic steels; ASTM: A 213 Gr T92, A 335 Gr P92, A 387 Gr 92 .

Features and Applications :

* Recommended for welding of heat resistant steels T/P92 which are used for steam tubing, turbine casings and power generating plants.
* Provides creep strength and toughness at elevated temperatures with additional alloying elements.
* Weld metal is resistant to temperatures up to +650 °C.
* Bruscato factor of X<15.
* Preheat and interpass temperature 200 – 300 °C.
* Re-drying : 350 - 400 °C / 2 h.

Welding Positions :



Current Type :

D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g/100 pcs
306338	3.20 x 350	1/8 x 14"	110 - 140	3750

Approvals :

GeKa®

ELOX B 307

Standards :

TS EN ISO 3581 - A	:	E 18 8 Mn B 22
EN ISO 3581 - A	:	E 18 8 Mn B 22
AWS A5.4	:	~E 307-15

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr
0.1	0.7	6.0	8.6	18.5

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 390	580-750	min. 80 J	min. 35

Typical Base Material Grades :

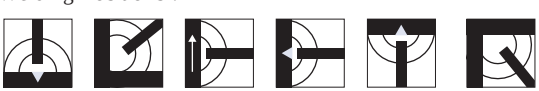
DIN :
X 6 Cr 13
X 6 Cr Al 13
X 10 Cr 13
X 8 Cr 17
X 20 Cr 13
X 10 Cr Al 7
X 10 Cr A 13
X 15 Cr 13
X 22 CrNi 17
X 5 CrNi 13 4
X 8 CrTi 17
G-X 20 Cr 14
G-X 8 CrNi 13
G-X 30 CrSi 6

AISI :
405
410
420
430
430 Ti
431
440
502

Features and Applications :

* Highly resistant steels, alloyed / unalloyed steels, armour steels, hard manganese steels, nonmagnetic steels, steels with 14% Mn hard-to-weld steels. * Joint welding of different metals with each other.
* Resistance of weld metal to corrosion, wear, thermal shocks and working temperatures between -100 °C and +500 °C. * Requirement of re-drying for at least 2 hours at temperatures between 150 °C and 200 °C.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300528	2.50 x 250	3/32 x 10”	60-80	1260
300529	3.20 x 350	1/8 x 14”	80-100	2880
300530	4.00 x 350	5/32 x 14”	110-140	4215

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX R 307

Standards :

TS EN ISO 3581 - A	:	E 18 8 Mn R 32
EN ISO 3581 - A	:	E 18 8 Mn R 32
AWS A5.4	:	~E 307-16

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr
0.11	1.0	4.5	8.5	19.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 390	600-770	min. 47 J	min. 30

Typical Base Material Grades :

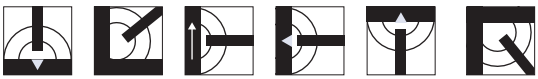
DIN :
X 7 Cr 13
X 7 Cr Al 13
X 10 Cr 13
X 8 Cr 17
X 20 Cr 13
X 10 Cr Al 13
X 10 Cr Al 7
X 15 Cr 13
X 22 CrNi 17
X 5 CrNi 13 4
X 8 CrTi 17
G-X 20 Cr 14
G-X 8 CrNi 13
G-X 30 CrSi 6

AISI :
405
410
420
430
430 Ti
431
440
502

Features and Applications :

* High resistant steels, alloyed / unalloyed steels, heat-resistant steels, Cr-stainless steels, steels including 14%Mn, hard-to-weld steels. * Joint welding and filler welding of difference metal with each other. * Electrode coating of rutile character. * Austenitic weld metal with resistance to thermal shocks. * Maintenance of toughness at temperatures down to -100 °C. * Requirement of re-drying for at least 2 hours at the temperature 300-350 °C.

Welding Positions :



Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300556	2.50 x 250	3/32 x 10”	60 - 80	1375
300557	3.20 x 350	1/8 x 14”	80 - 110	3195
300558	4.00 x 350	5/32 x 14”	110 - 140	4745

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX B 307 L

Standards :

TS EN ISO 3581 - A	: E 18 9 MnMo B 22
EN ISO 3581 - A	: E 18 9 MnMo B 22
AWS A5.4	: E 307-15

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Mo	Cr
0.08	0.6	4.0	9.5	1.0	19.0

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/+20 °C)	Elongation (L_o=5d_o)(%)
min. 390	590-740	min. 78 J	min. 35

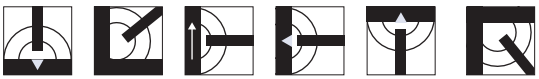
Typical Base Material Grades :

DIN :	X 20 Cr 13	AISI :	403	440
	X 8 Cr 17		405	501
	X 22 CrNi 17		410	502
	X 5 CrNi 17		420	
	G-X 20 Cr 14		430	

Features and Applications :

* Especially developped for welding of steel armor.
* Therefore this product using for hot work tool steels.
* The welding of steels that are difficult to resource availability.
* Stainless - Chromium, Chromium - Nickel steels and high strength steels welding.
* Requirement of re-drying of electrodes 2 hours at 150 - 200 °C in case of exposure of the electrode to humidity

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302703	3.20 x 350	1/8 x 14”	80-110	3580
302704	4.00 x 350	5/32 x 14”	110-140	4800

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX RS 307

Standards :

TS EN ISO 3581 - A	: E Z 18 9 MnMo R 53
EN ISO 3581 - A	: E Z 18 9 MnMo R 53
AWS A5.4	: ~E 307-26

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Mo	Cr
0.07	0.9	5.6	8.5	0.75	19.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 400	590-700	min. 47 J	min. 35

Typical Base Material Grades :

DIN :
X 6 Cr 13
X 6 Cr Al 13
X 10 Cr 13
X 8 Cr 17
X 20 Cr 13
X 10 Cr Al 7
X 10 Cr A 13
X 15 Cr 13
X 22 CrNi 17
X 5 CrNi 13 4
X 8 CrTi 17
G-X 20 Cr 14
G-X 8 CrNi 13
G-X 30 CrSi 6

AISI :
405
410
420
430
430 Ti
431
440
502

Features and Applications :

* Welding of high resistant alloyed / unalloyed steels, heat-resistant steels / stainless steels, steels with 14% Mn, for welding problematic steels. * Joint and filler welding of different metals. * Rutile coated electrode, weld metal is austenitic, resistant to thermal shocks, keeps its toughness down to -100 ° C.
re-drying : 300 °C / min. 2 h

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
303783	3.20 x 350	1/8 x 14”	110 - 150	4900
303784	4.00 x 350	5/32 x 14”	140 - 180	8000

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX R 308 L

Standards :

TS EN ISO 3581 - A	:	E 19 9 LR 32
EN ISO 3581 - A	:	E 19 9 LR 32
AWS A5.4	:	E 308 L - 16

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr
0.03	0.8	0.9	10.5	20.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 355	520-660	min. 47 J	min. 35

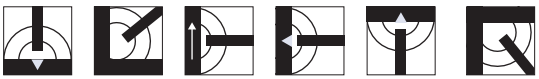
Typical Base Material Grades :

* X2CrNi 19 11, X5CrNi 18 10, X6CrNiTi 18 10, X6CrNiNb 18 10, X2CrNiN 18 10, X10CrNiNb 18 10, X12CrNi 18 8, 304 L, 304, 304 LN, 321, 347, 302

Features and Applications :

* Rutile-coated low-carbon electrode for use in chemical, petrochemical and food industries where similar steel types, including higher carbon grades as well as ferritic 13% -Cr steels are welded. Resistant to corrosion and cracks. Working temparatures up to +350°C
Re-drying : 300-350 °C / min. 2 h

Welding Positions :



Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300596	2.50 x 250	3/32 x 10"	50 - 90	1510
300597	3.20 x 300	1/8 x 12"	80 - 120	2880
300598	3.20 x 350	1/8 x 14"	80 - 120	3496
300599	4.00 x 350	5/32 x 14"	110 - 160	5103

Approvals :

TSE, BV, CE, ABS, GOST-R, HAKC (3.20 mm), CWB

GeKa®

ELOX R 308 L-17

Standards :

TS EN ISO 3581 - A	:	E 19 9 LR 32
EN ISO 3581 - A	:	E 19 9 LR 32
AWS A5.4	:	E 308 L - 17

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr
0.03	0.8	0.9	10.5	20.0

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/+20 °C)	Elongation (L_o=5d_o)(%)
min. 355	520-660	min. 47 J	min. 35

Typical Base Material Grades :

* X2CrNi 19 11, X5CrNi 18 10, X6CrNiTi 18 10, X6CrNiNb 18 10, X2CrNiN 18 10, X10CrNiNb 18 10, X12CrNi 18 8, 304 L, 304, 304 LN, 321, 347, 302

Features and Applications :

* Rutile-coated low-carbon electrode for use in chemical, petrochemical and food industries where similar steel types, including higher carbon grades as well as ferritic 13% - Cr steels are welded.
* Resistant to corrosion and cracks.
* Working temperatures up to + 300 - 350 °C.
* Requirement of re-drying for minimum 2 hours at the temperatures 300-350 °C.

Welding Positions :

Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
306255	2.50 x 250	3/32 x 10"	50 - 90	1500
306256	3.20 x 350	1/8 x 14"	80 - 120	3510
306257	4.00 x 350	5/32 x 14"	110 - 160	4935

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX R 308 H

Standards :

TS EN ISO 3581 - A	:	E 19 9 H R 32
EN ISO 3581 - A	:	E 19 9 H R 32
AWS A5.4	:	E 308 H - 16

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr
0.07	0.7	0.8	10.4	19.0

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/+20 °C)	Elongation (L_o=5d_o)(%)
min. 355	550-650	min. 47 J	min. 35

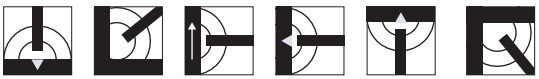
Typical Base Material Grades :

X6CrNi18-11, X12CrNiTi18-9, X6CrNiNb18-10

Features and Applications :

* Electrode with rutile coating on alloyed core-wire
* Applicability in welding Cr-Ni –alloyed austenitic high-temperature steels
* Usability in welding at all positions except for vertical downward position
* Applicability in joint-welding and surfacing of heat-resisting similar-type steels and steel castings
* Serviceability at temperatures of values up to 700 °C
* Resistance to fracture and corrosion
* Creep resistance at high temperatures being higher than that of the electrode GeKa ELOX R 308 L

Welding Positions :



Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302670	2.50 x 250	3/32 x 10”	50 - 80	1510
302672	3.20 x 350	1/8 x 14”	80 - 110	3496
305584	4.00 x 350	5/32 x 14”	110 - 140	5103

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX B 308 L

Standards :

TS EN ISO 3581 - A	:	E 19 9 LB 22
EN ISO 3581 - A	:	E 19 9 LB 22
AWS A5.4	:	E 308 L - 15

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr
0.02	0.45	1.2	10.3	19.7

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/+20 °C)	Elongation (L_o=5d_o)(%)
min. 370	520-660	90 J	min. 40

Typical Base Material Grades :

* X2CrNi 19 11, X5CrNi 18 10, X6CrNiTi 18 10, X6CrNiNb 18 10, X10CrNiNb 18 10, X2CrNiN 18 10, X12CrNi 18 8, 304L, 304, 304 LN, 321, 347, 302, 320 B 8 C ve D

Features and Applications :

* Low carbon alloyed core wire austenitic electrode with basic coating for use in all industries where similar steel types,including higher carbon grades as well as ferritic 13% -Cr steels are welded.
* High ductility of the weld metal,therefore preferably used for welding heavy sections.
* Very good out-of-position weldability.
* Good low-temperature ductility down to -196°C.
* Resistant to intergranular corrosion up to 350°C.
* Weld metal does not require preheating or postweld heat treatement.
* Re-drying : 150-200°C / min.2 h

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300904	2.50 x 250	3/32 x 10”	50-80	1510
300532	3.20 x 350	1/8 x 14”	80-110	3330
302460	4.00 x 350	5/32 x 14”	110-140	4760

Approvals :

TSE, CE, GOST-R

GeKa

ELOX B 308 H

Standards :

TS EN ISO 3581 - A	:	E 19 9 HB 22
EN ISO 3581 - A	:	E 19 9 HB 22
AWS A5.4	:	E 308 H - 15

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr
0.05	0.60	1.40	10.5	19.0

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/+20 °C)	Elongation (L_o=5d_o)(%)
min. 350	min. 550	min. 47 J	min. 30

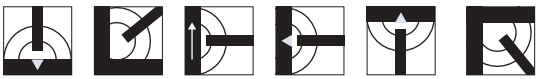
Typical Base Material Grades :

* 301, 302, 304, 304H, 305, 321

Features and Applications :

* A basic coating electrodes are used for welding type 304H and similar applications where creep strength is required.
* Electrodes are the same as E308, except for carbon content that has been restricted in the range of 0.04 to 0.08.
* It provides higher tensile and creep strength has at elevated temperatures.
* Weld metal ferrite content is normally targeted for 5 FN to minimize effect of sigma embrittlement in high-temperature service.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
305629	2.50 x 250	3/32 x 10"		
305630	3.20 x 350	1/8 x 14"	100 - 130	3300
305631	4.00 x 350	5/32 x 14"		

Approvals :

CE

GeKa®

ELOX R 308L Mo

Standards :

TS EN ISO 3581 - B	:	ES308LMo-16
EN ISO 3581 - B	:	ES308LMo-16
AWS A5.4	:	E 308 L Mo-16

Chemical Composition of Weld Metal- % (Typical) :

C	Cr	Ni	Mo
0.03	20.0	9.50	2.50

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 450	540-700	60	min. 35

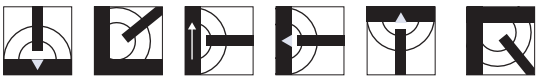
Typical Base Material Grades :

* ASTM A351-Gr. CF3M steel casting.

Features and Applications :

* A rutile electrode for welding of dissimilar steels.
* The general purpose electrode for repair welding.
* It has easy slag removal and smooth appearance in filled welding.

Welding Positions :



Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
306114	3.20 x 350	1/8 x 14”	80 - 120	3510

Approvals :

CE

GeKa®

ELOX RS 308

Standards :

TS EN ISO 3581 - A	:	E 19 9 R 53
EN ISO 3581 - A	:	E 19 9 R 53
AWS A5.4	:	E 308-26

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr
0.07	0.8	1.0	9.0	18.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 410	570-710	min.55 J	min. 30

Typical Base Material Grades :

* X2CrNi 19 11, X5CrNi 19 11, X5CrNi 18 8, X12CrNi 17 7, X12CrNi 18 8,G-X10 CrNi 18 8, G-X12CrNi 18 8, AISI : 304 L, 304, 302, 301, 308

Features and Applications :

* Applicability in joint- and surface-welding operations of 18/8 Cr-Ni steels, high-strength tempered steels, stainless steels and carbon steels.
* Welding efficiency of approximately 150%.
* Resistance to high current.
* Requirement of re-drying at 300-350 °C for 2 hours.

Welding Positions :

Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300609	2.50 x 350	3/32 x 14”	80-120	2820
300610	3.20 x 350	1/8 x 14”	110-160	5714
300611	4.00 x 350	3/16 x 14”	150-190	7680

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX R 309 L

Standards :

TS EN ISO 3581 - A	:	E 23 12 LR 32
EN ISO 3581 - A	:	E 23 12 LR 32
AWS A5.4	:	E 309L - 16

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr
0.03	0.8	0.8	12.6	23.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 440	540-720	min.47 J	min. 30

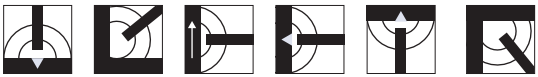
Typical Base Material Grades :

* High-strength unalloyed and heat-treatable steels, ferritic Cr and austenitic CrNi steels, austenitic Mn steels.
* Unalloyed tempered steels, tool steels, hard manganese steels, ferritic chromium steels, austenitic nickel-chromium steels, hard-to-weld steels.

Features and Applications :

* Similar-type austenitic stainless steels, dissimilar metals , buffer layers on mild and low-alloy steels prior to build up or overlaying with any stainless electrodes, joining of corrosion resistant stainless steel with mild or low alloy steels, clad steels.* Good crack resistance with hard to weld steels.
* The weld metal is content to high ferrite %.
* Re-drying : 300 °C / min. 2 h.

Welding Positions :



Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
304428	2.00 x 250	5/64 x 10''	50-80	940
300600	2.50 x 250	3/32 x 10"	60-90	1516
300601	3.20 x 350	1/8 x 14"	80-120	3560
300602	4.00 x 350	5/32 x 14"	100-160	5050

Approvals :

TSE, CE, BV, ABS, GOST-R

GeKa®

ELOX R 309 H

Standards :

TS EN ISO 3581-B	:	E S 309-16
EN ISO 3581-B	:	E S 309-16
AWS A5.4	:	E 309 H-16

Composition of Weld Metal %(Typical):

C	Si	Mn
0.06	0.80	0.80

Ni	Cr
12.0	23.0

Mechanical Properties %(Typical) :

Yield Strength (N/mm^2)	Tensile Stregth (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 440	550 - 720	min. 47 J	min. 30

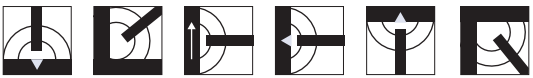
Typical Base Material Grades :

Alloyed and unalloyed Steels, AISI 309 Type Steel, Tool Steels, Austenitic Cr-Ni and Mn steels

Features and Applications :

* Electrode with rutile coating on alloyed core-wire.
* Applicability in welding similar/dissimilar type austenitic stainless steels, high-strength unalloyed and heat-treatable steels, ferritic Cr and austenitic CrNi steels, austenitic Mn steels.
* It provides higher tensile and creep strength at elevated temperatures according to ELOX R 309 L.
* Usability in welding at all positions except for vertical downward position.

Welding Positions :



Current Type :

D.C. (+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)	Welding Current (A)	Weight g/100 pcs
306329	2.50 x 250	50 - 90	1550
306330	3.20 x 300	80 - 120	2950
306331	3.20 x 350	80 - 120	3600
306332	4.00 x 350	110 - 160	5100

Approvals :

GeKa®

ELOX R 309 L-17

Standards :

TS EN ISO 3581-A	:	E 23 12 LR 32
EN ISO 3581-A	:	E 23 12 LR 32
AWS A5.4	:	E 309L - 17

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr
0.03	0.8	0.8	12.6	23.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 440	540-720	min.47 J	min. 30

Typical Base Material Grades :

* High-strength unalloyed and heat-treatable steels, ferritic Cr and austenitic CrNi steels, austenitic Mn steels
* Unalloyed tempered steels, tool steels, hard manganese steels, hard-to-weld steels

Features and Applications :

* Rutile-coated low-carbon electrode for use in high-strength unalloyed and heat treatable steels, ferritic Cr and austenitic CrNi steels, austenitic Mn steels.
* Similar-type austenitic stainless steels, dissimilar metals, buffer layers on mild and low-alloyed steels prior to build up or overlaying with any stainless electrodes, joining of corrosion resistant stainless steel with mild or low alloy steels, clad steels.
* Good crack resistance wity hard-to-weld steels.
* The weld metal is content to high ferrite %.
* Requirement of re-drying for minimum 2 hours at the temperatures 300 °C.

Welding Positions :

Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
306258	2.50 x 250	3/32 x 10"	60-90	1516
306259	3.20 x 350	1/8 x 14"	80-120	3560
306260	4.00 x 350	5/32 x 14"	100-160	5050

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX R 309 MoL

Standards :

TS EN ISO 3581-A	:	E 23 12 2 LR 32
EN ISO 3581-A	:	E 23 12 2 LR 32
AWS A5.4	:	E 309 L Mo-16

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Ni	Cr
<0.03	0.7	0.8	2.8	13.0	23.0

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/+20°C)	Elongation (L_o=5d_o)(%)
530	700	min. 55 J	35

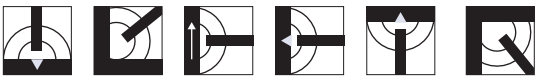
Typical Base Material Grades :

* High strength unalloyed and alloyed steels, heat resistant steels, ferritic and austenitic steels

Features and Applications :

* Welding of higher strength unalloyed and alloyed steels
* Welding of heat resistant steels
* Welding of high temperature pressure vessels, similar type of ferritic and austenitic steels
* Welding of corrosion and heat resistant steels, build-up or overlaying, buffer layers applications
* Weld metal contains higher amount of ferrite and has higher resistance to cracking
* Re-drying at 300°C - 350 °C for 2 hours

Welding Positions :



Current Type :

D.C.(+) / AC

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
300836	2.50 x 250	3/32 x 10"	60 - 90	5	1600
300604	3.20 x 350	1/8 x 14"	80 - 120	5	3640
300605	4.00 x 350	5/32 x 14"	100 - 160	5	5050

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX R 309 MoL-17

Standards :

TS EN ISO 3581 - A	:	E 23 12 2 LR 32
EN ISO 3581 - A	:	E 23 12 2 LR 32
AWS A5.4	:	E 309 L Mo-17

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr	Mo
< 0.03	0.7	0.8	13.0	23.0	2.8

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 490	620-750	min.47 J	min. 30

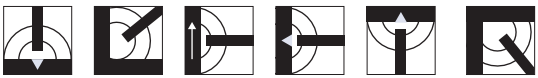
Typical Base Material Grades :

* Uses in high strength unalloyed and heat-treatable steels, ferritic / austenitic steels, austenitic Mn steels.

Features and Applications :

* Similar type austenitic stainless steels, dissimilar metals , buffer layers on mild and low-alloy steels prior to build up or overlaying with any stainless steels electrode.
* Joining of corrosion-resistant stainless steel with mild or low- alloy steels, clad steels.
* The weld metal is content to high ferrite %.
* Good cracking resistance with problematic steels.
* Re-drying : 300 °C / min. 2 h

Welding Positions :



Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
306261	2.50 x 250	3/32 x 10"	60-90	1600
306263	3.20 x 350	1/8 x 14"	80-120	3640
306264	4.00 x 350	5/32 x 14"	100-160	5050

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX B 309

Standards :

TS EN ISO 3581 - A	:	E 22 12 B 22
EN ISO 3581 - A	:	E 22 12 B 22
AWS A5.4	:	E 309 - 15

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr
0.085	0.9	1.8	12.5	22.5

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 360	550-650	min.47 J	min. 25

Typical Base Material Grades :

* X 15 CrNiSi 20 12 X 10 CrAl 7, X 10 CrAl 13 X 10 CrAl 18, G-X 40 CrNiSi 22, 9 G-X 40 CrSi 17, G-X 30 CrSi 6 305 , A297HF

Features and Applications :

* Basic-coated alloyed core wire electrode for welding analogous, heat resistant rolled,forged and cast steels as well as heat resistant ferritic CrSiAl steels.
* For weld joints exposed to reducing,sulphurous gases,the final layer has to be deposited by means of this electrode.
* In annealing plants,hardening plants,steam boiler construction,the crude oil industry and the ceramics industry.
* Scaling resistant up to 1000°C.
* Preheating and interpass temperatures for ferritic steels 200-300°C.
* Re-drying : 150 - 200°C / 2 h

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
301017	2.50 x 250	3/32 x 10”	60 - 80	1500
300905	3.20 x 350	1/8 x 14”	80 - 110	3250
302462	4.00 x 350	5/32 x 14”	110 - 140	4730

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX R 310

Standards :

TS EN ISO 3581 - A	:	E 25 20 R 32
EN ISO 3581 - A	:	E 25 20 R 32
AWS A5.4	:	~E 310-16

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr
0.12	0.9	2.5	20.0	26.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 355	560-690	min.47 J	min. 25

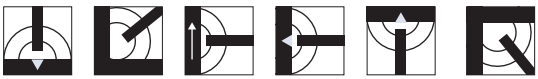
Typical Base Material Grades :

* Furnace, boilers, pipes made of Cr-Ni and Cr-Si-Al-alloyed steels.
* X15CrNiSi 25-20, X15CrNiSi 25-21, X15CrNrSi 20-12, G-X40CrNi25, GX40CrNiSi229, X10CrAl, X10CrAl24, GX40CrSi1, 305, 310, 304

Features and Applications :

* Weld metal is resistant to working temperatures up to +1200 °C.
* Used with alternative current also.
* Re-drying : 300°C / min. 2 h

Welding Positions :



Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300561	2.50 x 250	3/32 x 10”	50-80	1480
300562	3.20 x 300	1/8 x 12”	80-110	2860
300563	3.20 x 350	1/8 x 14”	80-110	3460
300564	4.00 x 350	5/32 x 14”	110-140	5140

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX R 310 Mo

Standards :

TS EN ISO 3581 - B	:	ES310Mo-16
EN ISO 3581 - B	:	ES310Mo-16
AWS A5.4	:	E310 Mo-16

Chemical Composition of Weld Metal- % (Typical) :

C	Cr	Ni	Mo
0.08	25.0	21.0	2.80

Mechanical Properties :

Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)
min. 550	min. 30

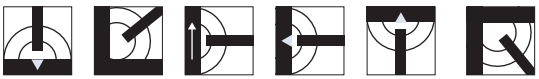
Typical Base Material Grades :

* For austenitic steels, Cr-Mo Steels, coated stainless steels and type 316, 316L and 317 clad steels.

Features and Applications :

* Rutile-basic coated electrode is used for austenitic steels, Cr-Mo steels, coated stainless steels and type 316, 316L and 317 clad steels.
* The addition of Mo is improved high temperature creep properties.
* The weld deposit is full austenitic and corrosion resistant.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
306265	3.20 x 350	1/8 x 14"	80 - 110	3510
306266	4.00 x 350	5/32 x 14"	110 - 140	5140

Approvals :

CE

GeKa®

ELOX B 310

Standards :

TS EN ISO 3581 - A	:	E 25 20 B 22
EN ISO 3581 - A	:	E 25 20 B 22
AWS A5.4	:	~E 310-15

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr
0.12	0.9	3.0	20.5	25.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 355	560-690	100 J	min. 25

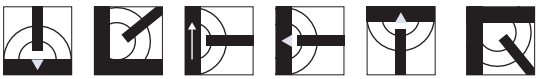
Typical Base Material Grades :

* X15CrNiSi 25 20, X12CrNi 25 21, X15CrNiSi 20 12, G-X 15CrNi 25 20, G-X 40CrNi 2521, G-X40CrNiSi 22 9, X10CrAl 18, X10CrAl 24, G-X40CrSi 17, 305, 310, 314.

Features and Applications :

* Austenitic CrNi steels, ferritic CrNiAl alloyed steels, heat-resisting rolled, forged and cast steels used in ceramic, petrochemical industries and furnace, boilers, chimney applications.
* Weld metal is resistant to working temperature - 196 up to +1200°C
* Re-drying : 150-200 °C / min. 2 h

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300533	2.50 x 250	3/32 x 10”	50-80	1340
300534	3.20 x 300	1/8 x 12”	80-110	2550
300535	3.20 x 350	1/8 x 14”	80-110	2920
300536	4.00 x 350	5/32 x 14”	110-140	4230

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX R 312

Standards :

TS EN ISO 3581 - A	:	E 29 9 R 12
EN ISO 3581 - A	:	E 29 9 R 12
AWS A5.4	:	~E 312-16

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr
0.12	1.0	0.8	10.5	30.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 490	700-830	min.24 J	min. 20

Typical Base Material Grades :

DIN :
X 7 Cr 13
X 7 Cr Al 13
X 10 Cr Al 13
X 8 Cr 17
X 20 Cr 13
X 15 Cr 13
X 22 Cr Ni 17
X 15 Cr Ni 13 4
X 8 Cr Ti 17

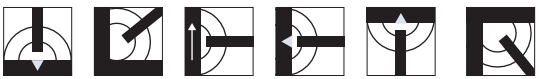
G-X 7 Cr 13
G-X 20 Cr 14
G-X 10 Cr Mo 13
G-X 8 Cr Ni 13

AISI :
403
405
410
420
430
430 Ti
431
446

Features and Applications :

* Alloyed-unalloyed high-resistant steels, Cr and Mn steels, joint welding of tool steels and different steels and repair welding of sprockets and wheelshaft. * Weld metal is resistant to corrosions, cracks and rust.
* Re-drying : 300 °C / min. 2 h

Welding Positions :



Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300566	2.50 x 250	3/32 x 10"	60-80	1328
300567	3.20 x 300	1/8 x 12"	80-110	2670
300568	3.20 x 350	1/8 x 14"	80-110	2960
300569	4.00 x 350	5/32 x 14"	110-160	4770

Approvals :

TSE, CE, ABS, BV, GOST-R

GeKa®

ELOX R 316 L

Standards :

TS EN ISO 3581 - A	:	E 19 12 3 LR 32
EN ISO 3581 - A	:	E 19 12 3 LR 32
AWS A5.4	:	E 316 L-16

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Ni	Cr
0.03	0.8	0.9	2.6	11.5	19.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 355	540-670	min.47 J	min. 30

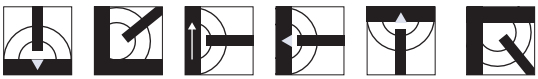
Typical Base Material Grades :

* X10CrNiMoNb 18 12, X2CrNiMo 18 14 3, X5CrNiMo 17 13 3, X2CrNiMo 17 13 2, X2CrNiMoN 17 12 2, X5CrNiMo 17 12 2, X5CrNiMoTi 17 12 2, X6CrNiMoNb 17 12 2, X2CrNiMoN 17 13 3, 316 Cb.316. 316L. 316 Ti.

Features and Applications :

* Tanks, pipes and equipments made of Cr-Ni-Mo low-carbon steels which are used in food, textile, chemical and paint industries.
* Weld metal is resistant to acid, corrosion.
* Serviceability at temperatures up to 400 °C.
* Re-drying : 300 °C / min. 2 h

Welding Positions :



Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
304429	2.00 x 250	5/64 x 10''	40-70	1000
300588	2.50 x 250	3/32 x 10"	50-90	1500
300590	3.20 x 350	1/8 x 14"	80-120	3500
300591	4.00 x 350	5/32 x 14"	110-160	5135

Approvals :

TSE, BV, CE, ABS, GOST-R, HAKC (3.20 mm)

GeKa®

ELOX R 316 L-17

Standards :

TS EN ISO 3581 - A	:	E 19 12 3 LR 32
EN ISO 3581 - A	:	E 19 12 3 LR 32
AWS A5.4	:	E 316 L-17

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Ni	Cr
0.03	0.8	0.9	2.6	11.5	19.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 355	540-670	min.47 J	min. 30

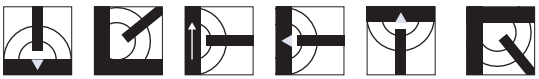
Typical Base Material Grades :

* X10CrNiMoNb 18 12, X2CrNiMo 18 14 3, X5CrNiMo 17 13 3, X2CrNiMo 17 13 2, X2CrNiMoN 17 12 2, X5CrNiMo 17 12 2, X5CrNiMoTi 17 12 2, X6CrNiMoNb 17 12 2, X2CrNiMoN 17 13 3, 316 Cb.316. 316L. 316 Ti.

Features and Applications :

* Rutile-coated low-carbon electrode for use in tanks, pipes and equipments made of Cr-Ni-Mo low-carbon steels which are used in food, textile, chemical and paint industries.
* Weld metal is resistant resistant to acid, corrosion.
* Serviceability at temperatures up to 400 °C.
* Requirement of re-drying for minimum 2 hours at the temperatures 300 °C

Welding Positions :



Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
306267	2.50 x 250	3/32 x 10"	50-90	1500
306268	3.20 x 350	1/8 x 14"	80-120	3500
306269	4.00 x 350	5/32 x 14"	110-160	5135

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX B 316 L

Standards :

TS EN ISO 3581 - A	:	E 19 12 3 LB 22
EN ISO 3581 - A	:	E 19 12 3 LB 22
AWS A5.4	:	E 316 L-15

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Ni	Cr
0.03	0.45	1.35	2.75	11.5	18.9

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/+20 °C)	Elongation (L_o=5d_o)(%)
min. 360	550-700	min.55 J	min. 35

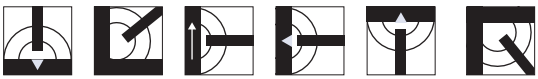
Typical Base Material Grades :

* X10CrNiMoNb 18 12, X2CrNiMo 18 14 3, X5CrNiMo 17 13 3, X2CrNiMo 17 13 2, X2CrNiMoN 17 12 2, X5NiMo 17 12 2, X5CrNiMoTi 17 12 2, X6CrNiMoNb 17 12 2, X2CrNiMoN 17 13 3, 316 L, 316, 316 Cb, 316 Ti

Features and Applications :

* Low-carbon alloyed-core wire austenitic electrode with basic coating for use in all industries where analogous steels, including higher carbon grades and ferritic 13% Cr types,are welded.High ductility of weld metal,therefore preferably used for welding of heavy sections.Very good out-of-position weldability.Good low-temperature ductility down to -196°C. Resistance to intergranular corrosion up to 400°C. * No requirement of preheating or postweld heat treatement of weld metal.
* Re-drying : 150 - 200°C / 2 h

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300538	2.50 x 250	3/32 x 10”	60-80	1440
300539	3.20 x 350	1/8 x 14”	80-110	3520
302456	4.00 x 350	5/32 x 14”	110-140	4570

Approvals :

TSE, CE, GOST-R

GeKa

ELOX RS 316

Standards :

TS EN ISO 3581 - A	:	E 19 12 2 R 53
EN ISO 3581 - A	:	E 19 12 2 R 53
AWS A5.4	:	E 316 - 26

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Ni	Cr
0.07	0.9	1.0	2.7	11.0	18.5

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 410	640-740	min.55 J	min. 30

Typical Base Material Grades :

* X5CrNiMo 17 13 3, X10CrNiMo 18 10, X6 CrNiMoTi 17 12 2, X5CrNiMo 17 12 2, G-X10CrNiMo 18 10, 316, 316 Ti, 317.

Features and Applications :

* Used for welding of Cr-Ni-Mo alloyed steels, joint of stainless steel to carbon steels and used for surfacing of stainless steel on carbon steels.
* The efficiency of weld metal is approx. 150%.
* It is synthetic electrode and is resistant to high current.
* Re-drying : 300-350°C / min. 2 h

Welding Positions :

Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300613	2.50 x 350	3/32 x 14"	90 - 120	3310
300614	3.20 x 350	1/8 x 14"	110 - 160	5480
300615	4.00 x 350	5/32 x 14"	150 - 190	8080
300616	5.00 x 350	3/16 x 14"	180 - 220	11400

Approvals :

TSE, CE

GeKa®

ELOX R 317 L

Standards :

TS EN ISO 3581 - A	:	E Z 19 13 4 LR 12
EN ISO 3581 - A	:	E Z 19 13 4 LR 12
AWS A5.4	:	E 317 L - 16

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Ni	Cr
<0.04	0.80	0.9	3.2	12.5	18.7

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 400	570-700	min.47 J	min. 30

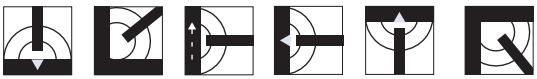
Typical Base Material Grades :

* X2 CrNiMoN 17 13 3, X2CrNiMoN 17 13 5, X2CrNiMoN 18 18 3, X2CrNiMoN 18 13, X4CrNiMoN 19 16 5, X4CrNiMoN 22 15, X2CrNiMo 18 14 3, X2CrNiMo 18 16 4, X10CrNiMoTi 18 12, 316 L, 316 Cb, 317, S 31726

Features and Applications :

* Reduces the possibility of intergranular carbide precipitation,providing increase in resistance to intergranular corrosion without use of stabilizers such as niobium or titanium.
* Rutile-basic coated alloyed-core wire electrode for corrosion-resistant CrNi steels of increased Mo-contents.
* Re-drying : 300 - 350°C / min. 2 h

Welding Positions :



Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302266	2.50 x 250	3/32 x 10"	50-90	1570
302267	3.20 x 300	1/8 x 14"	80-120	3470
302255	4.00 x 350	5/32 x 14"	80-120	5100

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX R 318

Standards :

TS EN ISO 3581 - A	:	E 19 12 3 Nb R 32
EN ISO 3581 - A	:	E 19 12 3 Nb R 32
AWS A5.4	:	~E 318 - 16

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Ni	Cr	Nb
0.04	0.8	0.8	2.8	11.0	19.4	+

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 390	580-750	min.47 J	min. 30

Typical Base Material Grades :

* X6CrNiMoTi 17 12 2, X6CrNiMoNb 17 12 2, X5CrNiMo 17 13 2, G-X5CrNiMo 18 10, X10CrNiMoNb 18 12, X5CrNiMo 17 13 3, G-X10CrNiMo 18 10, G-X10CrNiNb 18 10, 316 Ti, 316 Cb, 316 L

Features and Applications :

* Used for the welding of tanks and pipes made of Cr-Ni-Mo-alloyed, stabilized steels which are used in food, chemical textile and paint industries.
* The weld metal stabilized by Nb is resistant to temperatures up to +400°C.
* Re-drying : 250 - 300°C / min. 2 h

Welding Positions :

Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300574	2.00 x 250	5/64 x 10”	40-60	1000
300575	2.50 x 250	3/32 x 10”	50-90	1440
300576	3.20 x 300	1/8 x 12”	80-120	3040
300577	3.20 x 350	1/8 x 14”	80-120	3530
300578	4.00 x 350	5/32 x 14”	110-160	5240

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX B 318

Standards :

TS EN ISO 3581 - A	:	E 19 12 3 Nb B 22
EN ISO 3581 - A	:	E 19 12 3 Nb B 22
AWS A5.4	:	E 318 - 15

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Ni	Cr	Nb
0.04	0.45	1.45	2.75	11.5	20.0	+

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 390	590-730	min.55 J	min. 30

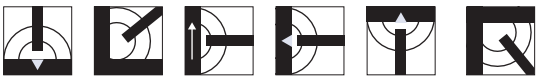
Typical Base Material Grades :

* X6CrNiMoTi 17 12 2, X6CrNiMoNb 17 12 2, X5CrNiMo 17 13 2,G-X5CrNiMo 18 10, X10CrNiMoNb 18 12, X5CrNiMo 17 13 3,G-X10CrNiMo 18 10, G-X10CrNiNb 18 10, 316, 316 Ti, 316Cb, 316 L

Features and Applications :

*Stabilized alloyed-core wire austenitic electrode with basic coating.Intended for use in all industries where analogous steels,including ferritic 13% chromium steels,are welded.Weld metal has high ductility,therefore preferably used for heavy sections.Very good out-of-position weldability.Resistant to intergranular corrosion up to 400°C.The weld metal does not require preheating or postweld heat treatement.
* Re-drying : 150 - 200°C / 2 h

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302720	2.50 x 250	3/32 x 10”	60 - 80	1450
302721	3.20 x 350	1/8 x 14”	80 - 110	3500
302722	4.00 x 350	5/32 x 14”	110 - 150	4600

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX B 327

Standards :

TS EN ISO 3581 - A	:	E 25 4 B 22
EN ISO 3581 - A	:	E 25 4 B 22

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr
0.12	0.4	1.3	5.0	25.5

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 500	650-780	min.30 J	min. 15

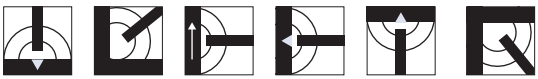
Typical Base Material Grades :

* X20CrNiSi 25 4, G-X40CrNiSi 27 4, X10 CrAl 7, X10CrAl 13, X10CrAl 18, X10CrAl 24, G-X30CrSi 6, G-X40CrSi 17, 327.

Features and Applications :

* Used for the fabrication of furnace, boilers, etc. that made of heat resistant steels (CrNi and CrNiAl alloyed steels).
* For furnace requiring elevated resistance to reducing and oxidizing sulphurous gases as well as for final passes of weld joints in heat-resistant CrSiAl-steels.
* Scaling resistance up to 1100 °C.
* Re-drying : 150 - 200 °C / min. 2 h

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302712	2.50 x 250	3/32 x 10”	50-80	1350
302713	3.20 x 350	1/8 x 14”	80-105	3000
302714	4.00 x 350	5/32 x 14”	100-130	4720

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX R 347

Standards :

TS EN ISO 3581 - A	:	E 19 9 Nb R 32
EN ISO 3581 - A	:	E 19 9 Nb R 32
AWS A5.4	:	E 347 - 16

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr	Nb
0.04	0.8	0.9	10.0	19.8	+

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 390	570-740	min.47 J	min. 35

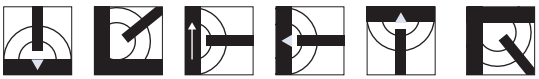
Typical Base Material Grades :

* X6CrNiNb 18 10, X6CrNiTi 18 10, G-X5CrNiNb 18 9, X5CrNi 18 10, X12CrNiTi 18 9, G-X10CrNi 18 8, X10CrNiNb 18 10, X2CrNi 19 11, 347, 321, 304, 304 LN

Features and Applications :

* Used for the welding of tanks and pipes in which milk and beer is kept.
* Also used for the welding of acid, gas, steam and water armatures.
* Resistant to acid and corrosion, stabilized by Nb. Weld metal can resist to temperatures up to +400°C.
* Re-drying : 300 - 350 °C / min. 2 h

Welding Positions :



Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300582	2.00 x 250	5/64 x 10”	40-60	940
300583	2.50 x 250	3/32 x 10”	50-90	1500
300584	3.20 x 300	1/8 x 12”	80-120	3000
300585	3.20 x 350	1/8 x 14”	80-120	3410
300586	4.00 x 350	5/32 x 14”	110-160	5150

Approvals :

TSE, CE, GOST-R

GeKa

ELOX B 347

Standards :

TS EN ISO 3581 - A	:	E 19 9 Nb B 22
EN ISO 3581 - A	:	E 19 9 Nb B 22
AWS A5.4	:	E 347 - 15

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr	Nb
0.04	0.45	1.4	10.2	19.8	0.4

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 400	600-740	min.55 J	min. 30

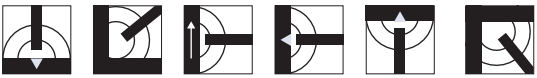
Typical Base Material Grades :

* X6CrNiNb 18 10, X6CrNiTi 18 10, X5CrNiNb 18 10, X5CrNi 18 10, X2CrNiN 18 10, X2CrNi 19 11, G-X5CrNiNb 19 10, G-X10 CrNi 18 8, 347, 321, 304, 304L, 304LN, 302, A296 CF 8 C, A 157 C9, A 320 B 8 C and D.

Features and Applications :

* Stabilized alloyed-core wire austenitic electrode with basic coating for use in all industries where similar steel types as well as ferritic 13% chromium steels are welded.
* High ductility of the weld metal, therefore preferable for welding heavy sections.
* Very good out-of-position weldability Good low-temperature-ductility down to -196 °C.
* Resistant to intergranular corrosion up to 400 °C.
* Weld metal does not require preheating or postweld heat treatment.
* Re-drying : 150-200 °C / 2h

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300551	2.50 x 250	3/32 x 10”	60-80	1400
300552	3.20 x 350	1/8 x 14”	80-120	3150
302711	4.00 x 350	5/32 x 14”	100-150	5103

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX R 385

Standards :

TS EN ISO 3581 - A	:	E Z 20 25 5 Cu L NR 32
EN ISO 3581 - A	:	E Z 20 25 5 Cu L NR 32
AWS A5.4	:	E 385 - 16

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Ni	Cr	Cu
<0.03	0.75	1.0	4.5	25.0	20.0	1.50

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 400	550-700	min.47 J	min. 30

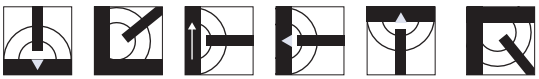
Typical Base Material Grades :

* X5 NiCrMoCuNb20 18, X5 NiCrMoCuTi 20 18, X2 NiCrMoCu 25 20 5, X5 NiCrMoCuNb 22 18, G-X7 CrNiMoCuNb 18 18, G-X7 NiCrMoCuNb 25 20 317L, 904L

Features and Applications :

* Used for fabrication of equipment and vessels / storage of sulfuric acid and phosphoric acid. The weld has resistance to pitting corrosion, stress corrosion and intergranular corrosion.
* Re-drying : 300 °C / min. 2 h

Welding Positions :



Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302715	2.50 x 250	3/32 x 10"	50 - 90	1570
302269	3.20 x 350	1/8 x 14"	80 - 120	3470
302716	4.00 x 350	5/32 x 14"	110 - 160	5200

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX B 385

Standards :

TS EN ISO 3581 - A	:	E Z 20 25 5 Cu L B 22
EN ISO 3581 - A	:	E Z 20 25 5 Cu L B 22
AWS A5.4	:	E 385 - 15

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Ni	Cr	Cu	Nb
<0.025	0.40	2.20	3.5	25.0	22.0	2.20	0.35

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 380	600-700	80 J	min. 35

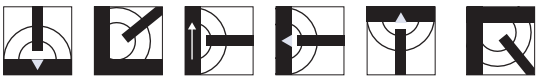
Typical Base Material Grades :

* X5NiCrMoCuNb 20 18, X5NiCrMoCuTi 20 18, X2NiCrMoCu 25 20 5,X5NiCrMoCuNb 22 18,G-X7 NiCrMoCuNb 25 20, G-X7 CrNiMoCuNb 18 18, 307, 307L, 904L

Features and Applications :

* Basic coated alloyed-core wire special electrode for corrosion-resistant high-molybdenum CrNi steels.
* Recomended for highly corrosive environments.
* Apart from its markedly good chemical resistance to stress corrosion cracking and crevice corrosion,the weld metal features high resistance to pitting.
* Particularly recomended for steels containing up to 5% molybdenum.
* Re-drying : 300°C / 2 h

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302717	2.50 x 250	3/32 x 10"	50-90	1573
304438	3.20 x 350	1/8 x 14"	80-120	3563
302719	4.00 x 350	5/32 x 14"	110-150	4570

Approvals :

TSE, CE, GOST-R

GeKa

ELOX B 410

Standards :

TS EN ISO 3581 - A	:	E 13 B 22
EN ISO 3581 - A	:	E 13 B 22
AWS A5.4	:	E 410 - 15

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr
0.07	0.7	0.8	13.5

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB) as welded	Hardness (HB) 750°C/2h/furnace
min. 450	650-800	min. 15	~350	200

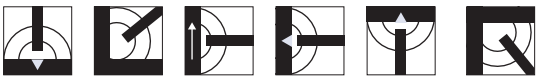
Typical Base Material Grades :

* X6Cr 13, X6CrAl 13, X15Cr 13, X10Cr 13, G-X10Cr 13

Features and Applications :

* 13% Cr used in the joining and surfacing welding of martensitic and martensitic-ferritic steels with 13% Cr and steel casts.(This electrode is also strong at filling in the surfaces of gas, water and steam armatures).
* Annealing at 750°C for 2 hours, cooling down to room temperature in the furnace.
* Re-drying: 150-200°C/min.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302692	2.50 x 250	3/32 x 10”	50-90	1400
300547	3.20 x 350	1/8 x 14”	80-120	3360
302693	4.00 x 350	5/32 x 14”	110-160	4500

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX B 410 Ni Mo

Standards :

TS EN ISO 3581 - A	:	E 13 4 B 42
EN ISO 3581 - A	:	E 13 4 B 42
AWS A5.4	:	E 410 Ni Mo - 15

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Ni	Cr
0.04	0.20	0.45	0.50	4.2	12.3

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/+20 °C)	Elongation (L_o=5d_o)(%)	Hardness (HB)
min. 500	min. 760	min.47 J	min. 15	~360

Typical Base Material Grades :

X5CrNi 13 4, G-X5CrNi 13 4, X6Cr13, G-X5CrNi 13 6

Features and Applications :

* Electrode with rutile coating on alloyed core-wire
* Applicability in welding Cr-Ni –alloyed austenitic high-temperature steels.
* Usability in welding at all positions except for vertical downward position.
* Applicability in joint-welding and surfacing of heat-resisting similar-type steels and steel castings.
* Serviceability at temperatures of values up to 700 °C
* Resistance to fracture and corrosion.
* Creep resistance at high temperatures being higher than that of the electrode ELOX R 308 L
* Re-drying: 300-350°C / 2h

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302694	2.50 x 250	3/32 x 10”	50 - 90	1400
302695	3.20 x 350	1/8 x 14”	90 - 110	3080
302696	4.00 x 350	5/32 x 14”	110 - 160	4600

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX BS 410 Ni Mo

Standards :

TS EN ISO 3581 - A	:	E 13 4 B 62
EN ISO 3581 - A	:	E 13 4 B 62
AWS A5.4	:	E 410 NiMo - 25

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Ni	Cr
0.05	0.3	0.5	0.5	4.5	11.5

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
min. 600	800-980	min.47 J	min. 15	~270

Typical Base Material Grades :

* X5CrNi 13 4, G-X5CrNi 13 4, X6Cr 13, G-X5CrNi 13 6

Features and Applications :

* Used in similar chemical composition in cast and wrought forms. Application areas are turbines, valve bodies, high pressure piping, compressor, flanges and power generation.
* Re-drying : 300°C / min. 2h

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302697	2.50 x 350	3/32 x 14”	70-110	1960
300526	3.20 x 350	1/8 x 14”	110-150	3636
300527	4.00 x 350	5/32 x 14”	150-190	4500

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX B 430

Standards :

TS EN ISO 3581 - A	:	E 17 B 22
EN ISO 3581 - A	:	E 17 B 22
AWS A5.4	:	E 430 - 15

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr
0.08	0.5	0.4	17.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB) as welded	Hardness (HB) 750°C/2h/furnace
min. 350	540-660	min. 20	~270	~200

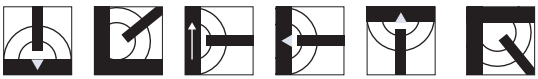
Typical Base Material Grades :

X6CrTi 17, X20CrNi17-2, 431,430 Ti

Features and Applications :

* Mainly used for corrosion-resistant, wear-resistant surfacing applications.
* Preferably for surfacing on sealing faces of gas, water and steam valves.
* Scaling resistance up to 900 °C.
* Weld metal protector hardness up to 500°C.
* Re-drying : 150-200 °C / min. 2 h

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302698	2.50 x 250	3/32 x 10"	50 - 90	1400
300550	3.20 x 350	1/8 x 14"	80 - 120	3000
302699	4.00 x 350	5/32 x 14"	110 - 160	4600

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX B 430 Mo

Standards :

TS EN ISO 3581 - A	:	E Z 17 Mo B 22
EN ISO 3581 - A	:	E Z 17 Mo B 22

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Cr
0.20	0.5	0.5	1.2	17.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB) as welded	Hardness (HB) 750°C/2h/furnace
min. 490	650-750	min. 15	~400	~250

Typical Base Material Grades :

* GS-C 25, X22CrNi 17, 41 Cr 4

Features and Applications :

* It is used for corrosion resistant steels contains max. % 0.2 C inside and surface coating applications of unaloyed and low alloy steels for example gas, water and vapour armature.
* Re-drying : 300-350 °C / min. 2 h

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
301010	2.50 x 250	3/32 x 10"	50-90	1650
301011	3.20 x 350	1/8 x 14"	80-120	3030
302700	4.00 x 350	5/32 x 14"	110-160	4300

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX R 2209

Standards :

TS EN ISO 3581 - A	:	E 22 9 3 N LR 32
EN ISO 3581 - A	:	E 22 9 3 N LR 32
AWS A5.4	:	E 2209 - 17

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Ni	Cr	N
0.03	0.50	0.9	2.7	10.0	22.0	0.12

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20 °C)	Elongation ($L_o=5d_o$)(%)
min. 520	690-850	min.47 J	min. 20

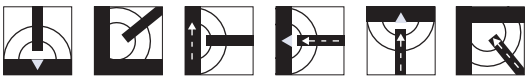
Typical Base Material Grades :

* X2CrNiMoN22-5-3, X2CrNiMoN23-4, X2CrNiMoN22-5-3 with X2CrNiMoNb18-12, X2CrNiMoN22-5-3 with P235GH/ P265GH, S255N, P295GH, S355N, 16Mo3

Features and Applications :

* Applicability in welding dublex steels.
* Suitability to joint- and surfacing applications of similar-type austenitic steels and cast steels.
* Electrode coating of rutile character.
* Excellent weldability.
* Very high resistance to stress corrosion cracking and to corrosion at particularly chlorious and sulphuruous media.
* In the liquid conditions at chemical industry, serviceability at temperatures of values up to 280 °C.
* Re-drying : 300 - 350 °C / min. 2 h

Welding Positions :



Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302701	2.50 x 250	3/32 x 10"	50-90	1570
302268	3.20 x 350	1/8 x 14"	80-120	3450
302442	4.00 x 350	5/32 x 14"	110-160	5200

Approvals :

TSE, CE, ABS, BV, GOST-R, CLASS NK

GeKa®

ELOX B 2209

Standards :

TS EN ISO 3581 - A	:	E 22 9 3 N LB 22
EN ISO 3581 - A	:	E 22 9 3 N LB 22
AWS A5.4	:	E 2209 - 15

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Mo	Ni	Cr	N
0.03	0.40	1.30	2.6	9.0	22.0	0.14

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/+20°C)	Impact Strength (ISO-V/-60°C)	Elongation (L_o=5d_o)(%)
min. 520	690-850	min. 80 J	min. 40 J	min. 30

Typical Base Material Grades :

* X2CrNiMoN22-5-3, X2CrNiMoN23-4, X2CrNiMoN22-5-3 with X2CrNiMoNb18-12, X2CrNiMoN22-5-3 with P235GH/ P265GH, S255N, P295GH, S355N, 16Mo3

Features and Applications :

* Applicability in welding dublex steels.
* Suitability to joint- and surfacing applications of similar-type austenitic steels and cast steels.
* Electrode coating of basic character.
* Excellent weldability.
* Very high resistance to stress corrosion cracking and to corrosion at particularly chlorious and sulphuruous media.
* In the liquid conditions at chemical industry, serviceability at temperatures of values up to 280 °C.
* Re-drying : 300 - 350 °C / min. 2 h

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302702	2.50 x 250	3/32 x 10”	60-80	1550
302473	3.20 x 300	1/8 x 12”	80-110	2850
302475	4.00 x 350	5/32 x 14”	110-140	5060

Approvals :

TSE, CE, GOST-R

GeKa®

ELOX B 2594

Standards :

AWS A5.4 : E 2594-15

Composition of Weld Metal %(Typical):

C	Cr	Ni	Mn
0.035	24.0	8.60	1.45

Si	Ni
0.35	0.25

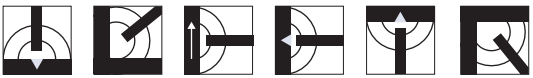
Mechanical Properties %(Typical) :

Tensile Stregth (N/mm^2)	Elongation ($L_o=5d_o$)(%)
min. 760	min. 15

Features and Applications :

* Basic type electrode which is used especially for the welding of duplex steels. It provides high yield and tensile strength and the weld metal is resistant to pitting corrosion.

Welding Positions :



Current Type :

D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight Kg
306333	2.50 x 250		60 - 80	1470
306334	3.20 x 300		80 - 120	2870

Approvals :

GeKa®

ELOX B 16-8-2

Standards :

TS EN ISO 3581-A	:	E Z 16 8 2 B 22
EN ISO 3581-A	:	E Z 16 8 2 B 22
AWS A5.4	:	E 16 8 2-15

Chemical Composition of Weld Metal- % (Typical) :

C	Cr	Ni	Mo
0.05	16.0	8.5	1.30

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Impact Strength (ISO-V/ +20°C)
min. 410	min. 550	min. 35	min. 47 J

Typical Base Material Grades :

* Basic coated electrode is used primarily for welding stainless steel, such as types 16-8-2, 316, and 347, for high pressure, high-temperature piping systems.
* A controlled chemical composition and ferrite number (<5 FN) of weld metal gives good creep, oxidation and general corrosion resistance.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
306053	3.20 x 350	1/8 x 14”	100 - 130	3212

Approvals :

CE

GeKa®

ELNIKEL

Standards :

TS 9463 EN ISO 1071	:	E C Ni-CI 1
EN ISO 1071	:	E C Ni-CI 1
AWS A5.15	:	E Ni-CI

Chemical Composition of Weld Metal- % (Typical) :

C	Ni
0.50	rest

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
200	250	3	~170

Typical Base Material Grades :

* Joint welding of grey cast iron, temper cast iron, nodular cast iron as well as joint welding of cast iron with steel, stainless steel and Monel metal.
* Ni cored stick electrode.
* Welding in short passes, and gently striking the bead of each pass with a hammer when the bead is hot are required.
* Ni-cored stick electrode.

Welding Positions :

Current Type :

D.C.(-)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300520	2.50 x 300	3/32 x 12"	60 - 90	1860
300521	3.20 x 300	1/8 x 12"	90 - 110	2847
300835	4.00 x 400	5/32 x 16"	110 - 130	5500

Approvals :

TSE, CE, GOST-R

GeKa

ELNIKEL-HD

Standards :

TS 9463 EN ISO 1071	:	E C Ni-Cl 1
EN ISO 1071	:	E C Ni-Cl 1
AWS A5.15	:	E Ni-Cl

Chemical Composition of Weld Metal- % (Typical) :

Fe	Ni
7.0	rest

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
200	250	3	~170

Typical Base Material Grades :

* Ni cored stick electrode.
* Welding in short passes, and gently striking the bead of each pass with a hammer when the bead is hot.
* Joint welding of grey cast iron, temper cast iron, nodular cast iron and joint welding of cast iron with steel.
* Weld metal recovery of approx. 110%.

Welding Positions :

Current Type :

D.C.(-) / A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
306066	4.00 x 400	5/32 x 16”	110 - 140	6820

Approvals :

TSE, CE

GeKa®

ELNIKEL-NC

Standards :

TS 9463 EN ISO 1071	:	E C Ni-Cl 1
EN ISO 1071	:	E C Ni-Cl 1
AWS A5.15	:	E Ni-Cl

Chemical Composition of Weld Metal-
% (Typical) :

C	Ni
0.50	min. 96

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
200	250	3	~170

Typical Base Material Grades :

* Non-conductive, basic-graphite-coated nickel stick electrode.
* Repair welding of problematic cast iron parts of irregular shapes.
* Joint welding of cast iron parts, and cast iron parts to steel parts.
* Pre-heating to 200 °C is recommended for thick-walled components.
* Welding in short runs, and peening are required.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302723	2.50 x 300	3/32 x 12”	70 - 100	1950
302724	3.20 x 300	1/8 x 12”	90 - 110	3050
302726	4.00 x 400	5/32 x 16”	110 - 130	5250

Approvals :

TSE, CE, GOST-R

GeKa

ELNIFER

Standards :

TS 9463 EN ISO 1071	:	E C NiFe Cl 1
EN ISO 1071	:	E C NiFe Cl 1
AWS A5.15	:	E NiFe-Cl

Chemical Composition of Weld Metal- % (Typical) :

Ni	Fe
>45.0	>40.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
200	350	6	~190

Typical Base Material Grades :

* Welding of grey cast iron, temper cast iron.
* Joint welding of cast iron with hard-to-weld steels or cast parts.
* Ni-Fe cored stick electrode.
* Welding in short passes, and hammering the bead of each pass through gentle strikes are required.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300516	2.50 x 300	3/32 x 12"	60 - 90	1730
300518	3.20 x 300	1/8 x 12"	80 - 120	2670
300519	4.00 x 400	5/32 x 16"	110 - 150	5260

Approvals :

TSE, CE, GOST-R

GeKa

ELMONEL

Standards :

TS 9463 EN ISO 1071	:	E C NiCu-B1
EN ISO 1071	:	E C NiCu-B1
AWS A5.15	:	~E NiCu B

Chemical Composition of Weld Metal- % (Typical) :

Ni	Cu
~68.0	~30.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
min. 190	300	min. 15	~140

Typical Base Material Grades :

* Soft joint welding of grey cast iron.
* Filler welding, repair welding and joint welding of cast iron with steel.
* Welding by short passes and gently striking the bead of each pass with a hammer when the bead is hot are required.
* Ni-Cu-Cored stick electrode.

Welding Positions :

Current Type :

D.C.(-),
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300509	2.50 x 300	3/32 x 12"	60 - 90	1600
300510	3.20 x 300	1/8 x 12"	90 - 110	2750
300514	4.00 x 400	5/32 x 16"	110 - 130	5520

Approvals :

TSE, CE, GOST-R

GeKa

ELFER

Standards :

TS 9463 EN ISO 1071 :	EC Fe - 2
EN ISO 1071 :	EC Fe - 2

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	V
0.07	1.0	0.8	8.0

Mechanical Properties :

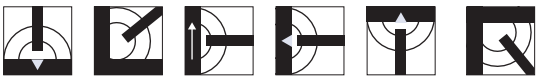
Weld Metal Hardness (HB)
~250

Typical Base Material Grades :

* Repair of welding defects,for facing of worn-out parts of mold of automobile body,shielding process of metal frictioning works. *Good results at joint welding of steel with cast iron.

* Basic coated,Barium compound free,iron base,Vanadium alloyed cast iron electrode, which is used for repairing and maintanance of defective lameller and nodular cast iron equipment and machine parts.Also used for hard face welding of wear susceptible of cast iron parts. Adventages of this Nickel free cast iron electrode is;*The deposit metal is a close color match to cast iron, *The similaritiy of chemical composition of weld metal and cast iron assures similar heat expansion and contraction charactheristics,as a result there is no subject about thermal deformation.*When welding,electrode is not hot,as a result welding can be done uninterrupted and more quickly.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302249	2.50 x 350	3/32 x 12"	70 - 100	2350
302250	3.20 x 350	1/8 x 12"	100 - 120	3650
302727	4.00 x 350	5/32 x 16"	120 - 160	5260

Approvals :

TSE, CE, GOST-R

GeKa®

ELHARD 250

Standards :

TS EN 14700	:	E Fe 1
EN 14700	:	E Fe 1
DIN 8555	:	E 1-UM-250

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Cr
0.15	1.0	0.8	1.0

Mechanical Properties :

Weld Metal Hardness (HB)
240 - 280

Typical Base Material Grades :

* For tough build-ups on rails, gearwheels, shafts, gear parts, and couplings.
*For buffer layers on carbon steels and low-alloyed steels with concurrent extreme compressive stress on anti-wear surfaces.
* Re-drying : 300 °C / 2h

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300462	3.20 x 350	1/8 x 14"	100 - 140	3670
300464	4.00 x 450	5/32 x 18"	140 - 180	6820
300465	5.00 x 450	3/16 x 18"	180 - 230	10570

Approvals :

CE, GOST-R

GeKa

ELHARD 300

Standards :

TS EN 14700	:	E Fe 1
EN 14700	:	E Fe 1
DIN 8555	:	E1-UM-300

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Cr
0.15	1.3	0.5	1.5

Mechanical Properties :

Weld Metal Hardness (HB)
280 - 330

Typical Base Material Grades :

* Basic coated electrode for medium hardness value.
* For tough build-ups, particularly on Mn-Mo-alloyed wing and junction rails with mechanical strength of minimum 880 N/mm². * Deposit offers ease of machining.
* Pre-heating temperature 250-350°C.
* Re-drying : 300°C / 2 h

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300471	3.20 x 350	1/8 x 14"	100 - 140	3751
300472	4.00 x 450	5/32 x 18"	140 - 180	6775
300473	5.00 x 450	3/16 x 18"	180 - 230	10500

Approvals :

CE, GOST-R

GeKa®

ELHARD 300 R

Standards :

TS EN 14700	:	E Fe 1
EN 14700	:	E Fe 1
DIN 8555	:	E1-UM-300

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Cr
0.14	0.5	0.5	1.8

Mechanical Properties :

Weld Metal Hardness (HB)	Weld Metal Hardness (HB) 900°C/cooled on water/tempered
300 - 330	450 - 470

Typical Base Material Grades :

* Basic coated electrode for medium hardness value.
* For tough build-ups, particularly on Mn-Mo-alloyed wing and junction rails with mechanical strength of minimum 880 N/mm². * Deposit offers ease of machining. * It can use with alternating current.
* Pre-heating temperature 250-350°C.
* Re-drying : 300°C / 2 h

Welding Positions :

Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300466	3.20 x 350	1/8 x 14”	90 - 135	3645
301119	4.00 x 450	5/32 x 18”	135 - 180	6800

Approvals :

CE, GOST-R

GeKa

ELHARD 350

Standards :

TS EN 14700	:	E Fe 1
EN 14700	:	E Fe 1
DIN 8555	:	E1-UM-350

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Cr
0.17	1.5	0.8	2.0

Mechanical Properties :

Weld Metal Hardness (HB)
330 - 380

Typical Base Material Grades :

* Basic-coated electrode.
* Wear resistant surfacing on Mn-Cr-V alloyed frogs, track rollers, idlers, tracks, slideways and drive sprockets.
* The deposits are machinable.
* Re-drying : 300°C / 2 h

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300468	3.20 x 350	1/8 x 14"	100 - 140	3600
300469	4.00 x 350	5/32 x 18"	140 - 180	6750
300470	5.00 x 450	3/16 x 18"	180 - 230	10540

Approvals :

CE, GOST-R

GeKa®

ELHARD 400

Standards :

TS EN 14700	:	E Fe 1
EN 14700	:	E Fe 1
DIN 8555	:	E1-UM-400

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Cr
0.14	1.50	0.60	2.00

Mechanical Properties :

Weld Metal Hardness (HB)
400 - 430

Typical Base Material Grades :

* Used for dozer, excavator, mineral mining machine equipment like ladle, idler, idler roller and their repair welding.
* Re-drying : 300°C / 2h

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
305764	4.00 x 450	5/32 x 18"	140-180	6750
305765	5.00 x 450	3/16 x 18"	180-230	10900

Approvals :

CE

GeKa®

ELHARD 410 R

Standards :

TS EN 14700	:	E Fe 7
EN 14700	:	E Fe 7
DIN 8555	:	E5-UM-400

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Cr	Ni	Mo
0.05	0.45	12.0	4.5	0.6

Mechanical Properties :

Weld Metal Hardness (HB)
440 - 460

Typical Base Material Grades :

* Rutile type electrode with high recovery.
* Welding for stainless of similar chemical compositions or cast steels having Cr of ~12%.
* Used of surfacing of carbon steels to resist corrosion, erosion and abrasion.
* Used in chemical Industry, Steel Industry and also at continuous casting rolls and surfacing steel mill rolls.

Welding Positions :

Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
306270	4.00 x 350	5/32 x 14''	140 - 180	6430

Approvals :

CE

GeKa®

ELHARD 500

Standards :

TS EN 14700	:	E Z Fe 1
EN 14700	:	E Z Fe 1
DIN 8555	:	E1-UM-50

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Cr
0.3	1.3	1.2	~5.5

Mechanical Properties :

Weld Metal Hardness (HRC)
~50

Typical Base Material Grades :

* Used in hardfacing applications of guide roller, rope pulleys, ladle lugs etc. for land, mineral and cool sector. Weld metal has strength against friction and wear.
Pre-heating is generally 200 °C according to base material.
* Re-drying : 300°C / 2 h

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300475	3.20 x 350	1/8 x 14"	100 - 140	3600
303777	4.00 x 450	5/32 x 18"	140 - 180	7010
302463	5.00 x 350	3/16 x 14"	180 - 230	7950

Approvals :

CE, GOST-R

GeKa

ELHARD 600

Standards :

TS EN 14700	:	E Fe 8
EN 14700	:	E Fe 8
DIN 8555	:	E6-UM-60 P

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Mo	V	Cr
0.5	0.5	1.1	1.0	1.0	7.5

Mechanical Properties :

Weld Metal Hardness (HRC)	780 - 820°C Cooling in Furnace	1000 - 1050°C Hardening in Oil	300 - 400°C Tempered
55 - 59	~250 HB	~60 HRC	53 - 55 HRC

Typical Base Material Grades :

* Final pass-welding of parts of earth-moving and mining equipment with high resistance to abraison, as well as of parts of hard manganese steels and frags.
* Weld metal is resistant to abraison.
* Re-drying : 300°C / 2 h

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300500	2.50 x 350	3/32 x 14"	60 - 100	2220
300501	3.20 x 350	1/8 x 14"	100 - 140	3570
300502	4.00 x 450	5/32 x 18"	140 - 180	6750
300503	5.00 x 450	5/32 x 18"	180 - 230	10900

Approvals :

CE, GOST-R

GeKa®

ELHARD 600 S

Standards :

TS EN 14700	:	E Fe 8
EN 14700	:	E Fe 8
DIN 8555	:	E6-UM-60 P

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Cr
0.50	1.80	9.00

Mechanical Properties :

Weld Metal Hardness As Welded (HRC)	Soft Annealing	Hardening	Tempered
54 - 58	780 - 820°C Slow Cooling in Furnace	1000 - 1050°C in oil	300 - 400°C

Typical Base Material Grades :

* Applicability in final-layer hardfacing of parts of earth and mineral mining machines, impact drilling and crushing devices, guide springs, edges of cutting tools, hard manganese steels, bucket edges and teeth, all of which are made of alloyed or unalloyed steels, as well as in other materials required to have high resistance to wear.
* Electrode of basic type with thick coating.* Inclusion of chromium-silicon alloy, very hard electrode.
* Weld metal with ductile and cracking-resistant behaviors.* Crack resistance to impact forcing due to its high ductility.* Machinability of weld metal through grinding only.* Requirement of re-drying at 300 °C for 2 hours for moistened electrodes.* Recommended pre-heating at 200-300 °C for welding thick work pieces and materials tending to get hardened.* Requirement of 2-3 layers hardfacing to obtain the highest resistance to wear.
* Suitability of harder and/or higher-quality steels to buffer-layering with the GeKa electrodes LASER B 50, TEMPO B 63, or, in some cases, with the GeKa electrodes such as ELOX B307, ELOX R 312.
* Re-drying : 300° C / 2h.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
303476	2.50 x 350	3/32 x 14"	60 - 100	2200
303472	3.20 x 350	1/8 x 14"	100 - 140	3570
303470	4.00 x 450	5/32 x 18"	140 - 180	6750
301059	5.00 x 450	5/32 x 18"	180 - 230	10900

Approvals :

CE, GOST-R

GeKa®

ELHARD 600 R

Standards :

TS EN 14700	:	E Fe 8
EN 14700	:	E Fe 8
DIN 8555	:	E6-UM-60 P

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Mo	V	Cr
0.5	0.3	1.1	1.0	1.0	7.0

Mechanical Properties :

Weld Metal Hardness (HRC)
55 - 59

Typical Base Material Grades :

* Electrode covering of rutile character.
* Usability with a welding transformer (Weldability with AC).
* Weld metal with ductile and cracking-resistant behaviors.
* Requirement of re-drying at the temperature range of 300-350°C for 2 hours.
* Applicability in final layer welding of earth and mineral mining machines, impact drilling and crushing devices, guide springs,edges of cutting tools, hard manganese steels, bucket edges and teeth

Welding Positions :

Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300497	3.20 x 350	1/8 x 14”	90 - 135	4095
300498	4.00 x 450	5/32 x 18”	135 - 180	8170
300499	5.00 x 450	3/16 x 18”	180 - 230	12020

Approvals :

CE, GOST-R

GeKa®

ELHARD 650

Standards :

TS EN 14700	:	E Fe 6
EN 14700	:	E Fe 6
DIN 8555	:	E6-UM-60

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Mo	Nb	Cr
0.55	1.35	0.75	1.2	0.6	6.8

Mechanical Properties :

Weld Metal Hardness (HRC)
56 - 59

Typical Base Material Grades :

* Used in hardfacing applications of earth-moving industry and wearing parts of grinders etc.
* Can be used directly. After three or more passes, buffer-layering must be done according to material grade. (Elhard 63, Elhard 250, Elox R 307 and Elhard 14 Mn)
* For hardenable steels, preheat temperature is 100-300°C.
* Re-drying : 300° / 2h.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300452	3.20 x 350	1/8 x 14”	100 - 140	3846
300453	4.00 x 450	5/32 x 18”	140 - 180	6896
300454	5.00 x 450	3/16 x 18”	180 - 230	11110

Approvals :

CE, GOST-R

GeKa®

ELHARD 650 Si

Standards :

TS EN 14700	:	E Fe 2
EN 14700	:	E Fe 2
DIN 8555	:	E2-UM-60

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Cr
0.7	0.5	3.5	3.5

Mechanical Properties :

Weld Metal Hardness (HRC)
57 - 62

Typical Base Material Grades :

* Resistance to abrasion and shocks.
* Suitability for uses in harfacing worn parts of crushing, drilling, excavating, grinding machines in mines/quarries/soil crushing plants.
* Weld metal hardness can be exchange between 57 - 62 HRC according to welding current, number of passes, largeness of base metal and chemical compositon of base metal.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
305193	4.00 x 450	5/32 x 18"	140 - 180	6750
303532	5.00 x 450	3/16 x 18"	170 - 210	11200

Approvals :

CE, GOST-R

GeKa®

ELHARD 700

Standards :

TS EN 14700	:	E Fe 2
EN 14700	:	E Fe 2
DIN 8555	:	~E6-UM-60

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Mo	V	Cr
0.5	1.5	1.2	0.8	0.8	4.7

Mechanical Properties :

Weld Metal Hardness (HRC)
60 - 62

Typical Base Material Grades :

* Hardfacing of workpieces of steel, cast steel or hard Mn-steel exposed to a combination of impact, compression and abrasive wearing, such as cam shafts, gliding surfaces, gears, plough shares, rails, shunts, crosses, baffle plates, excavator parts, rope carrier wheels etc.
* Weld metal does not cracking
* Re-drying : 300-350°C / 2 h

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302733	3.20 x 350	1/8 x 14"	100 - 150	3700
302506	4.00 x 450	5/32 x 18"	140 - 180	7710
302734	5.00 x 450	3/16 x 18"	170 - 210	10750

Approvals :

CE, GOST-R

GeKa®

ELHARD 14 Mn

Standards :

TS EN 14700	:	EZ Fe 9
EN 14700	:	EZ Fe 9
DIN 8555	:	E 7-UM-200K
AWS A5.13	:	E FeMn-A

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Ni
0.60	13.5	0.1	3.0

Mechanical Properties :

Hardness (HB)	Hardness After Cold Deformation (HB)
180 - 220	~550

Typical Base Material Grades :

* Hardfacing of mining and rock-crushing machine parts as well as of hard manganese steels.
* Machinability of weld metal only if it is not hammered when it is cold, or, if it is not put into operation for a while.
* Re-drying at condition 300 °C / 2 h is required.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300457	3.20 x 350	1/8 x 14"	110 - 140	3750
300458	4.00 x 450	5/32 x 18"	150 - 180	7100
300459	5.00 x 450	3/16 x 18"	180 - 210	11170

Approvals :

CE, GOST-R

GeKa

ELHARD 40 W

Standards :

TS EN 14700	:	E Fe 1
EN 14700	:	E Fe 1
DIN 8555	:	E3-UM-400GPTS

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Mo	V	W	Cr
0.2	1.1	0.8	0.6	0.4	0.5	3.2

Mechanical Properties :

Hardness (HB)
380 - 440

Typical Base Material Grades :

* Used in surface coating applications and dies made from hot work tool steels.
* According to the base material pre-heat and slow cooling can be done.
* Weld metal keep its hardness until 500 °C.
* Re-drying : 300 - 350 °C / 2h.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300506	3.20 x 350	1/8 x 14"	100 - 140	3700
300507	4.00 x 350	5/32 x 14"	140 - 180	5590

Approvals :

CE, GOST-R

GeKa®

ELHARD 56

Standards :

TS EN 14700	:	E Fe 8
EN 14700	:	E Fe 8
DIN 8555	:	E6-UM-60 S

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Mo	V	Cr
0.70	0.2	0.4	1.4	0.4	5.3

Mechanical Properties :

Hardness (HRC)
60 - 63

Typical Base Material Grades :

1.2361 1.2601
1.2363 1.2080
Carbon and low-alloyed steels

Features and Applications :

* Used in bending tools, deep drawing dies, cutting tools and blades made from cold work steels.
* For % 5 Cr Steels 150 - 250° ; for % 12 Cr Steels 400 - 500°C pre-heat recommended.
* Re-drying : 300°C / 2h

Welding Positions :

Current Type :

D.C.(-)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302735	3.20 x 350	1/8 x 14"	90 - 120	3400
302736	4.00 x 350	5/32 x 14"	120 - 150	4900

Approvals :

CE, GOST-R

GeKa

ELHARD 58

Standards :

TS EN 14700	:	E Fe 4
EN 14700	:	E Fe 4
DIN 8555	:	~E 4-UM-60

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Mo	Co	V	Cr
0.7	1.0	1.0	7.0	2.0	1.7	4.0

Mechanical Properties :

Hardness (HRC)
56 - 60

Typical Base Material Grades :

* Used in repairing of machining and cutting tools, tool bits, press dies and supports, fillers against strong abraison of excavating and detaching attachments.
* Weld deposit has high resistance to friction and wear.
* Re-drying : 300-350°C / 2 h

Welding Positions :

Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300477	3.20 x 350	1/8 x 14"	80 - 110	4200
300478	4.00 x 350	5/32 x 14"	110 - 140	5550

Approvals :

CE, GOST-R

GeKa®

ELHARD 60

Standards :

TS EN 14700	:	E Fe 14
EN 14700	:	E Fe 14
DIN 8555	:	E 10-UM-60 GRZ

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Cr
3.20	0.5	1.0	29.0

Mechanical Properties :

Hardness (HRC)
58 - 62

Typical Base Material Grades :

* On parts primarily exposed to abraison combined with light impact, such as conveyor screws, mixer blades and mud pumps.
* Requirement of re-drying for 2 hours at the temperatures between 300 °C and 350 °C.

Welding Positions :

Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300482	3.20 x 350	1/8 x 14''	110 - 140	4810
300483	4.00 x 350	5/32 x 14''	140 - 170	7960
300485	5.00 x 350	3/16 x 14''	170 - 210	11400

Approvals :

CE, GOST-R

GeKa®

ELHARD 62

Standards :

TS EN 14700	:	E Fe 16
EN 14700	:	E Fe 16
DIN 8555	:	~E 10-UM-60 GRZ

Chemical Composition of Weld Metal- % (Typical) :

C	Cr	Nb
6.5	24.0	7.5

Mechanical Properties :

Hardness (HRC)
~62

Typical Base Material Grades :

* On parts primarily exposed to abraison combined with light impact, such as conveyor screws, mixer blades and sand pumps.
* Weld metal has resistant to corrosion, friction and impact.
* It is not recommended overlap passes.
* Requirement of re-drying for minimum 2 hours at temperatures between 300 °C and 350 °C.

Welding Positions :

Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300486	3.20 x 350	1/8 x 14"	125 - 160	4985
300487	4.00 x 350	5/32 x 14"	140 - 200	7710
300488	5.00 x 350	3/16 x 14"	190 - 260	11970

Approvals :

CE, GOST-R

GeKa®

ELHARD 63

Standards :

TS EN 14700	:	E Z Fe 14
EN 14700	:	E Z Fe 14
DIN 8555	:	E 10-UM-60 GRZ
AWS A5.13	:	~E FeCr-A8

Chemical Composition of Weld Metal- % (Typical) :

C	Cr	Si	Mn
4.5	34.0	1.0	0.5

Mechanical Properties :

Hardness (HRC)
60 - 64

Typical Base Material Grades :

* Special coating, high-chromium carbide electrode for hardfacing operations to provide maximum resistance to extreme mineral abrasion.
* A typical application is stringer beads on earth-moving, cement mill and brick making equipment.
* Weld metal efficiency is ~ % 220.
* Re-drying : 300-350°C / min. 2 h

Welding Positions :

Current Type :

D.C.(+)(-)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300489	3.20 x 350	1/8 x 14"	125 - 160	5200
300490	4.00 x 350	5/32 x 14"	140 - 200	7200
300491	5.00 x 350	3/16 x 14"	190 - 260	12190

Approvals :

CE, GOST-R

GeKa

ELHARD 65

Standards :

TS EN 14700	:	E Fe 16
EN 14700	:	E Fe 16
DIN 8555	:	E 10-UM-65 GRZ

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Mo	V	W	Cr	Nb
4.5	0.3	1.0	5.0	1.7	2.5	23.5	4.0

Mechanical Properties :

Hardness (HRC)
63 - 67

Typical Base Material Grades :

* Super hardfacing electrode with very high content of carbide formers (Mo, V, W, Nb) for deposits subject to extreme sliding mineral abraison.
* Used in blast furnace cover mechanism, breakers, mixers, gimlet, non-steel and cement industry, mining coal industries, weld metal efficiency is ~ % 230.
* Re-drying : 300-350°C / min. 2 h

Welding Positions :

Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300492	3.20 x 350	1/8 x 14"	110 - 150	6150
300493	4.00 x 350	5/32 x 14"	140 - 200	9450
300494	5.00 x 350	3/16 x 14"	190 - 250	14850

Approvals :

CE, GOST-R

GeKa®

NIBAZ B 65

Standards :

TS EN ISO 14172	:	E-Ni 6625(NiCr22Mo9Nb)
EN ISO 14172	:	E-Ni 6625(NiCr22Mo9Nb)
AWS A5.11	:	E NiCrMo-3

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Mo	Ni	Fe	Cr	Ti	Nb
0.04	0.4	0.7	9.0	rest	5.0	21.0	+	3.5

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Impact Strength (ISO-V/-196°C)	Elongation ($L_o=5d_o$)(%)
min. 420	min. 760	min. 60 J	min. 35 J	min. 30

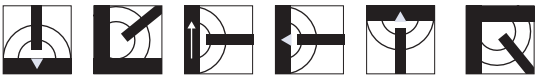
Typical Base Material Grades :

-1.4529 X2 NiCrMoCu 25 20 6
-1.4583 X10 NiCrMoNb 18 12
-1.4876 X10 NiCrAlTi 32 20 (incoloy800)
-1.5662 X8 Ni 9 (ASTM 9Ni)
-2.4816 NiCr 15 Fe (inconel 600)
-2.4856 NiCr 22 Mo 9 Nb (inconel 625)
-2.4858 NiCr 21 Mo (inconel 825)
-2.4951 NiCr 20 Ti (ASTM 75)
-2.4952 NiCr 20 TiAl (ASTM 80A)
-ASTM B443, B444, B446 (UNS N06625)

Features and Applications :

* High Molybdenium Nickel-base alloy electrode for creep-resistant steels,heat resisting steels, heat resisting and Cryogenic materials,dissimilar joints and high strength problem steels.
* Especially designed for Inconel 625 and Incoloy 825. * Re-drying cond. : 250-300 °C / 2 h.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
302728	2.50 x 250	3/32 x 10"	60 - 80	1600
300684	3.20 x 300	1/8 x 12"	70 - 100	3225
301197	4.00 x 350	5/32 x 14"	90 - 130	5200

Approvals :

CE, GOST-R

GeKa®

NIBAZ B 70

Standards :

TS EN ISO 14172	:	E-Ni 6082(NiCr20Mn3Nb)
EN ISO 14172	:	E-Ni 6082(NiCr20Mn3Nb)
AWS A5.11	:	~E NiCrFe 3

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Mo	Ni	Fe	Cr	Nb	Ti
0.05	4.5	0.4	1.5	>65	3.0	20.0	1.8	0.25

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 390	630 - 710	min. 60 J	min. 30

Typical Base Material Grades :

* Un-alloyed and alloyed, high temperature steels to X8Ni9, high alloyed Cr and CrNi Steels, particularly for mixed alloy joints. Nickel and nickel alloys and joints to steels.
* NiCr 15 Fe, LC-NiCr 15Fe, NiCr 60 15, INCONEL 600 / 600 L, INCOLOY 800

Features and Applications :

* Resisting to low and high temperature and creep, low and unalloyed steels contain up to % 9 Ni Ni and Ni Alloys and pressure vessels.
* Weld metal has non-scalling structure at -196°C and 1200°C.
* Weld metal is stainless, austenitic steels and resistance to thermal shock.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300685	2.50 x 250	3/32 x 10"	50-80	1600
300686	3.20 x 300	1/8 x 12"	75-105	2850
301198	4.00 x 350	5/32 x 14"	90-130	5000

Approvals :

CE, GOST-R

GeKa®

NIBAZ B 71

Standards :

TS EN ISO 14172	:	E-Ni 6182(NiCr15Fe6Mn)
EN ISO 14172	:	E-Ni 6182(NiCr15Fe6Mn)
AWS A5.11	:	E NiCrFe 3

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Ni	Fe	Cr	Nb
0.04	7.5	0.60	rest	7.5	16.7	2.2

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/+20°C)	Impact Strength (ISO-V/-196°C)	Elongation ($L_o=5d_o$)(%)
min. 360	min. 550	min. 47 J	min. 32 J	min. 30

Typical Base Material Grades :

NiCr 15 Fe, LC-NiCr 15 Fe, NiCr 60 15,INCONEL 600/600L, INCOLOY 800

Features and Applications :

* Nickel-based basic-type electrode
* Applicability in welding high-temperature steels and low-temperature alloyed or unalloyed steels, nickel (Ni), and Ni-alloys
* High creep-resistance
* Serviceability at temperatures ranging between -196 °C and 480 °C
* Requirement of re-drying at 300-350 °C for 2 hours

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
304980	2.50 x 250	3/32 x 10"	50-80	1600
302243	3.20 x 300	1/8 x 12"	75-105	2850
305075	4.00 x 350	5/32 x 14"	90-130	5000

Approvals :

CE, GOST-R

GeKa®

ELIT CUT

Typical Base Material Grades :

* Non-alloyed and low alloyed steels, stainless steels, aluminium and aluminium alloys, copper and copper alloys, cast-iron and steel casts.

Features and Applications :

* Usability in cutting, in making welding grooves, or in drilling all metals that cannot be oxygen-cut or -drilled. * Resistance against high values of current at welding.* Requirement of holding the electrode in the direction perpendicular to work direction.

Welding Positions :

Current Type :

D.C.(-) A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300687	3.20x350	1/8x14"	160-240	3550
300689	4.00x350	5/32x14"	180-300	5000
300690	4.00x450	5/32x18"	180-300	6660
300691	5.00x450	5/32x18"	240-400	10140

Gouging Electrode

ELIT NUT

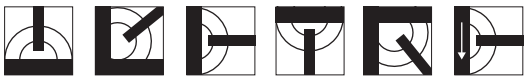
Typical Base Material Grades :

* Non-alloyed and low alloyed steels, stainless steels, aluminium and aluminium alloys, copper and copper alloys, cast-iron and steel casts.

Features and Applications :

* Usability in making welding grooves, or in removing defective weld beads in all metals that cannot be worked through oxygen.* Very easy usage. * Arc start by holding the electrode in a direction perpendicular to that of the work, and, by subsequently pushing it forward after approaching it at an angle of 15° to work direction. * Groove depth of half of the electrode's coating thickness. * Deeper grooves obtained only by repeating the operation after the work piece is cooled.

Welding Positions :



Current Type :

D.C.(-) A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
300702	3.20 x 350	1/8 x 14"	180-240	3593
300703	4.00 x 350	5/32 x 14"	250-320	5140
300704	5.00 x 350	3/16 x 14"	360-500	8030

Approvals (ELIT CUT / NUT : GOST-R

Welding Wires

GeKa®

SG 1

Standards :

TS EN ISO 14341-A	:	G2Si
TS EN ISO 636-A	:	W2Si
EN ISO 14341-A	:	G2Si
EN ISO 636-A	:	W2Si
AWS A5.18	:	ER 70 S-3

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn
0.10	0.6	1.2

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-30°C)	Elongation ($L_o=5d_o$)(%)
min. 400	480 - 600	min. 47 J	min. 22

Typical Base Material Grades :

* S235J2G3-S355J2G3, P235T2-P355T2, L210NB-L290NB, L290MB-L360MB, P235G1TH, P255G1TH, P235GH-P355GH, S235JRS1-S235J4S, S315G1S-S355G3S, P255NH-P355NH, GE200-GE300

Features and Applications :

* Welding of thin walled parts.
* Root pass welding.
* For making galvanized coating.
* TIG welding of tubes and pipes.
* Shielding gases : TIG: Ar MAG: 20% CO_2 - 80% Ar or pure CO_2

Welding Positions :

Current Type :

TIG D.C.(-)

MAG D.C.(+)

Operating Data :

Product Code			Diameter x Length (mm) / (inch)		Weight Kg	Package Type
BS 300	D 300	K 300				
304430 ---- ---- ----	304030 303011 303021 ----	303001 302636 303023 303028	0.8 1.0 1.2 1.6 (0.6,0.9,1.14,1.4)	0.030" 0.040" 0.047" 0.062"	15 15 15 15 (1.5,15,18,50,25 0.400)	BS/D/K 300 D200 D100 ECO PACK BIG PACK
303618 303619 303620 303621 303622 303623			1.6x1000 2.0x1000 2.4x1000 3.2x1000 4.0x1000 5.0x1000	1/16 x 39" 5/64 x 39" 3/32 x 39" 1/8 x 39" 5/32 x 39" 3/16 x 39"	5 5 5 5 5 5	Carton Box

Approvals :

SG1/CO_2 : TSE, CWB, CE, GOST-R SG1/TIG : CE

GeKa®

SG 70 S-2

Standards :

TS EN ISO 14341-A	:	G2Ti
TS EN ISO 636-A	:	W2Ti
EN ISO 14341-A	:	G2Ti
EN ISO 636-A	:	W2Ti
AWS A5.18	:	ER 70 S-2

Chemical Composition of Welding Wire- % (Typical) :

C	Mn	Si	Zr	Ti	Al
0.05	1.1	0.55	0.07	0.12	0.11

Mechanical Properties (MAG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-30°C)	Elongation ($L_o=5d_o$)(%)
min. 400	min. 480	min. 47 J	min. 22

Typical Base Material Grades :

* S235J2G3-S355J2G3, P235T2-P355T2, L210NB-L290NB, L290MB-L360MB, P235G1TH, P255G1TH, P235GH-P355GH, S235JRS1-S235J4S, S315G1S-S355G3S, P255NH-P355NH,S255N-S420N, GE200-GE300,

Features and Applications :

* Wire for welding mild and low alloy steels as well as thin walled materials.
* Being triple deoxidized with Aluminium, Titanium and Zirconium as well as Manganese and Silicon, the wire is capable of producing efficient welds when the steel to be welded is rusty, dirty, undercoat painted.
* It is recommended for pipe welding and for root passes in heavy vessel construction.
* Also for welding of steels of which surface will be coated (such as galvanized, etc.)
* Shielding gases : MAG; Ar +CO_2 mix gases, TIG; %100 Ar gas can be used

Welding Positions :

Current Type :

TIG D.C.(-)
MAG D.C.(+)

Operating Data :

Product Code			Diameter x Length (mm) / (inch)		Weight Kg	Package Type
BS 300	D 300	K 300				
---- ---- ---- ----	304738 304739 304740 ----	302816 302367 303371 302846	0.8 1.0 1.2 1.6 (0.6,0.9,1.14,1.4)	0.030" 0.040" 0.047" 0.062"	15 15 15 15 (1.5,15,18,50,25 0.400)	BS/D/K 300 D200 D100 ECO PACK BIG PACK
	303651 303652 303653 303654 303655		1.6x1000 2.0x1000 2.4x1000 3.2x1000 4.0x1000	1/16 x 39" 5/64 x 39" 3/32 x 39" 1/8 x 39" 5/32 x 39"	5 5 5 5 5	Carton Box

Approvals :

SG 70 S2 : TSE, CE, GOST-R

GeKa

SG 2

Standards :

TS EN ISO 14341-A	:	G3 Si 1
TS EN ISO 636-A	:	W3 Si 1
EN ISO 14341-A	:	G3 Si 1
EN ISO 636-A	:	W3 Si 1
AWS A5.18	:	ER 70 S-6

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn
0.08	0.85	1.45

Mechanical Properties (MAG/M21) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-30°C)	Elongation ($L_o=5d_o$)(%)
min. 420	500 - 640	min. 47 J	min. 22

Typical Base Material Grades :

* E295, E335, S235J2G3-S355J2G3, P235T1-P355T1, P235T2,P355T2, L210NB-L415NB, L290MB-L360MB, P235G1TH, P255G1TH, P235GH-P355GH, S235JRS1-S235J4S, S315G1S-S355G3S, S255N-S380N,P255NH-P355NH, GE200-GE260

Features and Applications :

* Steel construction and machinery production.
* Welding of ships, boiler tanks, pipe parts.
* Welding of thin walled steels.
* Thin sheet welding in automotive industry.
* Perfect smooth feedability, perfect welding characteristics.
* Shielding gases : MAG; Ar+CO_2 mix gases, TIG; %100 Ar gas can be used

Welding Positions :

Current Type :

TIG D.C.(-)

MAG D.C.(+)

Operating Data :

Product Code			Diameter x Length (mm) / (inch)		Weight Kg	Package Type
BS 300	D 300	K 300				
303572 303729 303428 302438	303571 303585 303594 303602	303574 303587 303598 303603	0.8 1.0 1.2 1.6 (0.6,0.9,1.14,1.4)	0.030" 0.040" 0.047" 0.062"	15 15 15 15 (1.5,15,18,50,25 0,400)	BS/D/K 300 D200 D100 ECO PACK BIG PACK
303396 303625 303626 303627 303628			1.6x1000 2.0x1000 2.4x1000 3.2x1000 4.0x1000	1/16 x 39" 5/64 x 39" 3/32 x 39" 1/8 x 39" 5/32 x 39"	5 5 5 5 5	Carton Box

Approvals :

SG2 / M24 : BV, DNV-GL, TL,DB, ABS, LR, RS, RINA, NK GOST-R, DB, TÜV

SG2 / CO2 : TSE, CWB, CE, DB, TÜV GOST-R

SG2 / TIG : BV, ABS, CE, DB GOST-R, DNV-GL, GLz

GeKa®

SG 3

Standards :

TS EN ISO 14341-A	:	G4 Si 1
TS EN ISO 636-A	:	W4 Si 1
EN ISO 14341-A	:	G4 Si 1
EN ISO 636-A	:	W4 Si 1
AWS A5.18	:	ER 70 S-6

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn
0.10	1.0	1.70

Mechanical Properties (MAG/M21) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-40°C)	Elongation ($L_o=5d_o$)(%)
min. 460	540 - 680	min. 47 J	min. 22

Typical Base Material Grades :

* E295, E360, S235J2G3-S355J2G3, P235T1-P355T1, P235T2,P355T2, L210NB-L415NB, L290MB-L360MB, P235G1TH, P255G1TH, P235GH-P355GH, S235JRS1-S235J4S, S315G1S-S355G3S, S255N-S420N, P255NH-P420NH, GE200-GE260

Features and Applications :

* Used for the same welding purposes as SG-2.
* Its strength is increased by Si-Mn.
* Low spatter although used under CO_2 atmosphere.
* Excellent wire feeding capability.
* Shielding gases : MAG; Ar+CO_2 mix gases, TIG; %100 Ar gas can be used

Welding Positions :

Current Type :

TIG D.C.(-)
MAG D.C.(+)

Operating Data :

Product Code BS 300	Product Code D 300	Product Code K 300	Diameter x Length (mm)	Diameter x Length (inch)	Weight Kg	Package Type
302523 302546 302272 303748	303577 303404 303286 303316	303579 303606 303611 303615	0.8 1.0 1.2 1.6 (0.6,0.9,1.14,1.4)	0.030” 0.040” 0.047” 0.062”	15 15 15 15 (1.5,15,18,50,25 0,400)	BS/D/K 300 D200 D100 ECO PACK BIG PACK
	303761 303630 303631 303632 304708		1.6x1000 2.0x1000 2.4x1000 3.2x1000 4.0x1000	1/16 x 39” 5/64 x 39” 3/32 x 39” 1/8 x 39” 5/32 x 39”	5 5 5 5 5	Carton Box

Approvals :

SG3 / M24 : TSE, DB, TÜV, CE, DNV-GL, GOST-R

GeKa®

SG Mo

Standards :

TS EN ISO 21952-A	:	G Mo Si
EN ISO 21952-A	:	G Mo Si
TS EN ISO 21952-A	:	W Mo Si
EN ISO 21952-A	:	W Mo Si
AWS A5.28	:	ER 80 S-G (mod.) (ER 70 S-A1)

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mo	Mn
0.10	0.6	0.5	1.1

Mechanical Properties (MAG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-40°C)	Elongation ($L_o=5d_o$)(%)
min. 460	550 - 670	min. 47 J	min. 22

Typical Base Material Grades :

* S355J2G3, L320-L415NB, L320MB-L415MB, P255G1TH, P235GH-P355GH, P255NH, 16Mo3,17MnMoV6-4, 20MnMoNi5-5, 20MnMoNi4-5, GE240-GE300, 22Mo4, S255N-S460N, P255NH-P460 NH

Features and Applications :

* Copper coated wire for GMAW and rod TIG welding in boiler pressure vessel, pipework and crane construction as well as in structural steel engineering. * High quality, very tough deposit of high crack resistance and non-aging. * Recommended for service in temperature range -45°C (TIG) or -40°C (GMAW) to +550°C. * Good copper bonding with low total copper content. Very good welding and flow characteristics. * Preheating interpass and postweld heat treatment as required by base metal.* Shielding gases : MAG; Ar+CO_2 mix gases, TIG; %100 Ar gas can be used

Welding Positions :

Current Type :

TIG D.C.(-)

MAG D.C.(+)

Operating Data :

Product Code			Diameter x Length (mm) / (inch)		Weight Kg	Package Type
BS 300	D 300	K 300				
---- ---- 304653 ----	---- ---- 302788 ----	302954 302951 302950 303338	0.8 1.0 1.2 1.6 (0.6,0.9,1.14,1.4)	0.030" 0.040" 0.047" 0.062"	15 15 15 15 (1.5,15,18,50,25 0.400)	BS/D/K 300 D200 D100 ECO PACK BIG PACK
	303633 303634 303635 303636 303637		1.6x1000 2.0x1000 2.4x1000 3.2x1000 4.0x1000	1/16 x 39" 5/64 x 39" 3/32 x 39" 1/8 x 39" 5/32 x 39"	5 5 5 5 5	Carton Box

Approvals :

SGMo : CE, GOST-R

GeKa®

SG 80 S-D2

Standards :

TS EN ISO 21952-A	:	G Z Mn Mo
EN ISO 21952-A	:	G Z Mn Mo
TS EN ISO 21952-A	:	W Z Mn Mo
EN ISO 21952-A	:	W Z Mn Mo
AWS A5.28	:	ER 80 S-D2

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mo	Mn
0.10	0.65	0.5	1.8

Mechanical Properties (TIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-30°C)	Elongation ($L_o=5d_o$)(%)
min. 470	550 - 680	min. 47 J	min. 22

Typical Base Material Grades :

* S355J2G3, L320-L415NB, L320MB-L415MB, P255G1TH, P235GH-P355GH, 16Mo3,17MnMoV6-4, 20MnMoNi5-5, 20MnMoNi4-5, GE240-GE300, 22Mo4, S255N-S460N, P255NH-P460 NH

Features and Applications :

* Copper coated for GMAW and TIG welding in boiler pressure vessel, pipework and crane construction as well as in structural steel engineering. * High quality, very tough deposit of high crack resistance and non-aging. * Recommended for service in temperature range -45°C (TIG) or -40°C (GMAW) to +550°C. * Good copper bonding with low total copper content. * Very good welding and flow characteristics. * Preheating interpass and postweld heat treatment as required by base metal. * Shielding gases : MAG; Ar+CO_2 mix gases, TIG; pure Ar gas can be used.

Welding Positions :

Current Type :

TIG D.C.(-)

MAG D.C.(+)

Operating Data :

Product Code			Diameter x Length (mm) / (inch)		Weight Kg	Package Type
BS 300	D 300	K 300				
----	----	302845	0.8	0.030"	15	BS/D/K 300
----	----	303337	1.0	0.040"	15	D200
----	302998	303381	1.2	0.047"	15	D100
----	302584	302975	1.6 (0.6,0.9,1.14,1.4)	0.062"	15 (1.5,15,18,50,25 0.400)	ECO PACK BIG PACK
	303657		1.6x1000	1/16 x 39"	5	Carton Box
	303658		2.0x1000	5/64 x 39"	5	
	303659		2.4x1000	3/32 x 39"	5	
	303660		3.2x1000	1/8 x 39"	5	
	303661		4.0x1000	5/32 x 39"	5	
	303662		5.0x1000	3/16 x 39"	5	

Approvals :

SG80 S-D2 : CE, GOST-R

GeKa®

SG CrMo 1

Standards :

TS EN ISO 21952-A	:	G Z Cr Mo 1 Si
EN ISO 21952-A	:	G Z Cr Mo 1 Si
TS EN ISO 21952-A	:	W Z Cr Mo 1 Si
EN ISO 21952-A	:	W Z Cr Mo 1 Si
AWS A5.28	:	ER 80 S-B2

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Mo	Cr
0.10	0.6	0.5	0.5	1.2

Mechanical Properties (TIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 470	550 - 670	min. 78 J	min. 19	620°C/1hour-300°C air

Typical Base Material Grades :

13CrMo4-5, 15CrMo5, 42CrMo4, 16CrMoV4, 25CrMo4, 24CrMo5, G22CrMo5-4, G17CrMo5-5, A 333Gr; P11, P12

Features and Applications :

* Used for the welding of high heat resisting. Cr-Mo alloyed steels which are used for the production of boilers tubes and pipes and nitrided steels.
* Weld metal is resistant to temperatures up to +570°C
* Shielding gases : MAG; Ar+CO2 and Ar+ O2 mix gases, TIG; pure Ar gas can be used.

Welding Positions :

Current Type :

TIG D.C.(-)

MAG D.C.(+)

Operating Data :

Product Code			Diameter x Length (mm) / (inch)		Weight Kg	Package Type
BS 300	D 300	K 300				
---- ---- 304643 ----	---- ---- 302600 ----	302992 303340 303343 303346	0.8 1.0 1.2 1.6 (0.6,0.9,1.14,1.4)	0.030" 0.040" 0.047" 0.062"	15 15 15 15 (1.5,15,18,50,25 0.400)	BS/D/K 300 D200 D100 ECO PACK BIG PACK
304215 303701 303638 303639 303640			1.6x1000 2.0x1000 2.4x1000 3.2x1000 4.0x1000	1/16 x 39" 5/64 x 39" 3/32 x 39" 1/8 x 39" 5/32 x 39"	5 5 5 5 5	Carton Box

Approvals :

CE, GOST-R

GeKa

SG CrMo 1 Si

Standards :

TS EN ISO 21952-A	:	G Cr Mo 1 Si
EN ISO 21952-A	:	G Cr Mo 1 Si
TS EN ISO 21952-A	:	W Cr Mo 1 Si
EN ISO 21952-A	:	W Cr Mo 1 Si
AWS A5.28	:	ER 80 S-G

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Mo	Cr
0.10	0.6	1.0	0.5	1.2

Mechanical Properties (TIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 470	550 - 670	min. 78 J	min. 20	680°C/1hour-300°C air

Typical Base Material Grades :

13CrMo4-5, 15CrMo5, 42CrMo4, 16CrMoV4, 25CrMo4, 24CrMo5, G22CrMo5-4, G17CrMo5-5

Features and Applications :

* Used for the welding of high heat resisting. Cr-Mo alloyed steels which are used for the production of boilers tubes and pipes and nitrided steels.
* Weld metal is resistant to temperatures up to +570°C
* Shielding gases : MAG; Ar+CO_2 and Ar+O_2 mix gases, TIG; pure Ar gas can be used.

Welding Positions :

Current Type :

TIG D.C.(-)

MAG D.C.(+)

Operating Data :

Product Code			Diameter x Length (mm) / (inch)		Weight Kg	Package Type
BS 300	D 300	K 300				
---- ---- ---- ----	---- ---- ---- ----	304964 304965 304966 304967	0.8 1.0 1.2 1.6 (0.6,0.9,1.14,1.4)	0.030" 0.040" 0.047" 0.062"	15 15 15 15 (1.5,15,18,50,25 0,400)	BS/D/K 300 D200 D100 ECO PACK BIG PACK
304976 304977 304771 304978 304979			1.6x1000 2.0x1000 2.4x1000 3.2x1000 4.0x1000	1/16 x 39" 5/64 x 39" 3/32 x 39" 1/8 x 39" 5/32 x 39"	5 5 5 5 5	Carton Box

Approvals :

CE, GOST-R

GeKa

SG CrMo 2

Standards :

TS EN ISO 21952-A	:	G Z Cr Mo 2 Si
EN ISO 21952-A	:	G Z Cr Mo 2 Si
TS EN ISO 21952-A	:	W Z Cr Mo 2 Si
EN ISO 21952-A	:	W Z Cr Mo 2 Si
AWS A5.28	:	ER 90 S-B3

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Mo	Cr
0.08	0.6	0.5	1.0	2.4

Mechanical Properties (TIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)	Heat Treatement
min. 540	620 - 760	min. 47 J	min. 20	690°C/1h/300°C air

Typical Base Material Grades :

* 10 CrMo9-10, 10 CrSiMoV 7, 10 CrV 63, G-17 CrMo 9-10, A 335 Gr.P22

Features and Applications :

* Used for the welding of high heat resisting.
* XCr-Mo alloyed steels which are used for the production of boilers tubes, pipes and nitrided steels.
* Weld metal is resistant to temperatures up to +600°C
* Shielding gases : MAG; Ar+CO_2 and Ar+O_2 mix gases, TIG; pure Ar gas can be used.

Welding Positions :

Current Type :

TIG D.C.(-)

MAG D.C.(+)

Operating Data :

Product Code			Diameter x Length (mm) / (inch)		Weight Kg	Package Type
BS 300	D 300	K 300				
---- ---- ---- ----	---- 304466 302614 ----	---- 303349 303351 303353	0.8 1.0 1.2 1.6 (0.6,0.9,1.14,1.4)	0.030" 0.040" 0.047" 0.062"	15 15 15 15 (1.5,15,18,50,25 0,400)	BS/D/K 300 D200 D100 ECO PACK BIG PACK
303641 303642 303643 303644 303645			1.6x1000 2.0x1000 2.4x1000 3.2x1000 4.0x1000	1/16 x 39" 5/64 x 39" 3/32 x 39" 1/8 x 39" 5/32 x 39"	5 5 5 5 5	Carton Box

Approvals :

CE, GOST-R

GeKa®

SG CrMo 2 Si

Standards :

TS EN ISO 21952-A	:	G Cr Mo 2 Si
EN ISO 21952-A	:	G Cr Mo 2 Si
TS EN ISO 21952-A	:	W Cr Mo 2 Si
EN ISO 21952-A	:	W Cr Mo 2 Si
AWS A5.28	:	ER 90 S-G

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Mo	Cr
0.08	0.6	1.0	1.0	2.4

Mechanical Properties (TIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)	Heat Treatement
min. 540	620 - 760	min. 47 J	min. 20	720°C/1h/300°C air

Typical Base Material Grades :

* 10 CrMo9-10, 10 CrSiMoV 7, 10 CrV 63, G-17 CrMo 9-10, A335Gr. P22

Features and Applications :

* Used for the welding of high heat resisting.
* XCr-Mo alloyed steels which are used for the production of boilers tubes, pipes and nitrided steels.
* Weld metal is resistant to temperatures up to +600°C
* Shielding gases : MAG; Ar+CO_2 and Ar+O_2 mix gases, TIG; pure Ar gas can be used.

Welding Positions :

Current Type :

TIG D.C.(-)

MAG D.C.(+)

Operating Data :

Product Code			Diameter x Length (mm) / (inch)		Weight Kg	Package Type
BS 300	D 300	K 300				
---- ---- ---- ----	---- ---- ---- ----	304975 304968 304969 304971	0.8 1.0 1.2 1.6 (0.6,0.9,1.14,1.4)	0.030" 0.040" 0.047" 0.062"	15 15 15 15 (1.5,15,18,50,25 0,400)	BS/D/K 300 D200 D100 ECO PACK BIG PACK
304981 304982 304983 304984 304985			1.6x1000 2.0x1000 2.4x1000 3.2x1000 4.0x1000	1/16 x 39" 5/64 x 39" 3/32 x 39" 1/8 x 39" 5/32 x 39"	5 5 5 5 5	Carton Box

Approvals :

CE, GOST-R

GeKa®

SG CrMo 9V

Standards :

TS EN ISO 21952-A	:	W Cr Mo 91
EN ISO 21952-A	:	W Cr Mo 91
AWS A5.28/(A5.9)	:	ER 90 S-B9

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Mo	Cr	V	Ni	Nb	N
0.09	0.25	0.6	0.95	9.0	0.2	0.65	0.06	0.05

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)	Heat Treatement
650	740	min. 60 J	min. 18	760°C/2h 300°C/air

Typical Base Material Grades :

* X10CrMoVNb 9-1, A213 Gr. T91, A335 Gr. P91 (T31), A139 Gr. T91, % 9-12 Cr martensitic stainless steels.

Features and Applications :

* Used for TIG welding of high resistance steels such as P91 / T91. Power plants, turbines, oil refineries, cool and gasification plants, boiler production, also used for the welding of steels with 9Cr 1Mo. Weld metal is resistant to working temperature up to 600°C

Shielding gas (TIG) : Pure Ar.

Welding Positions :

Current Type :

TIG DC (-)

Operating Data :

Product Code	Diameter x Length (mm)	Diameter x Length (inch)	Weight (kg)	Package Type
607705	2.00 x 1000	5/64 x 39”	5	Carton Box
607704	2.40 x 1000	3/34 x 39”	5	Carton Box

Approvals :

GeKa®

SG Ni1

Standards :

TS EN ISO 14341-A	:	G3Ni 1
TS EN ISO 636A	:	W3Ni 1
EN ISO 14341-A	:	G3Ni 1
EN ISO 636A	:	W3Ni 1
AWS A5.28	:	ER80S-Ni1

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Ni
0.08	0.65	1.10	1.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-45°C)	Elongation ($L_o=5d_o$)(%)
min. 470	min. 550	min. 27 J	min. 24

Typical Base Material Grades :

* A106; A515; A714; A131; A369; A210; L290; P235 T1 / T2; P275 T1;
* L360; L415; P275T2; P355N; API X-42; X46; X62; X60; P235GH; P355GH;
* A283; A285; A414; A372; A662; S275; S420; A516; A255; A333; A350; A612

Features and Applications :

* Building up of cranes, transport, industrial facilities, equipment in general, pipelines, shipbuilding, etc./
* Working temperatures are between of -45°C and +400°C.
* Shielding gas : Ar+CO_2 mix gases can be used for MAG
* Shielding gas : Ar gas can be used for TIG

Welding Positions :

Current Type :

MAG D.C.(+) / TIG D.C. (-)

Operating Data :

Product Code	Diameter (mm)	Weight (kg)	Package Type
606763	1.20	15	BS 300 Spool
607966	2.4 x 1.000	5	Carton Box

Approvals :

CE

GeKa®

SG Ni2

Standards :

TS EN ISO 14341-A	:	G2Ni 2
EN ISO 14341-A	:	G2Ni 2
AWS A5.28	:	ER80S-Ni2

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Ni
0.08	0.55	1.10	2.30

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-60°C)	Elongation ($L_o=5d_o$)(%)	PWHT
min. 470	min. 550	min. 27 J	min. 24	620 ± 15°C / 2 hours

Typical Base Material Grades :

* S255NL2-S355NL2; 14Ni6; 12Ni14; X12Ni5; S255N, S380N, S255NL, S380NL; S255NL1-S355NL1; S380NL1;
* A333: Gr.1-3; A442; Gr55-60; A334: Gr.3;
* 10Ni14, 13MnNi63; TTSt E355; TTSt E 460; HY 80; TTSE 35 N

Features and Applications :

* Applications down to -60°C on mild steels, low-alloy steels and fine-grainedsteels, plates, storagestanks, pipelines and equipment for cryogenic use.
* Shielding gas: Ar+CO_2 mix gases can be used.

Welding Positions :

Current Type :

MAG D.C.(+)

Operating Data :

Product Code	Diameter (mm)	Weight (kg)	Package Type
606764	1.20	15	BS 300 Spool

Approvals :

CE

GeKa®

SG NiMo1

Standards :

TS EN ISO 16834-A	:	G 62 6 C1/M21 Mn3Ni1Mo
EN ISO 16834-A	:	G 62 6 C1/M21 Mn3Ni1Mo
AWS A5.28	:	ER 100 S-G

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Ni	Mo
0.09	0.65	1.70	1.15	0.40

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-60°C)	Elongation ($L_o=5d_o$)(%)
min. 620	700 - 890	min. 47	min. 18

Typical Base Material Grades :

* P355NL1, P460NL1, StE460-590, USS-T.TTS, TE47-51, N-X-ATRA 70, WTSt37-2, WT37-3, WT St52-3, WT St52-3A, Corten A, Patinax 37, Alcodur 50, Koralpin 52, S255, S550, A516, A350, A612, A255, A299, A333, API-X42, API-X60, StE 620, N-A-XTRA 63, HY80, USS-T, TTSt47-51

Features and Applications :

* Fine-grained low alloy steels and also austempering steels for applications. Building up of cranes, transport, tanks, industrial facilities, equipment in general, pipelines, shipbuilding, etc.
* If necessary, post-weld stress relief shall be heat treated at 560°C-600°c for 1 hour and left in the furnace for cooling down to 300°C.
* Shielding gas: Ar+CO_2 mix gases can be used.

Welding Positions :

Current Type :

MAG D.C.(+)

Operating Data :

Product Code	Diameter (mm)	Weight (kg)	Package Type
606766	1.20	15	BS 300 Spool

Approvals :

CE

GeKa®

ER 100 SG

Standards :

TS EN ISO 16834-A	G/W Mn3Ni1CrMo
EN ISO 16834-A	: G/W Mn3Ni1CrMo
AWS A5.28	: ER 100S-G

Chemical Composition of Welding Wire- % (Typical) :

C	Mn	Mo
0.07	1.55	0.25

Cr	Ni	Si
0.25	1.50	0.50

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-30°C)	Elongation ($L_o=5d_o$)(%)
min. 620	min.690	min. 47 J	min. 18

Typical Base Material Grades :

* S460N, S500N, S550NC, S500NL, N-A-XTRA 56-70,BHV 70, PAS700, HSM700, E 295-E 360

Features and Applications :

* ER 100 SG is low alloyed and high strength GMAW wire.
* It is used for joining of the high strength low alloy steels and the fine grained constructional steels.
* It has high yield strength and impact toughness at low temperatures.
* Shielding gases MAG : (Ar+% 15-25 CO_2) / TIG : Ar

Welding Positions :

Current Type :

MAG D.C.(+)
TIG D.C.(-)

Operating Data :

Product Code			Diameter x Length (mm) / (inch)		Weight Kg	Package Type
BS 300	D 300	K 300				
304719 304720 304683 304721	---- 304744 304807 ----	---- 304895 304713 304984	0.8 1.0 1.2 1.6 (0.6,0.9,1.14,1.4)	0.030" 0.040" 0.047" 0.062"	15 15 15 15 (1.5,15,18,50,25 0.400)	BS/D/K 300 D200 D100 ECO PACK BIG PACK
304745 304766 304767 304768			1.6x1000 2.0x1000 2.4x1000 3.2x1000	1/16 x 39" 5/64 x 39" 3/32 x 39" 1/8 x 39"	5 5 5 5	Carton Box

Approvals :

CE, GOST-R

GeKa®

ER 110 SG

Standards :

TS EN ISO 16834-A		G/W Mn4Ni2CrMo
EN ISO 16834-A	:	G/W Mn4Ni2CrMo
AWS A5.28	:	ER 110S-G

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn
0.09	0.75	1.70

Mo	Ni	Cr	Cu
0.50	2.0	0.30	0.20

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-30°C)	Elongation ($L_o=5d_o$)(%)
min. 690	min. 760	min.47 J	19

Typical Base Material Grades :

* High strength structural steels and fine grained steels
* S690Q, L690M, N-A-XTRA 70, USS-T1, BH 70 V, HY 100, ASTM A514 Gr.F

Features and Applications :

* ER 110 SG is low alloyed and high strength GMAW wire and GTAW rods.
* It is used for joining of the high strength low alloy steels and the fine grained constructional steels with minimum yield strength of 690 N/mm^2, especially Hardox and Weldox sheets.
* Boilers, pressure vessels, pipelines, structure steels are the other application areas.
* Weld metal has high impact and toughness at low temperatures.
* Pre-heat can be according to the base material.
* Shielding gases - MAG : (Ar+% 15-25 CO_2) / TIG : (Ar)

Welding Positions :

Current Type :

MAG D.C.(+)

TIG D.C.(-)

Operating Data :

Product Code			Diameter x Length (mm) / (inch)		Weight Kg	Package Type
BS 300	D 300	K 300				
---- 305283 305273 ----	305925 305857 305427 306253	---- 305265 305266 ----	0.8 1.0 1.2 1.6 (0.6,0.9,1.14,1.4)	0.030" 0.040" 0.047" 0.062"	15 15 15 15 (1.5,15,18,50,25 0.400)	BS/D/K 300 D200 D100 ECO PACK BIG PACK
	305234 305233 305232		1.6x1000 2.0x1000 2.4x1000	1/16 x 39" 5/64 x 39" 3/32 x 39"	5 5 5	Carton Box

Approvals :

CE, GOST-R

GeKa

ER 120 SG

Standards :

TS EN ISO 16834-A		G 89 4 M21 Mn4Ni2,5CrMo
EN ISO 16834-A	:	G 89 4 M21 Mn4Ni2,5CrMo
AWS A5.28	:	ER 120S-G

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn
0.10	0.55	1.70

Mo	Ni	Cr	Cu
0.50	2.50	0.30	0.20

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-40°C)	Elongation ($L_o=5d_o$)(%)
min. 890	940-1180	min.47 J	min.15

Typical Base Material Grades :

* S890QL, P460NH, P460NL1,
* WELDOX 900, StE 960, S960Q

Features and Applications :

* Fine grained steels, high yield strength, austempering steels excellent properties low temperatures.
* Lifting and handling machines, bridges, tanks, transport, shipbuilding, railway sector, mines, cranes, frames, etc.
* Shielding gas: Ar+CO_2 mix gases can be used

Welding Positions :

Current Type :

MAG D.C.(+)

Operating Data :

Product Code	Diameter (mm)	Weight (kg)	Package Type
606760	1.00	15	BS 300 Spool
606761	1.20	15	

Approvals :

CE

GeKa®

SG NiCu

Standards :

TS EN ISO 14341-A	:	~G3Ni 1
EN ISO 14341-A	:	~G3Ni 1
AWS A5.28	:	ER80S-G

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn
0.08	0.80	1.30

Ni	Cr	Cu
0.80	0.20	0.40

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/+20°C)	Impact Strength (ISO-V/-60°C)	Elongation (L_o=5d_o)(%)
510	590	130 J	50 J	25

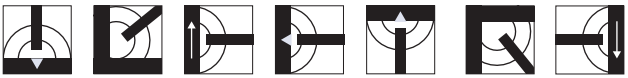
Typical Base Material Grades :

* S235JRW, S235J2G3, Patinax 37, Alcodur 50, Koralpin 52, S355J2G3Cu, 9CrNiCuP3-2-4, Corten A-B1, Itacor, WTSt37, WTST52.3, S355K2W

Features and Applications :

* Excellent resistance to atmospheerical agents thanks to the presence of Cu, Cr, Ni.
* Suitable for bridges, cranes, ground moving machines, boilers, building structures, petrochemical sector, fans gas pipes, fume section, etc.
* Shielding gas: Ar+CO_2 mix gases can be used.

Welding Positions :



Current Type :

MAG D.C.(+)

Operating Data :

Product Code	Diameter (mm)	Weight (kg)	Package Type
606762	1.20	15	BS 300 Spool

Approvals :

CE

GeKa

ELOX SG 307

Standards :

TS EN ISO 14343-A	:	G 18 8 Mn
EN ISO 14343-A	:	G 18 8 Mn
TS EN ISO 14343-A	:	W 18 8 Mn
EN ISO 14343-A	:	W 18 8 Mn
AWS A5.9	:	~ER 307

Chemical Composition of Welding Wire % (Typical) :

C	Si	Mn	Cr	Ni
0.08	0.9	7.0	19.2	9.0

Mechanical Properties (TIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 370	580 - 750	min. 63 J	min. 30

Features and Applications :

* Filler welding of high-strength low-alloyed and alloyed heat-treatable steels, armor steels, steels including 14 % Mn, ferritic chromium steels, heat-resistant steels, non-magnetic steels etc.
* Joint welding of different types of steels with each other.
* Filler welding of abraison-resistant steels for valves and turbines.
* As shielding gas, Argon is used at TIG welding, where as Ar+ %2.5 O_2 or Ar+ %2.5 CO_2 mixed gas is used at MIG welding.

Welding Positions :

Current Type :

TIG D.C.(-)
MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
600200 600199 600198	2.0 x 1000 2.4 x 1000 3.2 x 1000	5/64 x 39” 3/32 x 39” 1/8 x 39”	5 5 5	Plastic Box
600204 600203 600202 600201	0.8 1.0 1.2 1.6	0.030” 0.040” 0.047” 0.062”	12.5 15 15 15	D 300 K 300

Approvals :

GOST-R

GeKa®

ELOX SG 308-H

Standards :

TS EN ISO 14343-A	:	G 19 9 H
EN ISO 14343-A	:	G 19 9 H
TS EN ISO 14343-A	:	W 19 9 H
EN ISO 14343-A	:	W 19 9 H
AWS A5.9	:	ER 308 H

Chemical Composition of Welding Wire % (Typical) :

C	Si	Mn	Cr	Ni
0.06	0.5	1.7	20.1	9.8

Mechanical Properties (TIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/0°C)	Elongation ($L_o=5d_o$)(%)
min. 350	min. 550	min. 63 J	min. 25

Typical Base Material Grades :

* X 2 CrNi 19 11, X 5 CrNi 19 11, X 5 CrNi 18 8, X 12 CrNi 17 7, X 12 CrNi 18 8, G-X 10 CrNi 18 8, G-X 12 CrNi 18 8 AISI : 304 L, 301, 302, 304, 308

Features and Applications :

* Applicability in welding tempered high-strength steels as well as stainless steels, carbon steels, and 18/8, Cr-Ni -alloy steels
* Requirement of use of Ar as “shielding gas for TIG welding”, and of Ar+ %2.5 O_2 or Ar+ %2.5 CO_2 mixed gas as “shielding for MIG welding”

Welding Positions :

Current Type :

TIG D.C.(-)
MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
... 607649 606441 607650	1.6 x 1000 2.0 x 1000 2.4 x 1000 3.2 x 1000	1/16 x 39” 5/64 x 39” 3/32 x 39” 1/8 x 39”	5 5 5 5	Plastic Box
... ...	0.8 1.0 1.2	0.030” 0.040” 0.047”	12.5 15 15	D 300 K 300

Approvals :

GOST-R

GeKa®

ELOX SG 308 L

Standards :

TS EN ISO 14343-A	:	W 19 9 L
EN ISO 14343-A	:	W 19 9 L
AWS A5.9	:	ER 308 L

Chemical Composition of Welding Wire % (Typical) :

C	Si	Mn	Cr	Ni
<0.02	0.5	1.7	20.1	9.8

Mechanical Properties (TIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 390	540 - 660	min. 63 J	min. 35

Typical Base Material Grades :

* X2CrNi 19 11, X5CrNi 18 10, X6CrNiTi 18 10, X6CrNiNb 18 10, X2CrNiN 18 10, X10CrNiNb 18 10, 304, 304L, 304LN, 347, 321, A320 B 8 C, A320 B 8 D

Features and Applications :

* TIG welding of 13% Cr ferritic stainless steels, high-carbon steels of type 304, or stabilized steels of type 347, or steels of similar qualities, all of which used in drug, cellulose, paper and food (production) industries.
* The shielding gas is Argon (Ar).
* Maintenance of ductile behavior at temperature values down to -196 °C.
* Maintenance of resistance against intergranular corrosion at temperatures up to 400 °C.

Welding Positions :

Current Type :

TIG D.C.(-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
600232	1.6 x 1000	1/16 x 39''	5	Plastic Box
600231	2.0 x 1000	5/64 x 39''		
600230	2.4 x 1000	3/32 x 39''		
600229	3.2 x 1000	1/8 x 39''		

Approvals :

GOST-R, CE

GeKa®

ELOX SG 308 L Si

Standards :

TS EN ISO 14343-A	:	G 19 9 L Si
EN ISO 14343-A	:	G 19 9 L Si
AWS A5.9	:	ER 308 L Si

Chemical Composition of Welding Wire % (Typical) :

C	Si	Mn	Cr	Ni
<0.02	0.8	1.7	20.4	10.2

Mechanical Properties (MIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 350	520 - 660	min. 63 J	min. 35

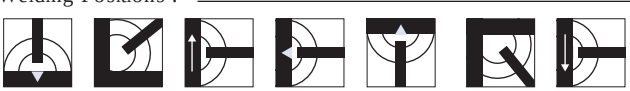
Typical Base Material Grades :

* X2 CrNi 19 11, X5CrNi 18 10, X6 CrNiTi 18 10, X6 CrNiNb 18 10, X2 CrNiN 18 10, X10 CrNiNb 18 10, 304, 304L, 304 LN, 321, 347, A 320 B 8 C, A 320 B 8 D

Features and Applications :

* MIG welding of 13% Cr ferritic stainless steels, high-carbon steels of type 304 or stabilized steels of type 347, or steels of similar types, used in industries of drug, cellulose, paper, and food (production).
* Ar+ %2.5 O_2 or Ar+ %2.5 CO_2 mixed gas is used as shielding gas.
* Maintenance of ductile behavoir at temperature values down to -196 °C.
* Maintenance of resistance to intergranular corrosion at temperatures up to 350 °C.

Welding Positions :



Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
600235	0.8	0.030”	12.5	D 300
600234	1.0	0.040”	15	K 300
600233	1.2	0.047”	15	

Approvals :

GOST-R, CE

Stainless Steel
Gas Shielded Welding Rod

GeKa®

ELOX SG 309 L

Standards :

TS EN ISO 14343-A	:	W 23 12 L
EN ISO 14343-A	:	W 23 12 L
AWS A5.9	:	ER 309 L

Chemical Composition of Welding Wire % (Typical) :

C	Si	Mn	Cr	Ni
0.03	0.45	1.80	23.5	13.0

Mechanical Properties (TIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 320	min. 520	min. 47 J	min. 30

Typical Base Material Grades :

* Ferritic Cr and ostenitic CrNi steels, austenitic manganese steels, unalloyed high strength steels, high temperature steels.

Features and Applications :

* Applicability on ferritic Cr or austenitic CrNi steels, austenitic manganese steels, unalloyed high-strength steels, heat-treated steels.
* Usability in welding austenitic stainless steels, in joint-welding of different kinds of metals, in buffer layers, in joint-welding of corrosion-resistant stainless steels to each other or to low-alloyed steels, and in welding coated steels.
* Requirement of use of Ar as shielding gas.

Welding Positions :

Current Type :

TIG D.C.(-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
600226	1.6 x 1000	1/16 x 39"	5	Plastic Box
600225	2.0 x 1000	5/64 x 39"		
600224	2.4 x 1000	3/32 x 39"		
602448	3.2 x 1000	1/8 x 39"		

Approvals :

GOST-R, CE

GeKa

ELOX SG 309 L Si

Standards :

TS EN ISO 14343-A	:	G 23 12 L Si
EN ISO 14343-A	:	G 23 12 L Si
AWS A5.9	:	ER 309 L Si

Chemical Composition of Welding Wire % (Typical) :

C	Si	Mn	Cr	Ni
0.03	0.80	1.80	23.5	13.0

Mechanical Properties (MIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 320	min. 520	min. 47 J	min. 30

Typical Base Material Grades :

* Ferritic Cr and ostenitic CrNi steels, austenitic manganese steels, unalloyed high strength steels, high temperature steels.

Features and Applications :

* Applicability on ferritic Cr or austenitic CrNi steels, austenitic manganese steels, unalloyed high-strength steels, heat-treated steels.
* Usability in welding austenitic stainless steels, in joint-welding of different kinds of metals, in buffer layers, in joint-welding of corrosion-resistant stainless steels to each other or to low-alloyed steels, and in welding coated steels.
* Ar+ %2.5 O_2 or (Ar+%2.5 CO_2) gas is used as shielding gas.

Welding Positions :

Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
604383	0.8	0.030”	12.5	
600228	1.0	0.040”	15	D/K 300
600227	1.2	0.047”	15	

Approvals :

GOST-R, CE

GeKa®

ELOX SG 310

Standards :

TS EN ISO 14343-A	:	G 25 20
EN ISO 14343-A	:	G 25 20
TS EN ISO 14343-A	:	W 25 20
EN ISO 14343-A	:	W 25 20
AWS A5.9	:	ER 310

Chemical Composition of Welding Wire % (Typical) :

C	Si	Mn	Cr	Ni
0.12	0.5	1.6	25.0	20.5

Mechanical Properties (TIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 350	550 - 720	min. 63 J	min. 30

Typical Base Material Grades :

* X15CrNiSi 25 20, X12CrNi 25 21, X15CrNi 20 12, G-X15CrNi 25 20, G-X40 CrNi 25 21, X10CrAl 7, X10CrAl 18, X10CrAl 24, 305, 310, 314, A297 HF, A297 HJ

Features and Applications :

* Applicability in cement and ceramic industries, in manufacture processes of industrial furnaces, oil refineries, in welding of steel and steel castings used in steam boiler manufacture.
* Suitability of weld metal for use at temperatures between -196 °C and 1200 °C.
* Suitability for both TIG and MIG welding.
* Requirement of use of Ar as shielding gas in TIG welding, and of Ar+ %2.5 O_2 or Ar+ %2.5 CO_2 mixed gas as shielding in MIG welding.

Welding Positions :

Current Type :

TIG D.C.(-)
MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
600180	1.6 x 1000	1/16 x 39"	5	Plastic Box
600179	2.0 x 1000	5/64 x 39"	5	
600178	2.4 x 1000	3/32 x 39"	5	
600177	3.2 x 1000	1/8 x 39"	5	
600183	0.8	0.030"	12.5	D/K 300
600182	1.0	0.040"	15	
600181	1.2	0.047"	15	

Approvals :

GOST-R, CE

GeKa®

ELOX SG 312

Standards :

TS EN ISO 14343-A	:	G 29 9
EN ISO 14343-A	:	G 29 9
TS EN ISO 14343-A	:	W 29 9
EN ISO 14343-A	:	W 29 9
AWS A5.9	:	ER 312

Chemical Composition of Welding Wire % (Typical) :

C	Si	Mn	Cr	Ni
0.12	0.40	1.80	30.0	9.0

Mechanical Properties (TIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 450	min. 660	47 J	min. 20

Typical Base Material Grades :

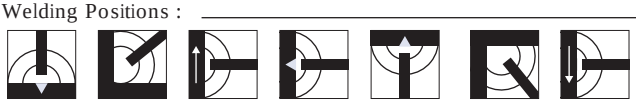
DIN :
X 7 Cr 13
X 7 Cr Al 13
X 10 Cr Al 13
X 8 Cr 17
X 20 Cr 13
X 15 Cr 13
X 22 Cr Ni 17
X 15 Cr Ni 13 4
X 8 Cr Ti 17
G-X 7 Cr 13
G-X 20 Cr 14
G-X 10 Cr Mo 13
G-X 8 Cr Ni 13

AISI :
403
405
410
420
430
430 Ti
431
446

Features and Applications :

* Applicability in joint-welding of unalloyed and alloyed high-strength steels, Cr and Mn steels, tool steels, and of different metals.
* Resistance to wearing, cracking and corrosion.
* Requirement of use of Ar as shielding gas in TIG welding, and Ar+ %2.5 O_2 or Ar+ %2.5 CO_2 mix as shield gas in MIG welding.

Welding Positions :



Current Type :

TIG D.C.(-)
MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
600176	1.6 x 1000	1/16 x 39”	5	Plastic Box
600175	2.0 x 1000	5/64 x 39”	5	
600174	2.4 x 1000	3/32 x 39”	5	
604891	0.8	0.030”	12.5	D/K 300
604857	1.0	0.040”	15	
602889	1.2	0.047”	15	

Approvals :

GOST-R, CE

GeKa®

ELOX SG 316 L

Standards :

TS EN ISO 14343-A	:	W Z 19 12 3 L
EN ISO 14343-A	:	W Z 19 12 3 L
AWS A5.9	:	ER 316 L

Chemical Composition of Welding Wire % (Typical) :

C	Si	Mn	Mo	Cr	Ni
0.02	0.5	1.6	2.2	18.5	11.5

Mechanical Properties (TIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 420	570 - 700	min. 63 J	min. 35

Typical Base Material Grades :

* X2 CrNiMo 18 14 3, X5 CrNiMo 17 13 3, X2 CrNiMo 17 13 2, X5 CrNiMoTi 17 12 2, X6 CrNiMoTi 17 12 2, X6 CrNiMoNb 17 12 2, X2 CrNiMoN 17 13 3, X2 CrNiMoN 17 12 2. 316, 316L, 316Cb, 316Ti

Features and Applications :

* TIG welding of 13% Cr ferritic stainless steels, high-carbon or stabilized steels of type 316, low-carbon stainless steels of type 316 L, all of which are used in machinery and equipment parts at production plants for food, chemical, drug textile and similar kinds of industries.
* As shielding gas, Argon (Ar) is used.
* Maintenance of resistance to intergranular corrosion at temperature valves up to 400 °C.
* Resistance to low temperatures varying at values down to -196 °C.

Welding Positions :

Current Type :

TIG D.C.(-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
600214	1.6 x 1000	1/16 x 39”	5	Plastic Box
600213	2.0 x 1000	5/64 x 39”	5	
600212	2.4 x 1000	3/32 x 39”	5	

Approvals :

GOST-R, CE

GeKa

ELOX SG 316 L Si

Standards :

TS EN ISO 14343-A	:	G Z 19 12 3 L Si
EN ISO 14343-A	:	G Z 19 12 3 L Si
AWS A5.9	:	ER 316 L Si

Chemical Composition of Welding Wire % (Typical) :

C	Si	Mn	Cr	Ni	Mo
0.02	0.80	1.6	18.5	11.5	2.2

Mechanical Properties (MIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 400	550 - 700	min. 63 J	min. 30

Typical Base Material Grades :

X2 CrNiMo 18 14 3, X5 CrNiMo 17 13 3, X2 CrNiMo 17 13 2, , X5 CrNiMo 17 12 2, X6 CrNiMoTi 17 12 2, X6 CrNiMoNb 17 12 2, X2 CrNiMoN 17 13 3, X2 CrNiMoN 17 12 2, 316, 316 Cb, 316 L, 316 Ti.

Features and Applications :

* MIG welding of 13% ferritic stainless steels, high-carbon or stabilized stainless steels of type 316 and low-carbon stainless steels of type 316 L, used in machinery and equipment parts of production plants for food, chemical, drug, textile and similar kinds of industries.
* As shielding gas, Ar+ %2.5 O_2 or Ar+ %2.5 CO_2 mixed gas is used.
* Maintenance of resistance to intergranular corrosion at temperature values up tp 400 °C.
* Resistance to low temperatures varying at values down to -196°C.

Welding Positions :

Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
600217	0.8	0.030"	12.5	D 300 K 300
600216	1.0	0.040"	15	
600215	1.2	0.047"	15	

Approvals :

GOST-R, CE

GeKa®

ELOX SG 318

Standards :

TS EN ISO 14343-A	:	W 19 12 3 Nb
EN ISO 14343-A	:	W 19 12 3 Nb
AWS A5.9	:	ER 318

Chemical Composition of Welding Wire % (Typical) :

C	Si	Mn	Cr	Ni	Mo	Nb
0.035	0.50	1.7	19.6	11.4	2.7	+

Mechanical Properties (TIG) :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/+20°C)	Elongation (L_o=5d_o)(%)
min. 440	640 - 780	min. 63 J	min. 30

Typical Base Material Grades :

* X6 CrNiMoTi 17 12 2, X6 CrNiMoNb 17 12 2, X5 CrNiMo 17 12 2, G-X5 CrNiMoNb 18 10, X10 CrNiMoNb 18 12, 316, 316Cb, 316L, 316 Ti

Features and Applications :

* TIG welding of 13% ferritic stainless steels as well as of stainless steels of similar chemical compositions as those of welding wires used in chemical, textile, paint, food and synthetic resin production.
* As the shielding gas, argon(Ar) is used.
* Maintenance of resistance to intergranular corrosion at temperature values up to 400 °C.

Welding Positions :

Current Type :

TIG D.C.(-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
602271	1.6 x 1000	1/16 x 39"	5	Plastic Box
600164	2.0 x 1000	5/64 x 39"	5	
600163	2.4 x 1000	3/32 x 39"	5	

Approvals :

GOST-R, CE

GeKa®

ELOX SG 318 Si

Standards :

TS EN ISO 14343-A	:	G 19 12 3 Nb Si
EN ISO 14343-A	:	G 19 12 3 Nb Si
AWS A5.9	:	~ER 318

Chemical Composition of Welding Wire % (Typical) :

C	Si	Mn	Cr	Ni	Mo	Nb
0.035	0.8	1.4	19.9	11.5	2.8	+

Mechanical Properties (MIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 390	600 - 780	min. 63 J	min. 30

Typical Base Material Grades :

* X6 CrNiMoTi 17 12 2, X6 CrNiMoNb 17 12 2, X5 CrNiMo 17 12 2, G-X5 CrNiMoNb 18 10, G-X10 CrNiMo 18 10, X10 CrNiNb 18 10, X10 CrNiMoNb 18 12, 316, 316Cb, 316L, 316 Ti

Features and Applications :

* Used for the welding of 13% ferritic stainless steels or stainless steels which have the similar chemical analysis to welding wires that are used in the chemical, textile, paint and food industries.
* Weld metal is resistant to corrosion up to +400°C and chlorine.
* Suitable for MIG welding.
* Ar+ %2.5 O_2 or Ar+ %2.5 CO_2 mixed gases are the shielding gases.

Welding Positions :

Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
606440	1.0	0.040"	15	D 300
606439	1.2	0.047"	15	K300

Approvals :

GOST-R, CE

GeKa®

ELOX SG 347

Standards :

TS EN ISO 14343-A	:	W 19 9 Nb
EN ISO 14343-A	:	W 19 9 Nb
AWS A5.9	:	ER 347

Chemical Composition of Welding Wire % (Typical) :

C	Si	Mn	Cr	Ni	Nb
0.035	0.5	1.4	19.4	9.5	+

Mechanical Properties (TIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 430	600 - 740	min. 63 J	min. 30

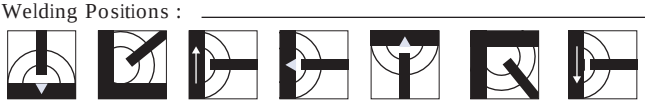
Typical Base Material Grades :

* X6 CrNiNb 18 10, X6 CrNiTi 18 10, G-X5 CrNiNb 18 9, X-5 CrNi 18 10, G-X10 CrNi 18 8, X12 CrNiTi 18 9, X10 CrNiNb 18 10, 304, 321, 347, A 157 C9, A 296 CF 8 C, A 320 B 8 C, A 320 B 8 D

Features and Applications :

* Used for the welding of 13% Cr steels which are used in the textile, paper, paint and food industries.
* Resistant to corrosion up to +400°C, suitable for TIG welding.
* Argon is the shielding gas and it is also used for the welding of materials which have the similar chemical composition to welding wire.

Welding Positions :



Current Type :

TIG D.C.(-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
600159	1.6 x 1000	1/16 x 39"	5	Plastic Box
600158	2.0 x 1000	5/64 x 39"	5	
600209	2.4 x 1000	3/32 x 39"	5	
600156	3.2 x 1000	1/8 x 39"	5	

Approvals :

GOST-R, CE

GeKa®

ELOX SG 347 Si

Standards :

TS EN ISO 14343-A	:	G 19 9 Nb Si
EN ISO 14343-A	:	G 19 9 Nb Si
AWS A5.9	:	ER 347 Si

Chemical Composition of Welding Wire % (Typical) :

C	Si	Mn	Cr	Ni	Nb
0.035	0.9	1.2	19.4	9.7	+

Mechanical Properties (MIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 400	570 - 710	min. 63 J	min. 30

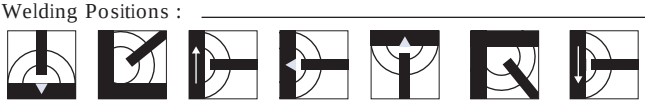
Typical Base Material Grades :

* X6 CrNiNb 18 10, X6 CrNiTi 18 10, G-X5 CrNiNb 18 9, X5 CrNi 18 10, G-X 10 CrNi 18 8, X12 CrNiTi 18 9, X10 CrNiNb 18 10, 304, 321, 347, A 157 C 9, A 296 CF 8 C, A 320 B 8 C, A 320 B 8 D.

Features and Applications :

* Used for the welding of 13% Cr steels which are used in the textile, paper, paint and food industries.
* Resistant to corrosion up to +400°C, suitable for MIG welding.
* Ar+ %2.5 O_2 or Ar+ %2.5 CO_2 mixed gases are used for shielding, also used for the welding of materials which have the similar chemical composition to welding wire.

Welding Positions :



Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
600161	1.0	0.040”	15	K 300
600160	1.2	0.047”	15	D 300

Approvals :

GOST-R, CE

GeKa®

ELOX SG 409 CB

Standards :

AWS A5.9	:	ER 409 Nb

Chemical Composition of Welding Wire % (Typical) :

C	Si	Mn	Cr	Ni	Mo
0.07	1.0	0.8	12.0	0.6	0.5

Mechanical Properties (MIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)
min. 355	min. 450	min. 20

Features and Applications :

* It used for the welding of ferritic stainless steel 409Cb and 409Ti which are commonly used for exhaust parts in automotive industry.
* High resistant to thermal fatigue.
* With help of Nb addition, Chromium carbide formation is prevented.
* Ar+ %2.5 O_2 or Ar+ %2.5 CO_2 mixed gases are used as shielding gas.

Welding Positions :

Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
606443	1.20	0.047"	15	D 300

Approvals :

CE

GeKa®

ELOX SG 410

Standards :

TS EN ISO 14343-A	:	G / W 13
EN ISO 14343-A	:	G / W 13
AWS A5.9	:	ER 410

Chemical Composition of Welding Wire % (Typical) :

C	Si	Mn	Cr
0.10	0.35	0.50	13.0

Mechanical Properties (MIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 250	min. 520	min. 20	840 °C - 870 °C/2h

Typical Base Material Grades :

* X 6 CrTi 17, X 20 CrNi 17 2, 431, 430 Ti.

Features and Applications :

* Preferred use in formation of surfaces resistant to corrosion, wear, and heat.
* Maintained hardness at temperatures of up to 500 °C.
* Resistance to formation of oxide layers at temperatures up to 900 °C.
* Reqiured use of Ar+ %2.5 O_2 or Ar+ %2.5 CO_2 mixed gas as shielding gas.
* For TIG; Ar gas as shielding.

Welding Positions :

Current Type :

MIG D.C. (+)
TIG D.C. (-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
606090	1.0	0.040"	15	K 300
604338	1.2	0.047"	15	D 300
606442	2.40 x 1000	3/32 x 39"	5	Plastic Box

Approvals :

GOST-R, CE

GeKa®

ELOX SG 430

Standards :

TS EN ISO 14343-A	:	G / W 17
EN ISO 14343-A	:	G / W 17
AWS A5.9	:	ER 430

Chemical Composition of Welding Wire % (Typical) :

C	Si	Mn	Cr
0.05	0.40	0.40	17.0

Mechanical Properties (MIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Heat Treatment
min. 300	min. 450	min. 20	750 °C/2h

Typical Base Material Grades :

* X 6 CrTi 17, X 20 CrNi 17 2, 431, 430 Ti.

Features and Applications :

* Applicability in surfacing to provide resistance to corrosion, wearing, and heat.
* Usability in MIG welding only.
* Requirement of use of For MIG : Ar+ %2.5 O_2 or Ar+ %2.5 CO_2 mix gas as shielding.

For TIG : Ar gas as shielding.

Welding Positions :

Current Type :

MIG D.C.(+)
TIG D.C. (-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
603518	1.0	0.040"	15	K 300
600153	1.2	0.047"	15	D 300
604859	1.6	0.062"	15	
606410	2.40 x 1000	3/32 x 39"	5	Plastic Box

Approvals :

GOST-R, CE

GeKa®

ELOX SG 2209

Standards :

TS EN ISO 14343-A	:	W 22 9 3 N L
EN ISO 14343-A	:	W 22 9 3 N L
AWS A5.9	:	ER 2209

Chemical Composition of Welding Wire %(Typical):

C	Si	Mn	Cr	Ni	Mo	N
0.02	0.40	1.70	22.80	7.80	2.90	0.15

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Impact Strength (ISO-V/-46°C)
550	700	28	100 J

Typical Base Material Grades:

* SAE 2209, SAE 2205, EN14462, X2CrNiMoN22-5-3, X2CrNiN23-4, X2CrNiMoN22-5-3 with X10CrNiMoNb18-12 and X2CrNiMoN22-5-3 with P235GH/ P265GH, S255N, P295GH, S355N and 16Mo3 combinations, UNS S31803, S32205.

Features and Applications :

* GeKa ELOX SG 2209 is duplex stainless steel TIG Welding rod contains low Carbon and approximate %22Cr, %9Ni and %3Mo.
* Microstructure is Austenite + Ferritic.
* The weld metal has an excellent resistance to stress corrosion, cracking and pitting.
* The use of this welding rod, pipe and general manufacturing industries, offshore applications, oil, gas, chemical and petrochemical industry.
* Shielding gas : TIG; pure Ar or Ar+%1-2N_2 mix gases can be used.

Welding Positions :

Current Type :

TIG D.C. (-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
606590	2.00 x 1000	5/64 x 39”	5	Plastic Box
606591	2.40 x 1000	3/32 x 39”	5	Plastic Box

Approvals :

CE

GeKa

ELOX SG 2594

Standards :

TS EN ISO 14343-A	:	W 25 9 4 N L
EN ISO 14343-A	:	W 22 9 4 N L
AWS A5.9	:	ER2594

Chemical Composition of Welding Wire %(Typical):

C	Si	Mn	Cr	Ni	Mo
0.02	0.35	0.70	25.0	9.00	3.80

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Impact Strength (ISO-V/+20°C)
min. 550	min. 760	min. 18	min. 47 J

Typical Base Material Grades:

* (1.4501)X2CrNiMoCuWN25-7-4, (1.4515)GX3CrNiMoCuN26-6-3, (1.4517)GX3CrNiMoCuN25-6-3-3, UNS S 32750, S 32760 ZERON 100, SAF 25/07, FALC100

Features and Applications :

* GeKa ELOX SG 2594 is a super duplex welding wire.
* Used for the welding Austenitic-Ferritic stainless alloys of %25 Cr, %9 Ni, %3.5 Mo and low C types.
* It has high resistance to intergranular corrosion and pitting.
* GeKa ELOX SG 2594 is intended for welding super duplex alloys such as 2507, ASTM S32760, S32550 and A31260.
* As the shielding gas, Argon (Ar) is used.

Welding Positions :

Current Type :

TIG D.C. (-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
608043	1.60 x 1000	1/16 x 39”	5	Plastic Box
608044	2.00 x 1000	5/64 x 39”	5	Plastic Box
608218	2.40 x 1000	3/32 x 39”	5	Plastic Box

Approvals :

GeKa

AlSi 5

Standards :

TS 6204 EN ISO 18273	:	S Al 4043(AlSi5)
EN ISO 18273	:	S Al 4043(AlSi5)
AWS A5.10	:	ER-4043

Chemical Composition of Welding Wire % (Typical) :

Si	Mn	Al	Fe
5.0	<0.05	rest	<0.8

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Working Temperature (°C)
110	150	15	575 - 633

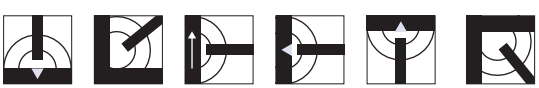
Typical Base Material Grades :

AlMgSi 0.5, AlMg1SiCu, AlMgSi 1, AlZn4.5Mg 1, Al 99.5, Al 99, AlCuMg 1, AlMgSi 0.7, AlMgSi 0.8, AlMgSiCu, AlMn 1, G-AlSi 6 Cu 4

Features and Applications :

* It is Al-Si welding MIG wire.
* Application range is joining of cast aluminum parts and aluminum profiles, motor blocks.
* Material range is AlMgSi 0.5, AlMgSiCu, Al99.5 etc.
* It is recommended that preheating to 105°C before welding of plates thicker than 10 mm.
* Required use of Ar, He or Ar+He gas as shielding gas.

Welding Positions :



Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
600319	0.8	0.030"	5
600318	1.0	0.040"	7
600317	1.2	0.047"	7
600316	1.6	0.062"	7

Approvals :

GOST-R

GeKa®

Al 99.5

Standards :

TS 6204 ENISO 18273	:	S Al 1100(Al99.0Cu)
ENISO 18273	:	S Al 1100(Al99.0Cu)
AWS A5.10	:	~ER 1100

Chemical Composition of Welding Wire
% (Typical) :

Al	Cu	Fe	Si
99.5	0.10	<0.40	<0.30

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation (L_o=5d_o)(%)	Working Temperature (°C)
50	85	25	647-658

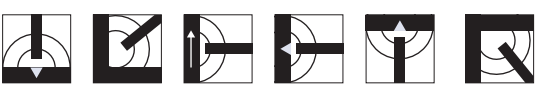
Typical Base Material Grades :

Al 99.5, Al 99.7, Al 99.8, E Al 99.9, Al 99, E-Al MgSi

Features and Applications :

* It is aluminum MIG welding wire.
* Application field is truck chassis and body, tanks, buses and containers, railway trucks, marine applications, pipes, flanges, panels, ship ports, barriers, ship boards etc.
* It is recommended that preheating to 150°C before welding of plates thicker than 10 mm.
* Required use of Ar, He or Ar+He gas as shielding gas.

Welding Positions :



Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
600328	0.80	0.030"	5
600330	1.00	0.040"	7
600329	1.20	0.047"	7
602278	1.60	0.062"	7

Approvals :

GOST-R

GeKa®

AlMg 3

Standards :

TS 6204 ENISO 18273	:	S Al 5754(AlMg3)
ENISO 18273	:	S Al 5754(AlMg3)

Chemical Composition of Welding Wire % (Typical) :

Mg	Mn	Si	Fe	Al
3.0	<0.5	<0.40	<0.40	rest

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation (L_o=5d_o)(%)	Working Temperature (°C)
100	200	20	610-642

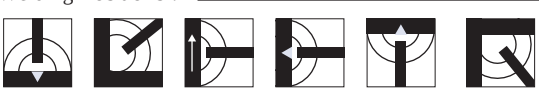
Typical Base Material Grades :

* AlMg 1, AlMg 2.5, AlMg 3, AlMg 2.7 Mn, AlMg Si 0.5, AlMg 2, AlMg2 Mn 0.8, AlMgSi 0.7, AlMgSi 0.8, G-AlMg 3, G-AlMg3 (Cu), G-AlMg 3 Si.

Features and Applications :

* It is used for joining aluminum alloys includes up to 3 % Mg. Resistance to sea water. Parent metals AlMg1, AlMg2.5, and AlMg2Mn0.8 etc.
* Required use of Ar, He or Ar+He gas as shielding gas.
* It is recommended that preheating to 150°C before welding of plates thicker than 10 mm.

Welding Positions :



Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
600327	1.20	0.047”	7
600326	1.60	0.062”	7

Approvals :

GOST-R

GeKa®

AlMg 5

Standards :

TS 6204 ENISO 18273 :	S Al 5356 (AlMgC-A)
ENISO 18273	:	S Al 5356 (AlMgC-A)
AWS A5.10	:	ER 5356

Chemical Composition of Welding Wire % (Typical) :

Mg	Mn	Si	Fe	Al
5.0	0.3	<0.25	<0.40	rest

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Working Temperature (°C)
180	260	20	575-633

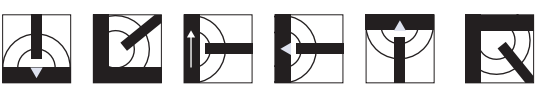
Typical Base Material Grades :

* AlMg 5, AlMg 4.5, G-AlMg 5, G-AlMg 10, AlMgSi 1, G-AlMg 3(Cu), AlMg 2.5Mn, AlMg 2 Mn 0.8, AlMg 3, AlMg 3 Si, G-Almg 3, AlMg 4.5 Mn, G-AlMg 3 Si, AlMg Si 0.5, AlMgSi 0.7, AlMgSi 0.8, AlMgSi 0.8, AlMgSi 1 Cu, AlZn 4.5 Mg 1.

Features and Applications :

* It is used for joining aluminum alloys includes over 3 % Mg. Resistance to sea water.
* Application field is cup and boilers, columns, marine applications.
* Required use of Ar, He or Ar+He gas as shielding gas.
* It is recommended that preheating to 150°C before welding of plates thicker than 10 mm.

Welding Positions :



Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
600323	0.80	0.030”	5
600322	1.00	0.040”	7
600321	1.20	0.047”	7
600320	1.60	0.062”	7

Approvals :

GOST-R

GeKa®

AlMg 4.5 Mn

Standards :

TS 6204 ENISO 18273	:	S Al 5183(AlMg4.5Mn0.7A)
ENISO 18273	:	S Al 5183(AlMg4.5Mn0.7A)
AWS A5.10	:	ER 5183

Chemical Composition of Welding Wire % (Typical) :

Mg	Mn	Si	Fe	Al	Cr
5.0	0.8	<0.40	<0.40	rest	0.20

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation (L_o=5d_o)(%)	Working Temperature (°C)
170	250	20	574-638

Typical Base Material Grades :

* AlMg 2.7 Mn, AlMg 3, AlMg 4.5 Mn, AlMg 4 Mn, AlMg 5, AlMgSi 0.5, AlMgSi, 0.7, AlMgSi 0.8, AlMgSi 1, AlMgSi 1 Cu, AlZn 4.5 Mg 1, AlZMgCu 1.5, AlZnMgCu 0.5, G-AlMg 5 Si, G-AlMg 3, G-AlMg 5.

Features and Applications :

* It is used in welding exposed to sea water aluminum parts, high strength aluminum alloys work in low temperatures (-196°C).
* Required use of Ar, He or Ar+He gas as shielding gas.

Welding Positions :

Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
600325	1.00	0.040”	7
600324	1.20	0.047”	7

Approvals :

GOST-R, ABS

GeKa®

AlSi 5 TIG

Standards :

TS 6204 EN ISO 18273	:	S Al 4043 (AlSi5)
EN ISO 18273	:	S Al 4043 (AlSi5)
TS EN ISO 17672	:	Al 105
EN ISO 17672	:	Al 105
AWS A5.10	:	ER 4043

Chemical Composition of Welding Rod
% (Typical) :

Al	Si	Mn	Fe
rest	5.0	max. 0.2	max. 0.4

Mechanical Properties :

Density (kg/dm^3)	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Melting Range (°C)
2.7	100	160	15	573 -625

Features and Applications :

* AlSi5 is aluminum TIG rod with high content of silicon.
* It is used for joining and filling of aluminum silicon cast alloys including up to 7% silicon.
* It is recommended that preheating to 150°C before welding of plates thicker than 15 mm.
* For gas welding, GeKaTec F-LH1 is recommended.
* Shielding gas : Ar

Welding Method :

TIG Welding - Gas Welding

Current Type	MIG Wire	Electrode
TIG A.C. (-)	GeKa AlSi 5	GeKaTec Aluweld Si

Welding Positions :

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
602159	1.6 x 1000	1/16 x 39"	5
600256	2.0 x 1000	5/64 x 39"	5
600255	2.4 x 1000	3/32 x 39"	5
600254	3.2 x 1000	1/8 x 39"	5
600253	4.0 x 1000	5/32 x 39"	5

Approvals :

GOST-R

GeKa®

AlSi 12 TIG

Standards :

TS 6204 EN ISO 18273	:	S Al 4047 (AlSi 12)
EN ISO 18273	:	S Al 4047 (AlSi 12)
TS EN ISO 17672	:	Al 112
EN ISO 17672	:	Al 112
AWS A5.10	:	ER 4047

Chemical Composition of Welding Rod % (Typical) :

Al	Si	Fe	Mn
rest	12.0	max. 0.5	max. 0.3

Mechanical Properties :

Density (kg/dm³)	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation (L_o=5d_o)(%)	Melting Range (°C)	Hardness (HB)
2.6	80	170	8	575 - 585	45

Features and Applications :

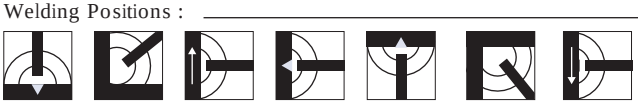
* AlSi12 is aluminum TIG rod with high content of silicon.
* It is used for joining and filling of aluminum silicon cast alloys including more than 7% silicon.
* It has a good fluidity. Oxyacetylene welding and brazing is possible with Gekatec F-LH1.
* It is recommended that preheating to 150°C before welding of plates thicker than 15mm.
* Shielding gas : Ar

Welding Method :

TIG Welding - Gas Welding

Current Type	Electrode
TIG A.C.(-)	GeKaTec Aluweld 12Si

Welding Positions :



Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
600244	2.0 x 1000	5/64 x 39"	5
600243	2.4 x 1000	3/32 x 39"	5
600242	3.2 x 1000	1/8 x 39"	5

Approvals :

GOST-R

GeKa®

Al 99.5 TIG

Standards :

TS 6204 EN ISO 18273	:	S Al 1100 (Al 99.0 Cu)
EN ISO 18273	:	S Al 1100 (Al 99.0 Cu)
DIN 1732	:	SG-Al 99.5Ti
AWS A5.10	:	~ER 1100

Chemical Composition of Welding Rod
% (Typical) :

Al
min. 99.5

Mechanical Properties :

Density (kg/dm³)	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation (L_o=5d_o)(%)	Melting Range (°C)	Electrical Conductivity (Sm/mm²)
2.7	min. 40	min. 70	30	658 - 674	35

Features and Applications :

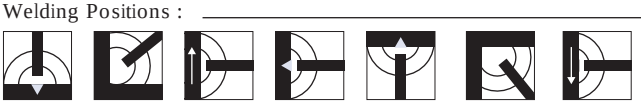
* Al99.5 TIG is pure aluminum welding TIG rod.
* It is used for joining of aluminum alloys required high electrical conductivity.
* It is recommended that preheating to 200 °C before welding of plates thicker than 15mm.
* For gas welding, GeKaTec F-LH1 is recommended.
* Shielding gas : Ar

Welding Method :

TIG Welding - Gas Welding

Current Type	MIG Wire	Electrode
TIG A.C.(-)	GeKa Al99.5	GeKaTec Aluweld 99Al

Welding Positions :



Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
600250	2.0 x 1000	5/64 x 39”	5
600251	2.4 x 1000	3/32 x 39”	5
600249	3.2 x 1000	1/8 x 39”	5
600252	4.0 x 1000	5/32 x 39”	5

Approvals :

GOST-R

GeKa®

AlMg 5 TIG

Standards :

TS 6204 EN ISO 18273	:	S Al 5356 (AlMgCr-A)
EN ISO 18273	:	S Al 5356 (AlMgCr-A)
DIN 1732	:	SG-A1 Mg5
AWS A5.10	:	ER 5356

Chemical Composition of Welding Rod
% (Typical) :

Al	Mg	Si	Mn
rest	5.0	0.5	0.5

Mechanical Properties :

Density (kg/dm^3)	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Melting Range (°C)	Hardness (HB)
2.6	120	250	25	560 - 630	70

Features and Applications :

* AlMg5 is magnesium alloyed aluminum TIG rod.
* It is used for joining of aluminum alloys required high mechanical properties.
* The weld deposit has a good resistance to atmospheric influences and sea water.
* And the weld metal is proper for surface treatment such as anodizing and polishing.
* It is recommended that preheating to 150 °C before welding of plates thicker than 15mm.
* For gas welding, GeKaTec F-LH1 is recommended.
* Shielding gas : Ar

Welding Method :

TIG Welding - Gas Welding

Current Type	MIG Wire
TIG A.C.(-)	GeKa AlMg 5

Welding Positions :

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
600248	2.0 x 1000	5/64 x 39”	5
600247	2.4 x 1000	3/32 x 39”	5
600246	3.2 x 1000	1/8 x 39”	5

Approvals :

GOST-R

GeKa®

AlMg4.5Mn TIG

Standards :

TS 6204 EN ISO 18273	:	SAl 5183(AlMg4.5Mn0.7A)
EN ISO 18273	:	SAl 5183(AlMg4.5Mn0.7A)
AWS A5.10	:	ER 5183

Chemical Composition of Welding Rod
% (Typical) :

Al	Si	Fe	Mn	Mg	Cr
rest	max. 0.4	max. 0.4	0.8	5.0	0.2

Mechanical Properties :

Density (kg/dm³)	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation (L_o=5d_o)(%)	Melting Range (°C)	Hardness (HB)
2.6	170	250	20	575 - 585	45

Features and Applications :

* AlMg4.5Mn is magnesium alloyed aluminum TIG rod.
* It is used for joining of aluminum alloys including more than 3% Mg.
* The weld deposit has a good resistance to atmospheric influences and sea water.
* It is recommended that preheating to 150 °C before welding of plates thicker than 15mm.
* For gas welding, Gekatec F-LH1 is recommended.
* Shielding gas : Ar

Welding Method :

TIG Welding - Gas Welding

Welding Positions :

Current Type :

TIG A.C.(-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)	
604749	2.0 x 1000	5/64 x 39"
604750	2.4 x 1000	3/32 x 39"
604751	3.2 x 1000	1/8 x 39"

Package Weight (Kg)
5
5
5

Approvals :

GOST-R

GeKa®

R1

Standards :

TS EN ISO 24373	:	S Cu 6560 (CuSi3Mn1)
EN ISO 24373	:	S Cu 6560 (CuSi3Mn1)
AWS A 5.7	:	ER Cu Si A

Chemical Composition of Welding Wire % (Typical) :

Si	Mn	Fe	Sn	Cu
3.0	1.0	<0.20	0.10	rest

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
130	220	30	55

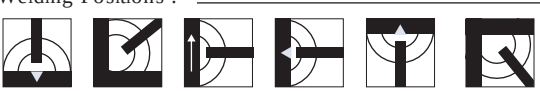
Typical Base Material Grades :

CuSi 2 Mn,CuSi 3 Mn,CuMn 5,CuMn 2 , Galvanized steels and Cu-Zn (brass) alloyed, Cu-Mn alloyed

Features and Applications :

* It is Copper-Silicon alloyed MIG welding wire and used in welding of galvanized steels.
* Shielding Gas: Ar (I1)

Welding Positions :



Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
603432	0.8	0.030”	15
600274	1.0	0.040”	15
600273	1.2	0.047”	15

Approvals :

GOST-R

GeKa®

R1 L

Standards :

TS EN ISO 24373	:~S Cu1898 (CuSn1)	
EN ISO 24373	:~S Cu1898 (CuSn1)	
AWS A 5.7	:	ER Cu

Chemical Composition of Welding Wire % (Typical) :

Si	Mn	Sn	Cu
0.3	0.3	0.8	rest

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
115	200	35	60

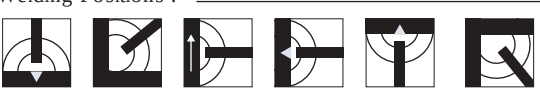
Typical Base Material Grades :

* OF-Cu, SE-Cu, SW-Cu, SF-Cu, Cu Fe 2P, CuSP, CuTeP, E-Cu C, F-Cu, D-Cu, SD Cu, SB-Cu, SA-Cu.

Features and Applications :

* It is Cu-Sn alloy welding wire.
* It is used in welding of pure copper and copper based low alloy, tank and boilers, graphite electrode holders, slag baths, oxygen tubes, electrical equipment.
* Shielding Gas: Ar, He, Ar+He

Welding Positions :



Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
600276	1.0	0.040”	15
600275	1.2	0.047”	15
600277	1.6	0.062”	15

Approvals :

GOST-R

GeKa

R1 AG

Standards :

TS EN ISO 24373 : S Cu1897 (CuAg1)
EN ISO 24373 : S Cu1897 (CuAg1)

Chemical Composition of Welding Wire % (Typical) :

Ag	P	Mn	Cu
0.8 - 1.20	0.01	0.1	rest

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
80	200	20	~50

Typical Base Material Grades :

* 2.0076, 2.0090, 2.0040

Features and Applications :

* Applicability in arc welding of copper materials with high electric conductivity, of copper-silver alloys containing low amounts of phosphor as well as of pure copper.
* Additional applicability in gas welding of deoxidized copper.
* High electric conductivity (30-45 S.m/mm^2).
* Use of Ar (I1) as shielding gas.

Welding Positions :

Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
604292	1.2	0.047"	15

Approvals :

GOST-R

GeKa

R4

Standards :

TS EN ISO 24373 : Cu5410 (CuSn12 P)
EN ISO 24373 : Cu5410 (CuSn12 P)

Chemical Composition of Welding Wire % (Typical) :

Sn	P	Fe	Cu
12.0	0.20	<0.10	rest

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
260	380	10	130

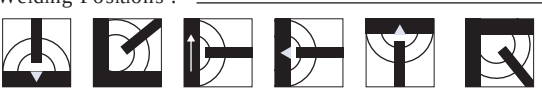
Typical Base Material Grades :

* Cu Sn 8, Cu Sn 12

Features and Applications :

* It is Cu-Sn alloy welding wire.
* It is used in welding of pure copper and copper based low alloy, tank and boilers, graphite electrode holders, slag baths, oxygen tubes, electrical equipment.
* Shielding Gas: Ar, Ar+He

Welding Positions :



Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
600262	1.0	0.040”	15
600261	1.2	0.047”	15
600260	1.6	0.062”	15

Approvals :

GOST-R

GeKa

R4 L

Standards :

TS EN ISO 24373	:	CuSn6 P - CF452K
EN ISO 24373	:	CuSn6 P - CF452K
AWS A 5.7	:	~ER CuSn - A

Chemical Composition of Welding Wire % (Typical) :

Sn	P	Fe	Cu	Pb
6.0	0.20	<0.10	rest	<0.02

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
270	410	30	100

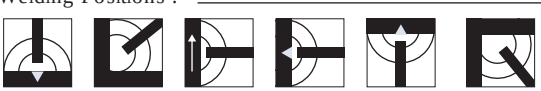
Typical Base Material Grades :

* CuSn 2, CuSn 4, CuSn 6, CuSn 8, CuSn 6 Zn, G-CuSn 2 ZnPb, G-CuSn 5 ZnPb, G-CuSn 6 ZnNi.

Features and Applications :

* It is Cu-Sn alloy welding wire.
* Joining and surfacing of tin bronzes, cast tin bronzes, such as CuSn 2, CuSn 6, CuSn 8 and CuSn 6 Zn...
* Shielding Gas: Ar, Ar+He

Welding Positions :



Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
600267	1.0	0.040”	15
600266	1.2	0.047”	15
600265	1.6	0.062”	15

Approvals :

GOST-R

GeKa

R4 A

Standards :

TS EN ISO 24373	:	Cu6180 (CuAl10Fe)
EN ISO 24373	:	Cu6180 (CuAl10Fe)
AWS A 5.7	:	ER CuAl-A2

Chemical Composition of Welding Wire % (Typical) :

Al	Si	Fe	Cu
9.0	<0.10	<1.50	rest

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
410	590	45	145

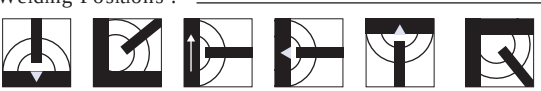
Typical Base Material Grades :

* CuAl 5, CuAl 8, G-CuAl 8 Mn

Features and Applications :

* It is Cu-Al MIG welding wire.
* It is used for welding of sea water vaporizers, door accessories, rolling equipment, CuAl 5, CuAl8, G-CuAl 8 Mn and abrasive resistant coatings.
* Shielding Gas: Ar+He or He.

Welding Positions :



Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
600272	1.0	0.040”	15
600271	1.2	0.047”	15
602108	1.6	0.062”	15

Approvals :

GOST-R

GeKa

R4 AL

Standards :

TS EN ISO 24373	:	S Cu 6100(CuAl8)
EN ISO 24373	:	S Cu 6100(CuAl8)
AWS A 5.7	:	CuAl-A1

Chemical Composition of Welding Wire
% (Typical) :

Al	Si	Zn	Cu	Mn
8.0	<0.10	<0.20	rest	<0.50

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
200	430	40	100

Typical Base Material Grades :

* CuAl 5, CuAl 8, G-CuAl 8 Mn, CuAl 5 As, CuZn 20 Al 2

Features and Applications :

* It is Cu-Al MIG welding wire.
* It is used for surfacing of steel and cast steels
* It is used for joining and surfacing of aluminum bronzes, e.g. CuAl5, CuAl8, G-CuAl 8 Mn, Cu Al 5 As, C Zn 20 Al 2, surfacing of Copper, Brass, non alloyed and low alloyed steels.
* Shielding Gas: Ar, He+Ar, He
* Metal to metal wear, sea water and is used in parts exposed to corrosive liquids such as acids.

Welding Positions :

Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
600269	1.0	0.040”	15
600268	1.2	0.047”	15
600270	1.6	0.062”	15
602632	1.0	0.040”	200 (Big Pack)

Approvals :

GOST-R

Copper Alloyed MIG Welding Wire

GeKa®

R4 M

Standards :

AWS A5.7 : ER CuMn Ni Al

Chemical Composition of Welding Wire % (Typical) :

Al	Fe	Ni	Cu	Mn
7.5	2.5	2.0	rest	13.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
470	650	20	205

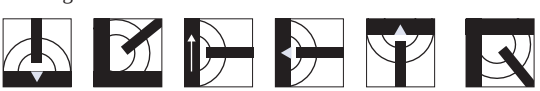
Typical Base Material Grades :

* Ductile cast iron steels, ductile cast iron-manganese steels.

Features and Applications :

* Mn-Ni,Aluminium Brange is MIG welding wire.
* Used for welding of screw, clutch pulley and compression plates.
* Shielding gas: Ar (%99.99)

Welding Positions :



Current Type :

MIG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
603236	1.0	0.040"	15
600264	1.2	0.047"	15
600263	1.6	0.062"	15

Approvals :

GeKa®

CuNi SG

Standards :

TS EN ISO 24373	:	S Cu 7158(CuNi30)
EN ISO 24373	:	S Cu 7158(CuNi30)
AWS A 5.7	:	ER CuNi

Chemical Composition of Welding Rod % (Typical) :

Mn	Ti	Fe	Ni	S	Cu
0.9	0.4	0.5	30.0	max. 0.01	rest

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
250	400	100 J	30

Typical Base Material Grades :

* CuNi 10 Fe 1 Mn(2.0872) - CuNi 20 Fe(2.0878) - CuNi 30 Fe(2.0882)

Features and Applications :

* It is used of Copper alloys includes up to 30% Nickel, joining and surfacing of steel alloys.
* Joining of stainless steel to copper alloys is possible.
* Because of excellent resistance to sea water corrosion, it is used marine off-shore applications, sea water exchangers and food and chemical industries.
* Shielding Gas: Ar

Welding Positions :

Current Type :

TIG D.C.(-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
602778	1.6 x 1000	1/16 x 39”	5
602779	2.0 x 1000	5/64 x 39”	5
602780	2.4 x 1000	3/32 x 39”	5

Approvals :

GOST-R

GeKa®

CuNiFe SG

Standards :

TS EN ISO 24373	:	S Cu 7061(CuNi10)
EN ISO 24373	:	S Cu 7061(CuNi10)
DIN 1733	:	SG-CuNi10 Fe

Chemical Composition of Welding Rod
% (Typical) :

Cu	Fe	Mn	Ti	Ni
rest	1.8	1.0	0.17	10.0

Mechanical Properties (TIG) :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
150	350	30	200

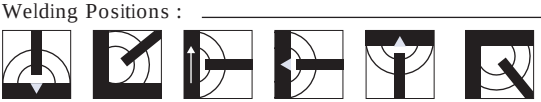
Typical Base Material Grades :

* CUNIFER 30, CUNIFER 40, Cu90-Ni10 and low Ni Allay Cu-Ni allays
2.0862 CuNi5Fe
2.0872 CuNi10Fe

Features and Applications :

* It is used for copper nickel alloys with 10% nickel such as CuNi5Fe, CuNi10Fe.
* Weld deposit is highly corrosion resistant.
* It is used for joining and surfacing copper-nickel alloys and CuNiFe pipes which perform in corrosive areas such as seawater.
* Shielding Gas: Ar

Welding Positions :



Current Type :

TIG D.C.(-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
605300	1.6 x 1000	1/16 x 39''	5
605301	2.0 x 1000	5/64 x 39''	5
605302	2.4 x 1000	3/32 x 39"	5

Approvals :

GOST-R

GeKa®

ELCOR R 71

Standards :

TS EN ISO 17632-A	:	T 42 4 P C 1 H5
EN ISO 17632-A	:	T 42 4 P C 1 H5
AWS A5.20	:	E 71 T-1C-J

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S
0.06	0.5	1.3	0.015	0.015

Mechanical Properties :

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-40°C)	Elongation ($L_o=5d_o$)(%)
AW	min. 420	500 - 640	min. 50 J	min. 22

AW : as welded

Typical Base Material Grades :

* S235JR, S275JR, S235J2G3-S355J2G3, P 235T1-P355T1, P235T2-P355T2, L210NB-L360NB, L290MB-L360MB, P235G1TH, P255G1TH, P235GH-P355GH, P295GH, S235JRS1-S235J4S, S315G1S-S355G3S, S255N-S380N, S255NL-S355NL,GE200-GE260

Features and Applications :

* Rutile-type flux-cored wire which is used for the production welding of machine and welding applications on ship, industry vehicle building and steel constructions in all positions.
* Provides high mechanical properties, proper, smooth, X-ray safety seams.
* It is economical as it has high melting ability and can work under high current in all positions.
* Shielding gas : %100 CO_2.

Welding Positions :

Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
304873	1.20	0.047"	4.5	D 200
305268	1.20	0.047"	5	D 300
304002	1.20	0.047"	15	C 300
304031	1.60	0.062"	15	C 300
305095	1.20	0.062"	200	BIG PACK

Approvals :

ELCOR R71 (CO_2) : TL, DNV-GL, BV, ABS, LR, RS, DB
NK, RINA, CWB, CE, GOST-R, HAKC(1.20mm)

GeKa

ELCOR R 71 CM

Standards :

TS EN ISO 17632-A	:	T 46 2 P M (C) 1
EN ISO 17632-A	:	T 46 2 P M (C) 1
AWS A5.20	:	E 71 T-1C/-1M

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S
0.06	0.5	1.3	< 0.015	< 0.015

Mechanical Properties :

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-20°C)	Elongation ($L_o=5d_o$)(%)
AW	min. 460	530 - 600	min. 50 J	min. 22

AW : as welded

Typical Base Material Grades :

S235JR, S275JR, S235J2G3-S355J2G3, P 235T1-P355T1, P235T2-P355T2, L210NB-L360NB, L290MB-L360MB, P235G1TH, P255G1TH, P235GH-P355GH, P295GH, S235JRS1-S235J4S, S315G1S-S355G3S, S255N-S380N, S255NL-S355NL, GE200-GE260

Features and Applications :

Rutile type flux cored wire which is used for the production welding of machine and welding applications on ship, and steel constructions in all positions. Provides high mechanical properties, proper, smooth, X-ray safety seams. It is economical as it has high melting ability and can work with high current in all positions. Shielding Gas: M21 (CO_2)

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
304546	1.20	0.047"	15	C 300

Approvals :

CE, GOST-R

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ELCOR R 71 SC

Standards :

TS EN ISO 17632-A	:	T 46 4 PC 1 H5
EN ISO 17632-A	:	T 46 3 PM 1 H5
AWS A5.20	:	E 71 T-1C/-1M H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S
0.05	0.5	1.3	< 0.015	< 0.015

Mechanical Properties :

Heat Treatment	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/-30°C) {with M21 gas}	Impact Strength (ISO-/-40°C) {with CO2 gas}	Elongation (L_o=5d_o)(%)
AW	min. 460	530 - 680	min. 47J	min. 47 J	min. 22

AW : as welded

Typical Base Material Grades :

S235JR, S275JR, S235J2G3-S355J2G3, P 235T1-P355T1, P235T2-P355T2, L210NB-L360NB, L290MB-L360MB, P235G1TH, P255G1TH, P235GH-P355GH, P295GH, S235JRS1-S235J4S, S315G1S-S355G3S, S255N-S380N, S255NL-S355NL, GE200-GE260

Features and Applications :

Rutile type flux cored wire which is used for the production welding of machine and welding applications on ship, and steel constructions in all positions. Provides high mechanical properties, proper, smooth, X-ray safety seams. It is economical as it has high melting ability and can work with high current in all positions. Shielding Gas: CO_2 or M21

Welding Positions :

Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
607485	1.20	0.047”	15	D 300

Approvals :

CE, GOST-R

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ELCOR MR 70

Standards :

TS EN ISO 17632-A	:	T 42 4 R C 3 H 10
EN ISO 17632-A	:	T 42 4 R C 3 H 10
AWS A5.20	:	E 70 T-9 C J H 8

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S
0.04	0.70	1.40	< 0.030	< 0.030

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-40°C)	Elongation ($L_o=5d_o$)(%)
min. 420	500 - 640	min. 47 J	min. 22

AW : as welded A : aging

Features and Applications :

* Metal-Rutile type flux cored welding wire.
* High fill rate and deep penantrant.
* Suitability flat and horizontal fillet weld.
* Excellent notch toughness value at low temperatures.
* Shielding Gas: CO_2

Welding Positions :

Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
305353	1.20	0.047”	15	C 300

Approvals :

CE

GeKa®

ELCOR B 70

Standards :

TS EN ISO 17632-A	:	T 42 4 B M 3 H5
EN ISO 17632-A	:	T 42 4 B M 3 H5
AWS A5.20	:	E 70 T-5 M J

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S
0.05	0.55	1.35	< 0.015	< 0.015

Mechanical Properties :

Heat Treatment	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/-30°C)	Impact Strength (ISO-V/-40°C)	Elongation (L_o=5d_o)(%)
AW or A	min. 420	520 - 670	120 J	min. 47 J	min. 22

AW : as welded A : aging

Typical Base Material Grades :

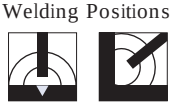
EN: S185, S235-S355, P 235 GH, P 265 GH, P 295 GH, P 235 T1/T2-P355N, L210-L485, S 255-S460, X42-X70

ASTM: A 131, A106/A515/A 714, A283/A285/A414/A662/A372, A369/A210/ A106, A516/A255/A 333/ A350/ A612

Features and Applications :

* Used for semi-automatic or fully automatic welding of alloyed or unalloyed construction steels, thin-walled steels.
* It has soft arc, deep penetration, good bead features.
* Impact strength values are higher than those of E71 T-1 in at low temperatures.
* M21 gas is used for shielding.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
304488	1.20	0.047”	15	C 300
304489	1.60	0.062”	15	C 300

Approvals :

CE, GOST-R, DB

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ELCOR B 70 SC

Standards :

TS EN ISO 17632-A	:	T 42 4 B C M 3 H5
EN ISO 17632-A	:	T 42 4 B C M 3 H5
AWS A5.20	:	E 70 T-5C/-5M H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S
0.05	0.60	1.40	< 0.015	< 0.015

Mechanical Properties :

Heat Treatment	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/-20°C)	Impact Strength (ISO-V/-40°C)	Elongation (L_o=5d_o)(%)
AW or SR	min. 470	550 - 640	min. 100 J	min. 60 J	min. 27

AW : as welded - SR : stress relieved

Typical Base Material Grades :

EN: S185, S235-S355, P 235 GH, P 265 GH, P 295 GH, P 235 T1/T2-P355N, L210-L485, S 255-S460, X42-X70
ASTM: A 131, A106/A515/A 714, A283/A285/A414/A662/A372, A369/A210/ A106, A516/A255/A 333/ A350/ A612

Features and Applications :

ELCOR B 70 SC is high-basicity flux-cored wire. Extremely crack resistant weld metal conditioned by the basic slag. High mechanical properties are easily obtained when used in single-sided welding operations using a ceramic back-up. Weld has X-ray quality with low spatter formation. Well-suited for joining high carbon steels and when welding critical mixed base metal combinations. Ideal metallurgical choice for repair welding and production as well as for use as a buffer layer.
Shielding gas ; CO_2 or M 21.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
605451	1.60	0.062"	15	C 300

Approvals :

CE

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ELCOR B 70 - ARM

Standards :

TS EN ISO 17632-A	:	T 42 A Z B M 3
EN ISO 17632-A	:	T 42 A Z B M 3
AWS A5.20	:	E 70 T-5 M

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S
0.03	0.10	0.35	< 0.015	< 0.015

Mechanical Properties :

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-30°C)	Elongation ($L_o=5d_o$)(%)
AW	min. 420	500-640	min. 47	min.22

Typical Base Material Grades :

* Armco Iron and mild steels.

Features and Applications :

* Suitable for use in welding of Armco Iron and mild steels. Applicability in welding of galvanized tanks made of Armco Iron.
* Suitable for automation.
* Shielding gas: M21

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
305769	1.20	0.047"	15	C 300

Approvals :

CE

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ELCOR M 70

Standards :

TS EN ISO 17632-A	:	T 42 5 MM 3
EN ISO 17632-A	:	T 42 5 MM 3
AWS A5.18	:	E 70 C-6 M

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S
0.05	0.63	1.58	0.017	0.011

Mechanical Properties :

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-50°C)	Elongation ($L_o=5d_o$)(%)
AW	min. 460	530-650	min. 47 J	min.22

AW : as welded

Typical Base Material Grades :

S235JR, S275JR, S235J2G3-S355J2G3, P 235T1-P355T1, P235T2-P355T2, L210NB-L415NB, L290MB-L415MB, P235G1TH, P255G1TH, P235GH-P355GH, P295GH, S235JRS1-S235J4S, S315G1S-S355G3S, S255N-S420N, S255NL-S355NL, GE200-GE260, X42-X60

Features and Applications :

* Suitable for butt and fillet welding. Better arc stability and wider optimum current range for spray transfer arc with less spattering than solid wire.
* Shielding gas M21

Welding Positions :

Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
304443	1.20	0.047"	15	C 300
304473	1.60	0.062"	15	C 300

Approvals :

ELCOR M 70 (M21) : BV, ABS, CE, GOST-R

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ELCOR M 70 SC

Standards :

TS EN ISO 17632-A	:	T 46 6 M M 1 H5
EN ISO 17632-A	:	T 46 6 M M 1 H5
AWS A5.18	:	E 70 C-6 M H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S
0.05	0.7	1.5	<0.015	<0.015

Mechanical Properties - % (Typical) :
(Typical values : with M21 gas)

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-40°C)	Impact Strength (ISO-V/-60°C)	Elongation ($L_o=5d_o$)(%)
AW or SR	>460	530 - 650	>60 J	>47 J	>26

AW : as welded - SR : stress relieved

Typical Base Material Grades :

S235JR, S275JR, S235J2G3-S355J2G3, P 235T1-P355T1, P235T2-P355T2, L210NB-L415NB, L290MB-L415MB, P235G1TH, P255G1TH, P235GH-P355GH, P295GH, S235JRS1-S235J4S, S315G1S-S355G3S, S255N-S420N, S255NL-S355NL, GE200-GE260, X42-X70

Features and Applications :

GEKA ELCOR M 70 is metal cored wire. Good arc restriking even with cold wire tip, suitable for robot applications. Multi-pass welding without in-between cleaning. Ideal for use in the field short arc and spray arc. Excellent gap bridging for root welding. Typical applications are shipbuilding, steel and pressure vessel construction, mechanical engineering and pipe work. High-efficiency type for economic production.
Shielding Gas: M21

Welding Positions :

Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
304512	1.20	0.047"	15	C 300

Approvals :

CE, GOST-R

GeKa

ELCOR M 80 Ni

Standards :

TS EN ISO 17632-A	:	T 50 4 M M 3
EN ISO 17632-A	:	T 50 4 M M 3
AWS A5.28	:	E 80 C Ni 1

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni
0.05	0.50	1.20	1.00

Mechanical Properties :

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-45°C)	Elongation ($L_o=5d_o$)(%)
AW	min. 500	560-720	min. 47 J	min.24

AW : as welded

Features and Applications :

* Used for automatic welding.
* It is metal cored wire
* It has soft arc, deep penetration, good bead features
* Suitable for butt and fillet welding
* Shielding gases : Ar+ %5-25 CO_2 (M21)

Welding Positions :

Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
305789	1.20	0.047''	15	C 300
305649	1.40	0.055"	15	C 300
305787	1.40	0.055"	200	Big Pack

Approvals :

CE

GeKa®

ELCOR R 81 Ni

Standards :

TS EN ISO 17632-A	:	T 46 4 1Ni P C 1
EN ISO 17632-A	:	T 46 4 1Ni P C 1
AWS A5.29	:	E 81 T1-Ni1 C

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Ni
0.05	0.5	1.30	<0.015	<0.015	0.90

Mechanical Properties - % (Typical) :
(Typical values : with CO_2 gas)

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-40°C)	Impact Strength (ISO-V/-30°C)	Elongation ($L_o=5d_o$)(%)
AW	min. 460	560 - 690	50 J	80 J	>24

AW : as welded

Typical Base Material Grades :

EN: S 185, S235-S355, P 235 GH, P 265 GH, P 295 GH, P 235 T1/T1-P 355 N, L210-L485, S 255-S500 (NL1,2), X 42-X80
ASTM: A 131, A 106/A515/A714, A 283/A285/A414/A662/A372, A369/A210/A106/A516/A573/A707, A516/A255/A299/ A333/ A350/ A612

Features and Applications :

Rutile type flux cored wire for mild steel and 490-550 MPa high tensile strength steel for low temperature service. Suitable for butt and fillet welding in all positions. You can get smooth arc, and low spatter, good weldability. Shielding Gas: CO_2

Welding Positions :

Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
304547	1.20	0.047”	15	C 300

Approvals :

ABS, CE, GOST-R

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ELCOR R 81 Ni SC

Standards :

TS EN ISO 17632-A :	T 50 3 1Ni P M 1 H5/T 46 4 1Ni P C 1 H5
EN ISO 17632-A :	T 50 3 1Ni P M 1 H5/T 46 4 1Ni P C 1 H5
AWS A5.29 :	E 81 T1-Ni1C ,Ni1M H 4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Ni
0.05	0.5	1.30	<0.015	<0.015	0.90

Mechanical Properties - % (Typical) :
(Typical values : with CO_2 gas)

Heat Treatment	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/-30°C) {with M21 gas}	Impact Strength (ISO-V/-40°C) {with CO2 gas}	Elongation (L_o=5d_o)(%)
AW	min 460	530 - 680	min47 J	min47 J	min22

AW : as welded

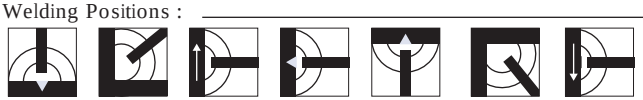
Typical Base Material Grades :

EN: S 185, S235-S355, P 235 GH, P 265 GH, P 295 GH, P 235 T1/T1-P 355 N, L210-L485, S 255-S500 (NL1,2), X 42-X80
ASTM: A 131, A 106/A515/A714, A 283/A285/A414/A662/A372, A369/A210/A106/A516/A573/A707, A516/A255/A299/ A333/ A350/ A612

Features and Applications :

Micro-alloy rutile flux-cored wire with rapidly solidifying slag for CO_2 and Ar+CO_2 mix. Excellent weld puddle manipulation, superior all-position welding. Using temperature up to -60 °C. Particularly suited for MAG orbital welding applications and all-position welding on ceramic backing. Low spatter loss, easy slag removel. CTOD-tested for offshore applications.
Shielding Gases: CO_2 or M21

Welding Positions :



Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
607486	1.20	0.047"	15	D 300

Approvals :

CE, GOST-R

GeKa®

ELCOR R 91

Standards :

TS EN ISO 18276-A	:	T 62 4 Mn 1.5 Ni PC 1
EN ISO 18276-A	:	T 62 4 Mn 1.5 Ni PC 1
AWS A5.29	:	E 91 T1 - K2C J

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Ni
0.08	0.5	1.20	<0.015	<0.015	1.70

Mechanical Properties - % (Typical) :
(Typical values : with CO_2 gas)

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-20°C)	Impact Strength (ISO-V/-40°C)	Elongation ($L_o=5d_o$)(%)
AW	min. 620	690 - 890	>62 J	>47 J	>18

AW : as welded

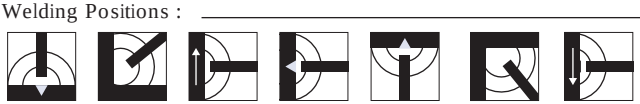
Typical Base Material Grades :

* S380N-S500N, S355NH-S460NH, S380NL-500NL

Features and Applications :

* Rutile type flux cored wire for 550-620 MPa high tensile strength steel for low temperature service.
* Suitable for butt and fillet welding all positions.
* Excellent impact value at low temperatures down to -40 °C.
* Shielding gas: CO_2

Welding Positions :



Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
305867	1.20	0.047"	15	D 300

Approvals :

ABS, GOST-R

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ELCOR R 91 SC

Standards :

TS EN ISO 18276-A	:	T 62 4 Mn 1.5 Ni PC 1 H5
EN ISO 18276-A	:	T 62 3 Mn 1.5 NiP M 1 H5
AWS A5.29	:	E 91 T1 - K2C,-K2M H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Ni	Mo
>0.07	0.5	1.40	<0.015	<0.015	1.70	0.20

Mechanical Properties - % (Typical) :
(Typical values : with M21 gas)

Heat Treatment	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/-30°C) with M21 gas	Impact Strength (ISO-V/-40°C) with CO2 gas	Elongation (L_o=5d_o)(%)
AW	min. 620	690 - 890	min. 47 J	min. 47 J	min. 18

AW : as welded

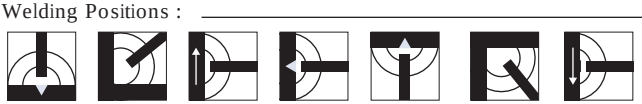
Typical Base Material Grades :

S380N-S500N, S355NH-S460NH, S380NL-500NL

Features and Applications :

Rutile type flux cored wire for expec•ally 550-620 MPa high tensile strength steel at low temperature service. Suitable for butt and fillet welding all positions. Exelent impact value at low temperatures down to -40 °C. Shielding Gas: M21or CO2

Welding Positions :



Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
607487	1.20	0.047"	15	D 300

Approvals :

GOST-R

GeKa®

ELCOR R 110

Standards :

TS EN ISO 18276-A	:	T 69 4 Mn2.5Ni P C 1
EN ISO 18276-A	:	T 69 4 Mn2.5Ni P C 1
AWS A5.29	:	E 111 T1-GC

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Ni	Mo
<0.08	0.5	1.70	<0.015	<0.015	2.10	0.20

Mechanical Properties - % (Typical) :
(Typical values : with CO_2 gas)

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-40°C)	Elongation ($L_o=5d_o$)(%)
AW	min. 690	770 - 940	min. 47 J	min. 17

AW : as welded

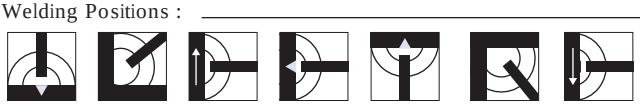
Typical Base Material Grades :

S690Q, L690M, N-A-XTRA, USS-T1, BH 70V, HY100, ASTM A514Gr.F,
High alloyed structural steels, fine grained steels.

Features and Applications :

* Rutile type flux cored wire which provides an exceptionally smooth and stable arc, low spatter.
* Applications of single and multipass welding of high strength low alloy steels, such as HY-80, and HY-100.
* Shielding gas: 100% CO_2.

Welding Positions :



Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
304631	1.20	0.047"	15	C 300

Approvals :

ABS (AWS), GOST-R

GeKa®

ELCOR R 110 SC

Standards :

TS EN ISO 18276-A	:	T 69 4 Mn 2,5N• PC 1 H5
EN ISO 18276-A	:	T 69 3 Mn 2,5 Ni PM 1 H5
AWS A5.29	:	E 111 T1-GC ,GM H4 (mod.)

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Ni	Mo
<0.08	0.5	1.70	<0.015	<0.015	2.00	0.30

Mechanical Properties - % (Typical) :
(Typical values : with M21 gas)

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-30°C) with M21 gas	Impact Strength (ISO-V/-40°C) with CO_2 gas	Elongation ($L_o=5d_o$)(%)
AW	min. 690	770 - 940	min. 47 J	min. 47 J	min. 17

AW : as welded

Typical Base Material Grades :

S690Q, L690M, N-A-XTRA, USS-T1, BH 70V, HY100, ASTM A514Gr.F,
High alloyed structural steels, fine grained steels.

Features and Applications :

ELCOR R 110 SC rutile type flux cored wire which provides an exceptionally smooth and stable arc, low spatter. Applications of single and multipass welding of high Strength low alloy steels, such as HY-80, and HY-100. Shielding Gas: M21or CO2

Welding Positions :

Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
607488	1.20	0.047”	15	D 300

Approvals :

GOST-R

GeKa®

ELCOR M Ni2 SC

Standards :

TS EN ISO 18276-A	:	T 55 6 Mn2Ni M M 1 H5
EN ISO 18276-A	:	T 55 6 Mn2Ni M M 1 H5
AWS A5.28	:	E80C-Ni2 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Ni
0.05	0.6	1.4	<0.015	<0.015	2.0

Mechanical Properties - % (Typical) :
(Typical values : with M21 gas)

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-40°C)	Impact Strength (ISO-V/-60°C)	Elongation ($L_o=5d_o$)(%)
AW	min. 550	640 - 820	min. 80 J	min. 47J	min. 24

AW : as welded

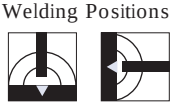
Typical Base Material Grades :

* Pipe Steels : P235T1/T2-P355N, L210-L485, ASTM A 537M
* Fine grained structural steels : S255(NL1/2) – S550 (QL/1)
* Ship building steels :15 NiCrMo10-6 (HY 80), ASTM G18NiCrMo12-6 HY80, ASTM A543M-93 B,C
* Pipeline Steels : API X42 – X80

Features and Applications :

* Good arc restriking even with cold wire tip, suitable for robot applications.
* Ideal for use in the field short arc and spray arc.
* Excellent gap bridging for root welding.
* High-efficiency type for economic production.
* Shielding Gas: M21

Welding Positions :



Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
605140	1.20	0.047"	15	D 300

Approvals :
GOST-R

GeKa®

ELCOR M NiMo1 SC

Standards :

TS EN ISO 18276-A	:	T 55 4 1NiMo M M 3 H5
EN ISO 18276-A	:	T 55 4 1NiMo M M 3 H5
AWS A5.28	:	E 90C-K3M H4
AWS A5.29	:	E 91 T1-G

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Ni	Mo
0.05	0.40	1.20	<0.015	<0.015	1.00	0.50

Mechanical Properties - % (Typical) :
(Typical values : with M21 gas)

Heat Treatment	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/-20cC)	Impact Strength (ISO-V/-40°C)	Elongation ($L_o=5d_o$)(%)
AW	>560	650 - 750	>60 J	>47 J	>17
SR	>540	630 - 710	>60 J	>47 J	>17

AW : as welded - SR : stress relieved
{580° -620°C/1h}

Typical Base Material Grades :

HY-80 and HY 100 steels

Features and Applications :

* Metal type flux-cored wire. * Good arc striking even with cold wire tip, suitable for robot applications.* Multi-pass welding without in-between cleaning.* Usable in the field short arc and spray arc.* Excellent gap bridging for root welding.* High-efficiency type for economic production.* Typical applications are crane, steel, vessel abd apparatus construction.
* Shielding Gas: M21

Welding Positions :

Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
304516	1.20	0.047"	15	D 300
605452	1.20	0.047"	16	C 300

Approvals :
GOST-R

GeKa®

ELCOR M NiCrMo SC

Standards :

TS EN ISO 18276 A	: T 69 6 Mn2NiCrMo M M 1 H5
EN ISO 18276 A	: T 69 6 Mn2NiCrMo M M 1 H5
AWS A5.28	: E 110 C-K4 H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Cr	Ni	Mo
0.05	0.40	1.60	<0.015	<0.015	0.5	2.2	0.50

Mechanical Properties - % (Typical) :
(Typical values : with M21 gas)

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-20°C)	Impact Strength (ISO-V/-40°C)	Impact Strength (ISO-V/-60°C)	Elongation ($L_o=5d_o$)(%)
AW	min. 690	770 - 940	>80 J	>75 J	>75 J	>17

AW : as welded -

Typical Base Material Grades :

HY-80 and HY 100 steels

Features and Applications :

ELCOR M NiCrMo SC metal cored wire without slag for Ar+CO_2 mix is a metal cored wire which provides an exceptionally smooth and stable arc, low spatter and minimal slag coverage.
Shielding Gas: M21

Welding Positions :

Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
304517	1.20	0.047"	15	C 300
305114	1.60	0.062"	15	C 300

Approvals :
GOST-R

GeKa®

ELCOR R 81 NiCu

Standards :

TS EN ISO 17632-A	:	T 46 3 Z P C 1
EN ISO 17632-A	:	T 46 3 Z P C 1
AWS A5.29	:	E 81 T1-W2 C

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Ni	Cr	Cu
0.05	0.50	1.30	<0.015	<0.015	0.50	0.55	0.50

Mechanical Properties - % (Typical) :

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-20°C)	Impact Strength (ISO-V/-30°C)	Elongation ($L_o=5d_o$)(%)
AW	min. 460	550 - 650	min. 60 J	min. 47 J	min. 22

AW : as welded

Typical Base Material Grades :

DIN: COR-TEN A-B-C
EN: S235JRW-S355JRW, 9CrNiCuP3-2-4, S255-S460,
ASTM: A 242/A441, A423/ A 588, A516/ A 255/ A 333/ A 350 / A612

Features and Applications :

* Rutile flux-cored wire.* Typical application is weathering grades of steels.* Excellent weld puddle maniplation, superior all-position welding.* Particularly suited for mechanized MAG welding and all-position welding on ceramic backing.* Low spatter with easy slag removal.* Shielding Gas: CO_2.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
304885	1.20	0.047"	15	BS 300

Approvals :

GOST-R, CE

GeKa®

ELCOR R 81 NiCu SC

Standards :

TS EN ISO 17632-A	:	T 46 2 Z P C 1 H5/T 46 2 Z P M 1 H5
EN ISO 17632-A	:	T 46 2 Z P C 1 H5/T 46 2 Z P M 1 H5
AWS A5.29	:	E 81 T1-G H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Ni	Cu
0.05	0.50	1.30	<0.015	<0.015	1.2	0.5

Mechanical Properties - % (Typical) :
(Typical values : with M21 gas)

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-20°C)	Impact Strength (ISO-V/-40°C)	Elongation ($L_o=5d_o$)(%)
AW	min. 460	550 - 650	min. 60 J	min. 47 J	>22

AW : as welded

Typical Base Material Grades :

DIN: COR-TEN A-B-C
EN: S235JRW-S355JRW, 9CrNiCuP3-2-4, S255-S460,
ASTM: A 242/A441, A423/ A 588, A516/ A 255/ A 333/ A 350 / A612

Features and Applications :

* Micro-alloy rutile flux-cored wire with rapidly solidifying slag for Ar+CO_2 mix.* Typical application is weathering grades of steels.* Excellent weld puddle maniplation, superior all-position welding.* Particularly suited for mechanized MAG welding and all-position welding on ceramic backing.* Low spatter with easy slag removal. Shielding Gas: M21 or CO_2

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Weight (Kg)	Package Type
304508	1.20	0.047"	15	BS 300
605619	1.20	0.047"	16	D 300

Approvals :
CE, GOST-R

GeKa®

ELCOR R Mo

Standards :

TS EN ISO 17632-A	:	T 46 2 Mo R C 2
EN ISO 17632-A	:	T 46 2 Mo R C 2
AWS A5.29	:	E 81 T1 - A1C

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Mo
0.05	0.50	1.25	<0.015	<0.015	0.50

Mechanical Properties - % (Typical) :

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (RT)	Impact Strength (ISO-V/-20°C)	Elongation ($L_o=5d_o$)(%)
AW	>470	550 - 650	>70 J	min. 47 J	>22
SR(620 °C / 1h, air cooled at 300°C)	>470	550 - 680	>70 J	min. 47 J	>21

AW : as welded SR : stress relieved RT : room temperature

Typical Base Material Grades :

* DIN: HI, HII, 17Mn4, 19Mn5, 15Mo3, 16 Mo 3
* EN: P 235 GH, P 265 GH, P 295 GH, 16 Mo 3, P 235 T1/T2-P355 N, L210-L485, S255-L485
* ASTM: A283, A285, A414, A662, A372, A204, A 369, A210, A106, A 516, A 255, A 333, A 350, A 612

Features and Applications :

* Rutile type flux-cored wire.* Typical applicatins are vessel and steel construction, mechanical engineering and pipe work.* Good arc restriking even with cold wire tip, suitable for robot applications.* Multi-pass welding without in-between cleaning.* Ideal for use in the field short arc and spray arc.* Excellent gap bridging for root welding. High-effeciency type for economic production environments. *Shielding Gas: CO_2

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
304850	1.20	0.047"	15	C 300

Approvals :

CE, GOST-R

GeKa®

ELCOR M Mo

Standards :

AWS A5.4 : E 2594-15

Composition of Weld Metal %(Typical):

C	Cr	Ni	Mn
0.035	24.0	8.60	1.45

Si	Ni
0.35	0.25

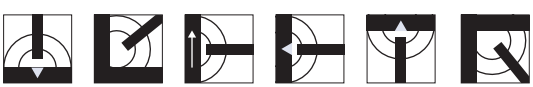
Mechanical Properties %(Typical) :

Tensile Stregth (N/mm^2)	Elongation ($L_o=5d_o$)(%)
min. 760	min. 15

Features and Applications :

* Basic type electrode which is used especially for the welding of duplex steels. It provides high yield and tensile strength and the weld metal is resistant to pitting corrosion.

Welding Positions :



Current Type :

D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight Kg
306213	2.50 x 250 3.20 x 300		60 - 80 80 - 120	1470 2870

Approvals :

GeKa®

ELCOR R Mo SC

Standards :

TS EN ISO 17632-A	:	T 46 2 Mo R C 2 H5
EN ISO 17632-A	:	T 46 2 Mo R C 2 H5
AWS A5.29	:	E 81 T1 - A1C H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Mo
0.05	0.50	1.30	<0.015	<0.015	0.50

Mechanical Properties - % (Typical) :
(Typical values : with CO_2 gas)

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (RT)		Elongation ($L_o=5d_o$)(%)
AW	>470	550 - 660	>70 J		>22
SR(620 °C / 1h, air cooled at 300°C)	>460	550 - 680	>70 J		>21

AW : as welded SR : stress relieved RT : room temperature

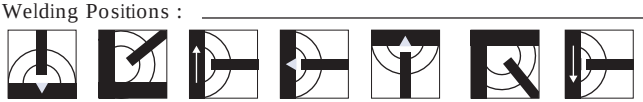
Typical Base Material Grades :

* DIN: HI, HII, 17Mn4, 19Mn5, 15Mo3, 16 Mo 3
* EN: P 235 GH, P 265 GH, P 295 GH, 16 Mo 3, P 235 T1/T2-P355 N, L210-L485, S255-L485
* ASTM: A283, A285, A414, A662, A372, A204, A 369, A210, A106, A 516, A 255, A 333, A 350, A 612

Features and Applications :

* Rutile type flux-cored wire.* Typical applicatins are vessel and steel construction, mechanical engineering and pipe work.* Good arc restriking even with cold wire tip, suitable for robot applications.* Multi-pass welding without in-between cleaning.* Ideal for use in the field short arc and spray arc.* Excellent gap bridging for root welding. High-effeciency type for economic production environments. *Shielding Gas: CO_2

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
605618	1.20	0.047"	15	D 300

Approvals :
CE, GOST-R

GeKa®

ELCOR M Mo SC

Standards :

TS EN ISO 17632-A	:	T 46 2 Mo M M 1 H5
EN ISO 17632-A	:	T 46 2 Mo M M 1 H5
AWS A5.29	:	E 81 T1 - A1
AWS A5.28	:	E 80 C - D2 - H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Mo
0.05	0.50	1.30	<0.015	<0.015	0.50

Mechanical Properties - % (Typical) :
(Typical values : with M21 gas)

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength RT		Elongation ($L_o=5d_o$)(%)
AW	min. 470	550 - 650	min. 70 J		min. 22
SR	min. 540	630 - 710	min. 70J		min. 22

AW : as welded SR : stress relieved RT : room temperature

Typical Base Material Grades :

DIN: Hl, HII, 17Mn4, 19Mn5, 15Mo3, 16 Mo 3
EN: P 235 GH, P 265 GH, P 295 GH, 16 Mo 3, P 235 T1/T2-P355 N, L210-L485, S255-L485
ASTM: A283, A285, A414, A662, A372, A204, A 369, A210, A106, A 516, A 255, A 333, A 350, A 612

Features and Applications :

* Metal cored wire without slag for Ar+CO_2 mix.* Typical applicatins are vessel and steel construction, mechanical engineering and pipe work.* Good arc restriking even with cold wire tip, suitable for robot applications.* Multi-pass welding without in-between cleaning.* Ideal for use in the field short arc and spray arc.* Excellent gap bridging for root welding.* High-effeciency type for economic production environments. * Shielding Gas: M21

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
304518	1.20	0.047"	15	C 300

Approvals :
CE, GOST-R

GeKa

FC TIG-B2

Standards :

EN ISO 21952-A	:	W Z CrMo1Si
ISO 219652-A	:	W Z CrMo1Si
AWS A5.28	:	E80C-B2(mod.)

Composition of Weld Metal %(Typical):

C	Si	Mn	P	Mo
0.06	0.55	0.90	0.01	0.50

As	Sb	Sn	Cr
<0.01	<0.005	<0.005	1.00

Mechanical Properties %(Typical) :

Heat Treatment	Yield Strength (N/mm^2)	Tensile Stregth (N/mm^2)	Impact Strength (ISO-V/-40°C)	Elongation ($L_o=5d_o$)(%)
680°C/2h	≥355	≥550	min. 47 J	≥20

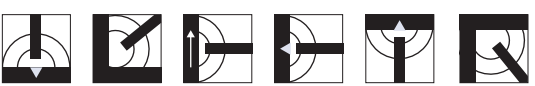
Typical Base Material Grades :

13CrMo4-5, 15CrMo5, 42CrMo4, 16CrMoV4, 25CrMo4, 24CrMo5, G22CrMo5-4, G17CrMo5-5

Features and Applications :

* Recommended for welding of Cr-Mo alloyed steels which are used for the production of boilers- tubes – pipes and nitride steels.
* Weld metal is resistant to temperatures up to +570 °C.
* Suitable for step-cooling applications.
* Shielding Gas : 100% Argon

Welding Positions :



Current Type :

TIG D.C. (-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg
306339	2.40 x 1000	3/32 x 39"	5

Approvals :

GeKa®

ELCOR R CrMo 1

Standards :

TS EN ISO 17634-A	:	T CrMo1 R C 2
EN ISO 17634-A	:	T CrMo1 R C 2
AWS A5.29	:	E 81 T1-B 2 C

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Cr	Mo
0.06	0.50	1.20	<0.015	<0.015	1.2	0.5

Mechanical Properties - % (Typical) :
(Typical values : with M21 gas)

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength RT	Elongation ($L_o=5d_o$)(%)
680 °C/2h	min. 460	550 - 690	min. 80 J	min. 19
920 °C/0.5h	min. 320	450 - 550	min. 100J	min. 26

AW : as welded SR : stress relieved RT : room temperature

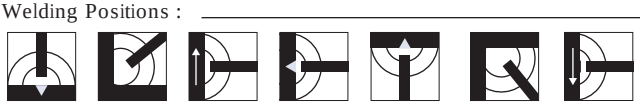
Typical Base Material Grades :

* DIN : 13 CrMo 44, 24 CrMo 5
* Cast Steels : GS 17CrMo55, GS 22CrMo54, G17CrMo5-5, G22CrMo5-4
* EN : 13 CrMo 4-5, G 17 CrMo 5-5, G 22 CrMo 5-4
* ASTM : A 182, A 387, A 217, A 387 Gr. 11-12

Features and Applications :

* Rutile type flux-cored wire.* Typical applicatins are vessel and steel construction, mechanical engineering and pipe work.* Good arc restriking even with cold wire tip, suitable for robot applications.* Multi-pass welding without in-between cleaning.* Ideal for use in the field short arc and spray arc.* Excellent gap bridging for root welding.
* High-effeciency type for economic production environments.* Shielding gas: CO_2

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
306041	1.20	0.047”	15	C 300

Approvals :
CE, GOST-R

GeKa®

ELCOR M CrMo1 SC

Standards :

TS EN ISO 17634-A	:	T CrMo1 M M 1 H5
EN ISO 17634-A	:	T CrMo1 M M 1 H5
AWS A5.28	:	E 80 C-B2-H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Cr	Mo
0.05	0.30	1.40	<0.015	<0.015	1.1	0.5

Mechanical Properties - % (Typical) :
(Typical values : with M21 gas)

Heat Treatment	Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength RT	Elongation ($L_o=5d_o$)(%)
AW	min. 480	580 - 700	min. 80 J	min. 20
920 °C/0.5h	min. 320	450 - 550	min. 100J	min. 26
680 °C/2h	min. 320	450 - 550	min. 100J	min. 26

AW : as welded RT : room temperature

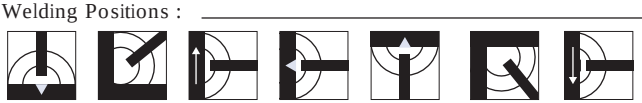
Typical Base Material Grades :

* DIN : 13 CrMo 44, 24 CrMo 5
* EN : 13 CrMo 4-5, G 17 CrMo 5-5, G 22 CrMo 5-4
* ASTM : A 182, A 387, A 217

Features and Applications :

* Metal cored wire without slag for Ar+CO_2 mix.* Typical applicatins are vessel and steel construction, mechanical engineering and pipe work.* Good arc restriking even with cold wire tip, suitable for robot applications.
* Multi-pass welding without in-between cleaning.* Ideal for use in the field short arc and spray arc.
* Excellent gap bridging for root welding.* High-effeciency type for economic production environments
* Shielding Gas: M21

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
304519	1.20	0.047"	15	D 300
605455	1.60	0.062"	15	C 300

Approvals :
GOST-R, CE

GeKa®

ELCOR R CrMo 2

Standards :

TS EN ISO 17634-A	: T CrMo2 R C 1 / T CrMo2 R M 1
EN ISO 17634-A	: T CrMo2 R C 1 / T CrMo2 R M 1
AWS A5.29	: E 91T1-B3C/B3M

Composition of Weld Metal %(Typical):

C	Si	Mn
0.05	0.45	1.00

Cr	Mo
2.40	1.00

Mechanical Properties %(Typical) :

Heat Treatment	Yield Strength (N/mm^2)	Tensile Stregth (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
690°C/1h	min. 540	620 - 760	50	min. 18

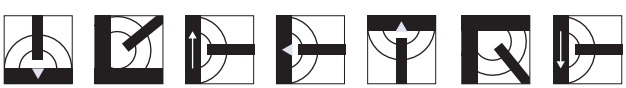
Typical Base Material Grades :

2.25% Cr – 1% Mo steels such as ASTM A387 or P21/P22 pipes.

Features and Applications :

* Rutile type flux cored wire for all position welding.
* Excellent weldability for vertical up position (PG) and overhead fillet (PD) position.
* Good arc stability and weldability.
* Shielding gas: 100% CO_2 or Ar+CO_2 MIX.

Welding Positions :



Current Type :

FCAW D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
306340	1.20	0.047"	15	BS 300

Approvals :

GeKa®

ELCOR B CrMo2 SC

Standards :

TS EN ISO 17634-A	:	T CrMo 2 BM 3 H5/T CrMo2BC3H5
EN ISO 17634-A	:	T CrMo 2 BM 3 H5/T CrMo2BC3H5
AWS A5.29	:	E 90 T5-B3-H4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Cr
0.07	0.30	1.00	<0.015	<0.015	2.3

As	Sn	Mo	Sb
<0.020	<0.015	1.1	<0.003

Mechanical Properties - % (Typical) :
(Typical values : with M21 gas)

Heat Treatment	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/)			Elongation (L_o=5d_o)(%)
			RT	-0 °C	-15 °C	
SR	min.530	620 - 820	min. 120 J (89)	min. 100 J (74)	min. 80 J (59)	min. 18

RT : room temperature S.R.stross relieved {675°-705°C/1h}

Typical Base Material Grades :

* DIN : 10 CrMo 9 10, 10 CrSiMoV 7, 12 CrMo 9 10
* EN : 10 CrMo 9-10, 12 Cr 9-10
* ASTM : A 182, A 217, A 541

Features and Applications :

* High-basicity flux-cored wire with slag for CO_2 and Ar+CO_2 mix.* Typical applications are pressure vessels; Chemical apparatus, and steam turbine construction.* Extremely crack resistant weld metal conditioned by the basic slag in combination with very low hydrogen content.* Well suited for the economic joining of high temperature and compressed hydrogen resistant 2,25 Cr2 Mo steels.* Meets requirements of step cooling by very low weld metal contaminations.
* Shielding Gas: CO_2 or M21

Welding Positions :

Current Type :
D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
304528	1.20	0.047"	15	D 300
605457	1.20	0.047"	16	C 300

Approvals :
GOST-R, CE

GeKa®

ELOXCOR S 307

Standards :

TS EN ISO 17633-A	:	T 18 8 Mn P M 1(C1)
EN ISO 17633-A	:	T 18 8 Mn P M 1(C1)
AWS A5.22	:	E307 T1-1/-4 (mod.)

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Ni
0.10	0.70	6.00	19.0	9.0

Mechanical Properties - % (Typical) :
(Typical values : with M21 gas)

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
480	630	50 J	40

Typical Base Material Grades :

* High-strength low alloyed and alloyed heat-treatable steels, armor steels, steels including 14 % Mn, ferritic chromium steels, heat-resistaant steels, non-magnetic steels, dissimalar joints and repair welding.

Features and Applications :

* ELOXCOR S 307 is rutile fast freezing type flux cored wire. Work-hardening austenitic deposit in CrNiMn steel modified type 307. Dissimilar joint, welding of steels of unknown types, armouring steels, buffering joining of 14 %Mn austenitic steels.
Service temperatures from -120 °C to +300 °C
* Shielding Gas: CO_2 or M21

Welding Positions :

Current Type :
D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
604936	1.20	0.047”	15	D 300

Approvals :
GOST-R, CE

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ELOXCOR S 308 L

Standards :

TS EN ISO 17633-A	:	T 19 9 L P M 1(C1)
EN ISO 17633-A	:	T 19 9 L P M 1(C1)
AWS A5.22	:	E308L T1-1/-4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Ni
0.030	0.70	1.40	20.0	10.5

Mechanical Properties - % (Typical) :
(Typical values : with M21 gas)

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-196°C)	Elongation ($L_o=5d_o$)(%)
460	620	34 J	36

Typical Base Material Grades :

* (1.4306) X2CrNi19-11, (1.4301) X5CrNi18-10, (1.4311) X2 CrNiN 18-10, (1.4312) GX10CrNi18-8)
AISI 304-304L-304LN, 302, 321-347
ASTM: A 157, Gr C9, A 320 Gr B8C or D

Features and Applications :

* Rutile type, rapid hardening flux cored wire.
* Weld metal structure is austenitic (CrNi alloyed, 308 type)
* Used in pharmaceutical, paper and food industry.
*Ferritic stainless steel, high carbon 304 and stabilized 347 grades can be welded this wire.
* Weld metal has resisting between -196°C and 400°C service temperature.
* Shielding Gas: CO_2 or M21

Welding Positions :

Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
604937	1.20	0.047"	15	D 300

Approvals :

ELOXCOR S 308 L (CO_2) : DNV-GL, GOST-R, CE

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ELOXCOR S 309 L

Standards :

TS EN ISO 17633-A	:	T 23 12 L P M 1 (C1)
EN ISO 17633-A	:	T 23 12 L P M 1 (C1)
AWS A5.22	:	E309L T1-1/-4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Ni
0.030	0.70	1.40	23.5	13.0

Mechanical Properties - % (Typical) :
(Typical values : with M21 gas)

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-60°C)	Elongation ($L_o=5d_o$)(%)
460	580	40 J	35

Typical Base Material Grades :

* High-strength unalloyed and heat-treatable steels, ferritic Cr and austenitic CrNi steels, austenitic Mn steels, unalloyed tempered steels, tool steels, hard mangenese steels, ferritic chromium steels, austenitic nickel-chromium steels, hard-to-weld steels, similar-type austenititic steels, dissimilar metals, joining of corrosion Resistant Stainless steel with mild or low alloy steels, clad steels.

Features and Applications :

* ELOXCOR S 309L is rutile fast freezing type flux cored wire. Austenitic-ferritic deposit in over-alloyed CrNi steel-type 309L, with optimised ferrite content for joining dissimilar metals. Joining of steels with similar compositions and joining carbon steels to Stainless steels. Buffering before cladding. Service temperatures from – 60 °C to + 350 °C. * Shieldin Gas: CO_2 or M21

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
604938	1.20	0.047"	15	D 300

Approvals :

ELOXCOR S 309 L (CO_2) : DNV-GL, GOST-R, CE

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ELOXCOR S 316 L

Standards :

TS EN ISO 17633-A	:	T 19 12 3 L P M 1 (C1)
EN ISO 17633-A	:	T 19 12 3 L P M 1 (C1)
AWS A5.22	:	E316L T1-1/-4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Ni	Mo
0.030	0.80	1.40	19.0	12.0	2.90

Mechanical Properties - % (Typical) :
(Typical values : with M21 gas)

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-110°C)	Elongation ($L_o=5d_o$)(%)
490	600	35 J	32

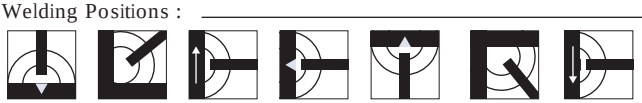
Typical Base Material Grades :

* (1.4401) X5CrNiM0 17-12-2, (1.4404) X2CrNiMo 17-12-2, (1.4435) X2CrNiMo 18-14-3, (1.4436) X3 CrNiMo 17-13-3, (1.4571) X6 CrNiMoTi 17-12-2, (1.4580) X6 CrNiMoNb 17-12-2, (1.4583) X10 CrNiMoNb 18-12, (1.4409) GX2 CrNiMo 19-11-2
AISI 316 L, 316 Ti, 316 Cb

Features and Applications :

* Rutile type, rapid hardening flux cored wire.
* Weld metal microstructure is austenite (CrNiMo alloyed, 316 type).
* Used in welding of high carbon and stabilized 316 grade steels, low carbon 316 L grade stainless steels, food, pharmaceutral, chemical dye and Machinery and equipment industries.
* Weld metal has resisting between -116 °C and 400 °C service temperature.
* Shielding Gas: CO_2 or M21

Welding Positions :



Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
604939	1.20	0.047”	15	D 300

Approvals :

ELOXCOR S 316 L (CO_2) : DNV-GL, GOST-R

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ELOXCOR S 2209

Standards :

TS EN ISO 17633-A:	T 22 9 3 N L P M 1 (C1)	
EN ISO 17633-A	:	T 22 9 3 N L P M 1 (C1)
AWS A5.22	:	E2209 T1-1/-4

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Ni	Mo	N
0.030	0.80	1.40	23.0	9.0	3.20	0.14

Mechanical Properties - % (Typical) :
(Typical values : with M21 gas)

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-60°C)	Elongation ($L_o=5d_o$)(%)
630	780	32 J	28

Typical Base Material Grades :

* (1.4462) X2CrNiMoN 22-5-3, (1.4362) X2 CrNiN 23-4, UNS S31803, S32205, J92295, S31500, S32304, S32404

Features and Applications :

* Rutile type and rapid hardening flux cored wire.
* Weld metal microstructure is austenite - ferritic.
* The weld metal has an excellent resistance to stress corrosion, cracking and pitting.
* used in duplex stainless steel and similar materials
* Shielding Gas: CO_2 or M21

Welding Positions :

Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
604940	1.20	0.047”	15	D 300

Approvals :

ELOXCOR S 2209 (CO_2) : DNV-GL, GOST-R, CE, CLASS NK

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HARDCOR 300 G

Standards :

TS EN 14700	:	T Fe 1
EN 14700	:	T Fe 1
DIN 8555	:	MF 1-GF-300 P

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Fe
0.13	0.30	1.00	2.0	rest

Mechanical Properties - (Typical) :

Hardness (as welded) (HB)
300

Typical Base Material Grades :

* Steel mill rolls, shafts, steel hammers, gear teeth, shovel pads, conveyor chains, crane wheels, rail track-changers, gear wheels, sprockets as well as carrying rollers.

Features and Applications :

* Suitable for uses in buffer-layer welding before hardfacing applications on parts exposed to high impact/pressure/wear. Alloy group is low alloy steel. Low alloy wire designed for build-up on carbon steels. Slag removal is very good. 300 G has excellent compressive strength and resistance to cracking. Machinability is very good. Requirement of cleaning of base material's surface and of heating of the base material at approximately 150 °C. Shielding Gas : CO_2 (M 21)

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)	Stick-out (mm)
1.20	170 - 190	17.0 - 19.0	25.0 - 30.0
1.60	180 - 200	26.0 - 30.0	25.0 - 30.0

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
304548	1.20	0.047"	15

Approvals :

GOST-R, CE

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HARDCOR 41 NiMo G

Standards :

TS EN 14700	:	T Fe 7
EN 14700	:	T Fe 7
DIN 8555	:	MF 5-45-PRT

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Ni	Mo	Nb	V	Fe
0.14	1.0	1.0	13.0	3.5	1.2	0.2	0.1	rest

Mechanical Properties - (Typical) :

Hardness (as welded) (HRC)
43-45

Typical Base Material Grades :

* Casting rollers particularly at iron-steel production plants, relays, valves, valves used in gas/water/steam environments, flanges, compressors,

Features and Applications :

* Suitability for use in welding of martencitic-ferritic materials used as tools for rolling, forging and steel casting operations.. Welding bead's hardness value of approximately 40 HRC, which the weld maintains at high temperatures. High resistance to corrosion.
Shielding Gas : (M12-M21)Ar+2-18CO_2 % - (M13)Ar+2-3 CO_2 %

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)	Stick-out (mm)
1.20	170 - 200	27 - 30	20 - 25
1.60	150 - 250	20 - 31	20 - 25

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
603615	1.60	0.062''	15

Approvals :

GOST-R, CE

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HARDCOR 414

Standards :

TS EN 14700	:	T Fe 7
EN 14700	:	T Fe 7
TS EN ISO 17633-A	:	T 13 4 M M 3
EN ISO 17633-A	:	T 13 4 M M3
AWS A5.22	:	E C 410NiMo (mod.)

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Ni	Mo
0.05	0.35	0.70	12.0	4.0	0.60

Mechanical Properties - (Typical) :

Hardness (as welded) (HB)
400

Typical Base Material Grades :

* Steel mill rolls, rollers, pumps and 410 stainless valves.

Features and Applications :

* Cr-Ni alloyed metal flux cored wire for hardfacing applications.
* Can be used joint welding.
* Shielding gas : m21

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)	Stick-out (mm)
1.60	180 - 210	26.0 - 31.0	25.0 - 30.0

Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
305639	1.60	1/16	15

Approvals :

CE

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HARDCOR 600 G

Standards :

TS EN 14700	:	T Fe 6
EN 14700	:	T Fe 6
DIN 8555	:	MF 6-GF-60-GP

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Fe
0.40	0.70	0.60	9.0	rest

Mechanical Properties - (Typical) :

Hardness (as welded) (HB)
600

Typical Base Material Grades :

* Hardfacing of parts of earth and mineral mining machines, impact drilling and crushing devices, guide springs, edges of cutting tools, hard bucket edges and teeth, all of which are made of alloyed or unalloyed steels, as well as in other materials required to have high resistance to wear, debarking knives, agricultural tillage tools, earth moving bucket lips.

Features and Applications :

* High resistance to wear and to impact. Alloy group is martensitic tool steel. Weld metals of high hardness and high tougness. Machinability of metal through grinding only. It is excellent choice for components that are required to maintain a sharp edge.

Shielding Gas : CO_2

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)	Stick-out (mm)
1.20	140 - 200	26.0 - 30.0	30.0 - 35.0
1.60	180 - 200	26.0 - 30.0	30.0 - 35.0

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
304467	1.20	0.047"	15
304504	1.60	1/16	15

Approvals :

GOST-R, CE

GeKa®

HARDCOR M 600 G

Standards :

DIN 8555 : MF 6-GF-60-GP

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Fe
0.40	2.00	0.60	9.0	rest

Mechanical Properties - (Typical) :

Hardness (as welded) (HB)
600

Typical Base Material Grades :

* Hardfacing of parts of earth and mineral mining machines, impact drilling and crushing devices, guide springs, edges of cutting tools, hard bucket edges and teeth, all of which are made of alloyed or unalloyed steels, as well as in other materials required to have high resistance to wear, debarking knives, agricultural tillage tools, earth moving bucket lips.

Features and Applications :

* HARDCOR 600 M is metal cored flux-cored wire for hardfacing. High resistance to wear and to impact. Alloy group is martensitic tool steel. Weld metals of high hardness and high tougness. Machinability of metal through grinding only. It is excellent choice for components that are required to maintain a sharp edge. Shielding Gas : CO_2 (M 21)

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)	Stick-out (mm)
1.20	170 - 200	27.0 - 30.0	20.0 - 25.0
1.60	180 - 220	26.0 - 31.0	20.0 - 25.0

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
305051	1.20	0.047"	15
305226	1.60	1/16	15

Approvals :

CE

GeKa®

HARDCOR 600 GS

Standards :

TS EN 14700	:	T Fe 6
EN 14700	:	T Fe 6
DIN 8555	:	MF 6 GF 60 GR

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Mo	Nb
0.60	0.60	0.65	8.2	0.12	0.15

Mechanical Properties - (Typical) :

Hardness (as welded) (HRC)
56

Typical Base Material Grades :

* Hardfacing of parts of earth and mineral mining machines, impact drilling and crushing devices, guide springs, edges of cutting tools, hard bucket edges and theeth, all of which are made of alloyed or unalloyed steels, as well as in order materials required to have high resistance to wear, debraking knives, agricultural tillage tools, earth moving bucket lips.

Features and Applications :

* Used in hardfacing welding of pieces exposed to high impact and abrasion wear.
* Weld metal microstructure is martensitic and has excellent resistance to friction metal to metal.
* This wire can also be used as a filling for cutting edge welding.
* Cracking does not observed.
* Because of the rutile character there is no spatter during welding, weld metal seam is perfect.
* Shielding gas : CO_2

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)	Stick-out (mm)
1.20	170 - 200	27.0 - 30.0	25.0 - 30.0
1.60	130 - 220	26.0 - 31.0	25.0 - 30.0

Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
305933	1.20	0.047"	15
305929	1.60	0.062"	15

Approvals :

CE

GeKa®

HARDCOR 600 O

Standards :

DIN 8555 : MF 6-GF-60-GP

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Fe
0.80	1.20	1.40	8.0	rest

Mechanical Properties - (Typical) :

Hardness (as welded) (HRC)
58

Typical Base Material Grades :

* Hardfacing of parts of earth and mineral mining machines, impact drilling and crushing devices, guide springs, edges of cutting tools, hard bucket edges and teeth, all of which are made of alloyed or unalloyed steels, as well as in other materials required to have high resistance to wear, debarking knives, agricultural tillage tools, earth moving bucket lips.

Features and Applications :

* High resistance to wear and to impact. Alloy group is martensitic tool steel. Weld metals of high hardness and high toughness. Machinability of metal through grinding only. It is excellent choice for components that are required to maintain a sharp edge. 58 HRC offers high hardness with good balance between abrasion and impact resistance. Shielding Gas : Open Arc

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)	Stick-out (mm)
1.20	170 - 200	26.0 - 30.0	20.0 - 25.0
1.60	180 - 200	26.0 - 30.0	20.0 - 25.0
2.80	325 - 450	26.0 - 30.0	20.0 - 25.0

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
603406	2.40	3/32	15
603407	2.80	7/64	15

Approvals :

GOST-R

GeKa

HARDCOR 660 O

Standards :

TS EN 14700	:	T Fe 9
EN 14700	:	T Fe 9
DIN 8555	:	~MF 7-GF-200 KP

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Fe
0.40	0.75	15.0	15.0	rest

Mechanical Properties - (Typical) :

Hardness (as welded) (HRC)	Hardness (after working) (HRC)
18 - 24	45 - 52

Typical Base Material Grades :

* Manganese rock crushing hammers and rolls, impactor bars, gyratory mantles, dredge components.

Features and Applications :

* Applicability in buffer layer and surfacing of carbon- and mangenese-steels. High resistance to impact and friction. Most common applications in hardfacing of various aquipment parts that are exposed to deep impacts, pressure and wearing in cement, mining and earth-moving industries. Build up death is generally unlimitted. Weld metal hardness increases by work hardening. Shielding Gas : Open Arc

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)	Stick-out (mm)
1.60	130 - 220	26.0 - 31.0	25.0 - 30.0
2.80	300 - 500	25.0 - 31.0	25.0 - 30.0

Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
603401	1.60	1/16	15
602486	2.80	7/64	25

Approvals :

GOST-R, CE

GeKa®

HARDCOR 14Mn G

Standards :

TS EN 14700	:	T Fe 9
EN 14700	:	T Fe 9
DIN 8555	:	MF 7-GF-200 KP

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Fe
0.55	0.1	12.8	2.5	rest

Mechanical Properties - (Typical) :

Hardness (as welded) (HB)	Hardness (after working) (HB)
170 - 200	~500

Typical Base Material Grades :

* Flux cored wire contains %12Mn.

* Weld metal microstructure is austenitic therefore has excellent impact resistance

Features and Applications :

* Hardcor 14Mn G is used for joining and buildups of work pieces made of hard austenitic manganese steels subjected to impact and abrasion wears. Weld deposit ensures workhardening under impact and shock because of fully austenitic structure. Used in crusher cylinders, crusher hammers and jaws made of %12 - 14 Mn Steels.
* Shielding Gas : CO_2 (M 21)

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)	Stick-out (mm)
1.20	170 - 200	27.0 - 30.0	25.0 - 30.0
1.60	180 - 220	26.0 - 31.0	25.0 - 30.0

Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
304848	1.20	0.047"	15
305054	1.60	0.062"	15

Approvals :

GOST-R, CE

GeKa®

HARDCOR 14Mn 0

Standards :

TS EN 14700	:	T Fe 9-250-KNP
EN 14700	:	T Fe 9-250-KNP
DIN 8555	:	MF 7-250 KNP

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Ni	Cr
1.1	0.3	14.0	0.6	4.0

Mechanical Properties - (Typical) :

Hardness (as welded) (HB)	Hardness (after working) (HB)
170 - 200	~500

Typical Base Material Grades :

* Flux cored wire contains %14 Mn, weld metal microstructure is austenitic therefore has excellent impact resistance.

Features and Applications :

* Used in crusher, cylinders, crusher hammers and jaws etc. made of %14 Mn steels.

* Shielding gas : Open Arc.

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)	Stick-out (mm)
1.20	170 - 200	26.0 - 30.0	25.0 - 30.0
1.60	180 - 220	26.0 - 30.0	25.0 - 30.0

Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
605202	1.60	0.062”	15

Approvals :

CE

GeKa®

HARDCOR 50 G

Standards :

TS EN 14700	:	T Z Fe 8
EN 14700	:	T Z Fe 8
DIN 8555	:	MF 3-50-CKTZW

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Ni	Mo	Co	Fe
0.1	0.7	0.4	15.0	+	3.2	14	rest

Mechanical Properties - % (Typical) :

Hardness (as welded) (HRC)	Hardness (after working) (HRC)
48 - 50	53

Typical Base Material Grades :

* Hardfacing of hot-work tool steels, forging dies, hot-shearing tools, punch tools, punch tools, rollers, hot hardening treatment, steel mill rolls Continuous casting driving rolls, dies, mandrels, forming tools, pumps elements...

Features and Applications :

* Applicability in hardfacing for protection against wear of steels working at temperature sup to 650 °C. Existence of high amounts of Cr, Co, Mo alloys in weld metal. High resistance to cracking. Oxidation-and creep-resistant behaviours at high temperatures. High resistance againist sliding wear of metallic object. High resistance to thermal shock. Shielding Gas : M 21 (Ar +1 %O_2)

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)	Stick-out (mm)
1.20	170 - 200	27 - 30	15 - 25

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
603419	1.20	0.047"	15

Approvals :

GOST-R, CE

GeKa®

HARDCOR 55 O

Standards :

TS EN 14700	:	T Fe 15
EN 14700	:	T Fe 15
DIN 8555	:	MF 10-GF-55 G

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Fe
4.80	1.20	1.20	27.0	rest

Mechanical Properties - (Typical) :

Hardness (as welded) (HRC)
58 - 62

Typical Base Material Grades :

* Hardfacing of bucket teeth, excavator buckets, brick pres spring, fan blades, drills, mixer and blades, grinding/pulverizing rolls and table segments, wear plates, clad pipe, dredge pump shells and related components, hammers.

Features and Applications :

* Open arc, hardfacing flux cored wire with Cr-Carbides.
* Used in hardfacing welding of parts exposed to high abrasive wear.
* It is common to have transverse cracks on weld seam.
* Weld metal can be machined by grinding.
* Max. two passes can be weld with this wire.

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)	Stick-out (mm)
2.80	300 - 500	25.0 - 31.0	25.0 - 30.0

Current Type :

FCAW
D.C. (+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
602490	2.80	7/64	25

Approvals :

GOST-R, CE

GeKa®

HARDCOR M 55

Standards :

TS EN 14700	:	T Fe 8
EN 14700	:	T Fe 8
DIN 8555	:	MF 6 GF 55 GT

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Mo	W	V
0.65	0.50	1.55	7.20	1.00	1.60	0.10

Mechanical Properties - (Typical) :

Hardness (as welded) (HRC)
53 - 56

Features and Applications :

* This hardfacing flux cored wire has excellent wear resistance and keeps its strength at high temperatures.
* Used in cold and hot work tool steels, hot shape knifes, extursion die and steel casting and dies.
* Shielding gas : m21

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)	Stick-out (mm)
1.20	150 - 220	26 - 30	20 - 25

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
305876	1.20	0.047”	15

Approvals :

CE

GeKa®

HARDCOR 58 TIC O

Standards :

TS EN 14700	:	T Fe 8
EN 14700	:	T Fe 8
DIN 8555	:	MF 10-GF-60-GP

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Mo	Ti	Fe
1.80	1.50	2.0	7.0	1.4	5.0	rest

Mechanical Properties - (Typical) :

Hardness (as welded) (HRC)
58

Typical Base Material Grades :

* Roller presses, grinding/pulverizing rolls, dredge pump shells, rock crushing hammers., shredders, asphalt, kneaders, crashing hard materials, vertical shaft impact crusher rotors, roller presses.

Features and Applications :

* FC wire containing C, Cr, Ti and Mo alloys. Weld metals with martensitic microstructure including titanium-carbide. High resistance to wear and to impact. Machinability of weld metal through grinding. Best suited for applications involving extreme wear under high pressere.
* Shielding Gas : Open Arc

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)	Stick-out (mm)
1.60	180 - 200	26.0 - 30.0	25.0 - 30.0
2.80	300 - 500	26.0 - 30.0	25.0 - 30.0

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
603408	1.60	1/16	15
603409	2.80	7/64	25

Approvals :

GOST-R, CE

GeKa®

HARDCOR 63 O

Standards :

TS EN 14700	:	T Z Fe 15
EN 14700	:	T Z Fe 15
DIN 8555	:	MF 10-GF-60 G

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Fe
5.0	1.5	1.3	27.0	rest

Mechanical Properties :

Hardness (as welded) (HRC)
60 - 64

Typical Base Material Grades :

* Ventilators, wear plates, crushers for soft materials, shredders, chemical and food processing industries.

Features and Applications :

* Open arc, hardfacing flux cored wire with Cr-Carbides.
* It is suitable for low alloyed steel and carbon steels.
* Weld metal is very hard and it is common to have transverse cracks on weld seam.
* Max. two passes can be weld with this wire.

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)	Stick-out (mm)
1.60	130 - 220	26.0 - 31.0	20.0 - 25.0
2.80	300 - 500	25.0 - 31.0	20.0 - 25.0

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
604935	1.60	1/16	15

Approvals :

GOST-R, CE

GeKa®

HARDCOR 63 OB

Standards :

TS EN 14700	:	T Fe 15
EN 14700	:	T Fe 15
DIN 8555	:	MF 10 GF-65-G

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Nb	Fe	B
5.2	1.3	0.4	22.0	7.0	rest	1.0

Mechanical Properties :

Hardness (as welded) (HRC)
62 - 65

Typical Base Material Grades :

* Hardfacing of mining aquipments, augers, impellers, dredgers, drills, gearwheels and parts. Fan blades, excavator scoops, bucket lipsand wear plates.

Features and Applications :

* Extremely high hardness with specially-proportioned chemical composition including high amounts of C, Cr, Nb, B. High strength to abrasion provided by the special chemical composition.
Shielding Gas : Open Arc

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)	Stick-out (mm)
1.60	130 - 220	26.0 - 31.0	25.0 - 30.0

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
604109	1.60	1/16	15

Approvals :

GOST-R, CE

GeKa®

HARDCOR 65 0

Standards :

TS EN 14700	:	T Fe 16
EN 14700	:	T Fe 16
DIN 8555	:	MF 10 GF 65 GT

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Cr	Nb	Mo	W	V	Fe
5.2	0.4	1.0	21.0	7.0	7.0	2.0	1.0	rest

Mechanical Properties :

Hardness (as welded) (HRC)
63 - 65

Typical Base Material Grades :

* Clad wear plate, slurry pipe, cement furnace components, sinter plant parts, fan blades, mixer blades, screws

Features and Applications :

* It is self shielded flux cored hardfacing welding wire composed of a high density of primary chromium with multiple secondary carbides. Because of the high content of C, Cr, Mo, Nb, W, V and their hard carbides, Hardness at the temperatures can be established. Designed specifically for single and double pass applications in high temperature environments. Weld deposit contains stres relief cracks, but this does not impair wear resistance.
* Shielding Gas: Oper arc

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)	Stick-out (mm)
1.60	130 - 220	26.0 - 31.0	25.0 - 30.0
2.40	250 - 300	26.0 - 30.0	25.0 - 30.0
2.80	325 - 450	25.0 - 31.0	25.0 - 30.0

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
603410	1.60	1/16	15

Approvals :

GOST-R, CE

GeKa®

HARDCOR M 67

Standards :

TS EN 14700	:	T Z Fe 16
EN 14700	:	T Z Fe 16
DIN 8555	:	MF 10 GF 65 G

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	Cr	B
~2.00	0.5	0.5	7.5	4.5

Mechanical Properties :

Hardness (as welded) (HRC)
65 - 67

Typical Base Material Grades :

* Repair of equipment used in mining and steel mills. Hardfacing equipment and tools used in the construction and agriculture industries, highway constructure equipment, and conveyor chains, mixing paddles, cement pumps components, etc.

Features and Applications :

* High-alloy metal powder flux-cored wire without slag for hardfacing preferred without shielding gas. Use with CO_2 and Ar-CO_2 mix possible. The weld metal characteristics and structure is similar to hard chrome alloys. Excellent resistance to abrasion from sand and minerals. The weld metal is machinable only by grinding. Stringer bead technique is recommended. The hardsurfacing contains check cracks, but this does not impair wear resistance.

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)	Stick-out (mm)
1.20	150 - 250	25.0 - 31.0	20.0 - 25.0
1.60	180 - 350	25.0 - 32.0	20.0 - 25.0

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
305835	1.60	0.062"	15

Approvals :

CE

Cobalt Based Flux Cored Wire for Hardfacing

GeKa®

HARDCOR COBALT 1

Standards :

TS EN 14700	:	T Co3
EN 14700	:	T Co3
DIN 8555	:	MF 20-55 CTZ

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	W	Fe	Cr	Co
2.4	0.4	0.7	11.0	< 3.0	29.0	rest

Mechanical Properties - % (Typical) :

Hardness (as welded) (HRC)
54 - 56

Typical Base Material Grades :

* Best used on wear pads, rotary seal rings, pump sleeves and centerless grinder work rests. Thermal shock resistant, abrasion, erosion, corrosion, cavitation at high temperature, bearing surfaces, chemical industry, hot shear blades, valves.

Features and Applications :

* HARDCORE COBALT 1 deposits a cobalt-based alloy with an austenitic-ledeburitic structure. This is the hardest of the standard cobaltbased alloys. It has a high resistance to corrosion especially to reducing acids, extreme wear and temperature shocks. The deposit is only machinable by grinding.
Shielding Gas : M13 (Ar +1 %O_2)

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)
1.60	180 - 300	26.0 - 30.0

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
603396	1.60	1/16	15

Approvals :

GOST-R, CE

GeKa®

HARDCOR COBALT 6

Standards :

TS EN 14700	:	T Co2
EN 14700	:	T Co2
DIN 8555	:	MF 20-45-CTZ

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	W	Fe	Cr	Co
1.1	0.6	1.0	4.5	< 3.0	28.0	rest

Mechanical Properties - % (Typical) :

Hardness (as welded) (HRC)
40 - 43

Typical Base Material Grades :

* Best used on stream and chemical valves and on equipment handling hot steel, such as tong bits, hot steel-shear blades, etc. Thermal shock resistant, abrasion, erosion, corrosion, cavitation at high temperature, bearing surfaces, chemical industry, hot shear blades, valves.

Features and Applications :

* Cobalt-based alloys with an austenitic-ledeburitic structure containing chrome and tungsten carbides. These alloys are resistant against high corrosion and abrasion, high impact stress and extreme temperature shocks. The deposit is machinable by hard metal tools.
Shielding Gas : M13 (Ar +1 %O_2)

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)
1.20	140 - 200	26.0 - 30.0

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
603397	1.20	0.047"	15

Approvals :

GOST-R, CE

Cobalt Based Flux Cored Wire for Hardfacing

GeKa®

HARDCOR COBALT 12

Standards :

TS EN 14700	:	T Co3
EN 14700	:	T Co3
DIN 8555	:	MF 20-50-CTZ

Chemical Composition of Weld Metal- % (Typical) :

C	Mn	Si	W	Fe	Cr	Co
1.4	0.8	1.0	8.0	< 3.0	29.0	rest

Mechanical Properties :

Hardness (as welded) (HRC)
48 - 50

Typical Base Material Grades :

* Thermal shock resistant, abrasion, erosion, corrosion, cavitation at high temperature, bearing surfaces, chemical industry, hot shear blades, valves.

Features and Applications :

* Cobalt based-alloy with high resistance against abrasion, temperature shocks and corrosion. This alloy is suitable for hardfacing cutting edges of long knives and other tools used in the wood, plastic, paper and chemical industries.

Shielding Gas : M13 (Ar +1 %O_2)

Welding Positions :

Operating Data :

Diameter (mm)	Welding Current (A)	Voltage (V)
1.20	140 - 200	26.0 - 30.0

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
603398	1.20	0.047"	15

Approvals :

GOST-R, CE

GeKa®

SUBCOR B 31 SC

Standards :

AWS A5.23 : F8A4 - EC - 1

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S
0.05	0.3	1.5	< 0.025	< 0.025

Mechanical Properties :

Heat Treatment	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/-20°C)	Impact Strength (ISO-V/-40°C)	Elongation (L_o=5d_o)(%)
AW ve SR	>460	540 - 640	>140 J	>100 J	25

AW : as welded SR : stress relieved

Typical Base Material Grades :

* DIN: HI, HII, 17Mn4, 19Mn5 etc.
EN: S 185, S 235-S355, P235 GH, P 265 GH, P 295 GH, P 235 T1/T2 – P 355 N – L210-L485, S 255-S 460
ASTM: A 131, A 106, A 515, A 714, A 283, A 285, A 414, A 662, A 372, A369, A210, A 106, A 516, A 255, A 333, A 350, A 612, X 42-X 70

Features and Applications :

* High-basicity flux cored wire for submerged arc welding. Extremely crack resistant weld metal conditioned by the basic slag. High mechanical properties are easily obtained when used in single sided welding operations using a ceramic back up. Weld X-ray quality. Well- suited for joining high carbon steels and when welding critical mixed base metal combinations. Ideal metallurgical choice for repair welding and production as well as a buffer layer. As welding flux we recommend our type GeKa ELIFLUX BFF, .

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
304666	2.40	3/32	25
304665	3.20	1/8	30
304664	4.00	5/32	30

Approvals :

GOST-R, CE

GeKa®

SUBCOR B-1D 35 SC

Standards :

AWS A5.23 : F8A6 - EC - 1D

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Mo
0.05	0.3	1.5	< 0.025	< 0.025	0.5

Mechanical Properties :

Heat Treatment	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/)				Elongation (L_o=5d_o)(%)
			RT	0 °C	-20 °C	-40 °C	
AW	>460	520 - 620	>140	>100	>80	>60	>24
SR	>460	520 - 620	>100	>80	>60	>47	>24

AW : as welded SR : stress relieved RT : room temperature

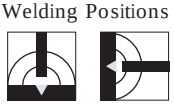
Typical Base Material Grades :

* DIN: HI, HII, 17Mn4, 19Mn5, 15 Mo 3, 16 Mo 3
EN: P 235 GH, P 265 GH, P 295 GH, 16 Mo 3, P 235 T1/T2, P 355 N, L290-L485, S 255-S460
ASTM: A 283, A 285, A 414, A 662, A 372, A 204, A 369, A 210, A 106, A 516, A 255, A 333, A 350, A 612

Features and Applications :

* Extremely crack resistant weld metal is result of high-basicity slag and very low diffusible hydrogen content. Especially suited for multi-wire welding applications. Typical applications are micro-alloy, basic slag flux-cored wire, for submerged-arc welding, vessel, steel and apparatus construction, production of large diameter pipes, shipbuilding.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
304667	2.40	3/32	25
304668	3.20	1/8	30
304669	4.00	5/32	30

Approvals :

GOST-R, CE

GeKa®

SUBCOR B 40 SC

Standards :

AWS A5.23 : F7A8 - EC - G
F7P8 - EC- G

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	P	S	Ni
0.10	0.3	1.4	< 0.015	< 0.015	0.9

Mechanical Properties :

Heat Treatment	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/)		Elongation (L_o=5d_o)(%)
			-40 °C	-60 °C	
AW	>480	550 - 680	>100	>80	>22
SR	>460	530 - 660	>120	>100	>24
N	>355	480 - 560	>100	>100	>26
N+A	>355	480 - 560	>120	>100	>26

AW : as welded SR : stress relieved N : normalized N+A : cooling in air

Typical Base Material Grades :

* DIN: HI, HII, 17Mn4, 19Mn5, 15 Mo 3, 16 Mo 3
EN: P 235 GH, P 265 GH, P 295 GH, 16 Mo 3, P 235 T1/T2, P 355 N, L290-L485, S 255-S460
ASTM: A 283, A 285, A 414, A 662, A 372, A 204, A 369, A 210, A 106, A 516, A 255, A 333, A 350, A 612

Features and Applications :

* Basic flux-cored wire for submerged-arc welding. Typical applications are apparatus and vessel construction. Extremely crack resistant weld metal conditioned by the high-basicity slag in combination with very low hydrogen content. Well suited for the economic joining of high temperature Resistant CrMoV-steels up to 550 °C. Weld X-ray quality.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
304544	3.20	1/8	30

Approvals :

GOST-R, CE

GeKa®

SUBCOR 41 NiMO - LH

Standards :

AWS A5.23	:	~ EC 410 NiMo

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Ni	Mo	V
0.07	0.35	1.50	12.5	2.2	1.0	0.2

Mechanical Properties :

Hardness (HV)	
Single Pass	3 Pass
350	400

Typical Base Material Grades :

* Applicability in welding of martensitic and martensitic-ferritic materials used in toolsof Rolling forging and steel casting operations. Continuous casting rollers particularly or iron-steel productions plants, relays, rolls, valves, used in gas/water/syeam environments, flanges, compressons.

Features and Applications :

* A tabular wire for submerged arc welding of martensitic stainless steels. Good resistance to corrosion and thermal fatigue. It used with GeKa ELIFLUX BSS flux for surfacing continuous casting, rollers.
* Weld metals of martensitic micro-structure.
* It is using with submerged arc fluxes of GeKa ELIFLUX BFB or GeKa ELIFLUX BSS.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
305110	2.40	3/32	25
305371	2.80	7/64	25
305328	2.80	7/64	200

Approvals :

GOST-R, CE

GeKa®

SUBCOR 41 NiMO - MH

Standards :

AWS A5.23	:	~ EC 410 NiMo

Chemical Composition of Weld Metal- % (Typical) :

C	Si	Mn	Cr	Ni	Mo	V	Nb
0.13	1.00	2.00	12.5	2.5	1.0	0.2	0.15

Mechanical Properties :

Hardness (HRC)	
Single Pass	3 Pass
40	45

Typical Base Material Grades :

* Applicability in welding of martensitic and martensitic-ferritic materials used in toolsof Rolling forging and steel casting operations. Continuous casting rollers particularly or iron-steel productions plants, relays, rolls, valves, used in gas/water/syeam environments, flanges, compressons.

Features and Applications :

* A tabular wire for submerged arc welding of martensitic stainless steels. Good resistance to corrosion and thermal fatigue. It used with GeKa ELIFLUX BSS flux for surfacing continuous casting, rollers.
* Weld metals of martensitic micro-structure.
* It is using with submerged arc fluxes of GeKa ELIFLUX BFB or GeKa ELIFLUX BSS.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
305203	2.40	3/32	25
305372	2.80	7/64	25

Approvals :

GOST-R, CE

GeKa

SUBCOR 430

Standards :

TS EN 14700	:	T Fe 7
EN 14700	:	T Fe 7

Chemical Composition of Weld Metal- % (Typical) :

C	Cr	Mn	Si
0.05	17	2.0	0.7

Mechanical Properties - % (Typical) :

Hardness (HV) 3 Pass
200

Features and Applications :

* %17 Chromium ferritic stainless steel deposit.
* It is used for buffer layers before hardfacing of SUBCOR 41 NiMo LH and MH.
* High resistant to combination of high temperature, corrosion and adhesive / friction wear.
* Application; rolls, contionous casting rolls, shafts.it is using with sumborget arcfluxes of Geka ELIFULUX BFB.
* It is using with submerged arc fluxes of GeKa ELIFLUX BFB.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (Kg)
305293	2.40	3/32	25
305370	2.80	7/64	25

Approvals :
GOST-R, CE

GeKa®

S 1

Standards :

TS EN ISO 14171-A	:	S 1
EN ISO 14171-A	:	S 1
AWS A5.17	:	EL 12

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Cu
0.08	0.10	0.50	<0.30[1]

Mechanical Properties :

Sumerged Arc Flux	AWS A5.17	Yield Strength N/mm²	Tensile Strength N/mm²	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)		
					0°C	-20°C	-30°C
EL•FLUX BAR	F6 AZ-EL 12	360	460	26	47	---	---
EL•FLUX BFB	F6 A2-EL 12	380	480	28	---	55	47
EL•FLUX BMS	F6 AZ-EL 12	395	475	24	38	---	---
EL•FLUX BBR-AG	F6 A0-EL 12	370	480	30	60	50	---

Chemical Compositon of Weld Metal - % (Typical)

Sumerged Arc Flux	C	Si	Mn
EL•FLUX BAR	0.07	0.50	1.10
EL•FLUX BFB	0.06	0.25	1.20
EL•FLUX BMS	0.05	0.80	1.10
EL•FLUX BBR-AG	0.06	0.30	0.90

Typical Base Material Grades :

* Structural Steels : S185-S235JR
* Pipe Steels : S275N
* Boiler Steels : P235GH
* Ship-Construction Steels : A, B, D
* Fine-grained Steels : P275N, S355N

Features and Applications :

* Copper-coated wire.
* Applicability in welding of steel constructions, pipes and tanks as well as in submerged arc welding of unalloyed structural steels, and plates.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
304432	1.6	1/16	25	
303664	2.0	5/64	25	
303468	2.4	3/32	25	K 435
303668	3.2	1/8	25	*BIG PACK
303670	4.0	5/32	25	
303672	5.0	3/16	25	

* Packaging alternatives according to the order ; 30 - 350 - 550 - 1000 Kg

Approvals :

S1 x ELIFLUX BAR : BV, DNV-GL, TL, ABS, LR, CE

S1 : TSE, CE GOST-R

1) Copper Coated

GeKa®

S 2

Standards :

TS EN ISO 14171-A	:	S 2
EN ISO 14171-A	:	S 2
AWS A5.17	:	EM 12

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Cu
0.12	0.10	1.0	<0.30[1]

1) Copper Coated

Mechanical Properties :

Submerged Arc Flux	AWS A5.17	Yield Strength N/mm²	Tensile Strength N/mm²	Elongation (L_o=5d_o)(%)	Impact Strength ISO-V(J)			
					0°C	-20°C	-30°C	-40°C
EL•FLUX BAR	F6AZ-EM12/F6PZ-EM12	400	500	30	60	---	---	---
EL•FLUX BFB	F7 A4-EM 12	460	525	30	---	70	55	50
EL•FLUX BFF	F7 A4-EM 12	410	520	24	---	---	70	60
EL•FLUX BBR-AG	F7 A2 EM12	410	490	32	50	50	50	---
EL•FLUX BMS	F6 A0-EM 12	390	485	30	---	69	---	---
EL•FLUX PIPE	F7 A4-EM 12	460	550	26	---	75	---	50

Chemical Compositon of Weld Metal - % (Typical)

Submerged Arc Flux	C	Si	Mn
EL•FLUX BAR	0.07	0.60	1.35
EL•FLUX BFB	0.07	0.35	1.50
EL•FLUX BFF	0.05	0.20	1.00
EL•FLUX BBR-AG	0.10	0.35	1.20
EL•FLUX BMS	0.04	0.45	1.27
EL•FLUX PIPE	0.07	0.40	1.35

Typical Base Material Grades :

* Structural Steels : S 355 JR * Pipe Steels : L360 * Boiler Steels : P 295 GH, P 355 GH
* Ship-Construction Steels : A, B, D, E * Fine-grained Steels : P 355 N, S 355 N

Features and Applications :

* Applicability in welding of steel constructions, pipes, pressure vessels, steam boilers, and plates, and, in submerged welding of general-purpose structural steels of tensile strength values up to 500 N/mm² as well as of unalloyed steels, medium-strength steels.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
302933	1.6	1/16	25	
303674	2.0	5/64	25	
303675	2.4	3/32	25	K 435
303676	3.2	1/8	25	*BIG PACK
303677	4.0	5/32	25	
303678	5.0	3/16	25	

* Packaging alternatives according to the order ; 30 - 350 - 550 - 1000 Kg

Approvals :

S2 x ELIFLUX BAR : BV, ABS, CE, DB
S2 : CE, GOST-R, TSE, DB
S2 x ELIFLUX BFB : TL, DNV,-GL BV, ABS, LR, RS, NK, RINA, TÜV, CE, DB
S2 x ELIFLUX BAB-S : ABS, CE
S2 x ELIFLUX BMS : BV, ABS, CE

1) Copper Coated

GeKa®

S 2 Si

Standards :

TS EN ISO 14171-A	:	S 2 Si
EN ISO 14171-A	:	S 2 Si
AWS A5.17	:	EM 12 K

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Cu
0.10	0.25	1.0	<0.30[1]

Mechanical Properties :

Sumerged Arc Flux	AWS A5.17	Yield Strength N/mm²	Tensile Strength N/mm²	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J) 0°C	-20°C	-30°C	-40°C
EL•FLUX BFB	F7A2-EM12K / F7P2-EM12K	430	530	28	---	80	70	---
EL•FLUX BFF	F7A4-EM12K / F7P4-EM12K	450	540	23	---	---	---	65
EL•FLUX BAB-S	F7 A4 EM12K	440	550	28	---	100	---	65
EL•FLUX BBR-AG	F7 A0 EM12K	420	510	29	---	50	---	---

Chemical Compositon of Weld Metal - % (Typical)

Sumerged Arc Flux	C	Si	Mn
EL•FLUX BFB	0.05	0.40	1.25
EL•FLUX BFF	0.06	0.30	1.10
EL•FLUX BAB-S	0.07	0.45	1.60
EL•FLUX BBR-AG	0.07	0.40	1.30

Typical Base Material Grades :

* Structural Steels : S355JR * Pipe Steels : L360 * Boiler Steels : P295GH, P 355 GH
* Ship-Construction Steels : A, B, D, E

Features and Applications :

* Applicability in submerged arc welding of steel materials with medium or high levels of tensile strength.
* Usability in manufacture processes of pressure vessels, boilers, pipes, ship and other steel construction purposes.
* Decreased affinity to oxygen due to high content of silicon.
* Increased electric conductivity, and increased resistance to corrosion due to copper coating

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
303547	2.0	5/64	25	
303549	2.4	3/32	25	K 435
303551	3.2	1/8	25	*BIG PACK
303553	4.0	5/32	25	
303555	5.0	3/16	25	

* Packaging alternatives according to the order ; 30 - 350 - 550 - 1000 Kg

Approvals :

S2 Si x ELIFLUX BFB : ABS, LR, BV, CE, DB | S2 Si : TSE, CE, GOST-R | S2 Si x ELIFLUX BFF : BV, ABS, CE

1) Copper Coated

GeKa®

S 2 Mo

Standards :

TS EN ISO 14171-A	:	S 2 Mo
EN ISO 14171-A	:	S 2 Mo
AWS A5.23	:	EA 2

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Mo	Cu
0.12	0.10	1.0	0.5	<0.30[1]

Mechanical Properties - (Typical) :

Sumerged Arc Flux	AWS A5.23	Yield Strength N/mm²	Tensile Strength N/mm²	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)		
					-20°C	-30°C	-40°C
ELIFLUX BFB	F8A4-EA2-A2	490	600	26	90	---	60
ELIFLUX BFF	F8A4-EA2-A2 / F8P5-EA2-A2	480	570	27	---	---	70
ELIFLUX BAB-S	F8A4-EA2-A3	500	600	26	---	---	60
ELIFLUX PIPE	F7 A4-EA2-A4	510	640	25	---	---	60

Chemical Compositon of Weld Metal - % (Typical)

Sumerged Arc Flux	C	Si	Mn	Mo
ELIFLUX BFB	0.06	0.40	1.40	0.50
ELIFLUX BFF	0.07	0.25	1.15	0.45
ELIFLUX BAB-S	0.07	0.55	1.70	0.50
ELIFLUX PIPE	0.06	0.40	1.40	0.50

Typical Base Material Grades :

* Pipe Steels : L485MB(X70) * Boiler Steels : 16Mo3, P355 GH * Fine-grained Steels : S460N, P460N

Features and Applications :

* Specific applicability in welding high-strength low-alloyed steels and creep-resisting steels.
* Weld metal of ½ Mo-alloy with resistance to creep at high-temperature applications.
* Serviceability at temperatures of values up to 500 °C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
303516	2.0	5/64	25	
303522	2.4	3/32	25	K 435
303529	3.2	1/8	25	*BIG PACK
303682	4.0	5/32	25	
303684	5.0	3/16	25	

* Packaging alternatives according to the order ; 30 - 350 - 550 - 1000 Kg

Approvals :

S2Mo X EL•FLUX BFB : BV, ABS, CE
S2Mo X EL•FLUX BFF : DNV-GL, BV, ABS, CE, DB
S2Mo X EL•FLUX BAB-S : ABS, CE

S2Mo : TSE, TUV, CE, GOST-R, DB

1) Copper Coated

GeKa®

S 2 Mo TiB

Standards :

TS EN ISO 26304	:	S Z
EN ISO 26304	:	S Z
AWS A5.23	:	EA2TiB

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Mo	B	Ti
0.08	0.15	1.10	0.55	0.015	0.15

Mechanical Properties - (Typical) :

Sumerged Arc Flux	AWS A5.23	Yield Strength N/mm²	Tensile Strength N/mm²	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)		
					0°C	-20°C	-30°C
ELIFLUX BFF	F8A0-EG-G	550	650	21	60	45	---
ELIFLUX BFB	F9A2-EG-G	580	660	28	---	---	60

Chemical Compositon of Weld Metal - % (Typical)

Sumerged Arc Flux	C	Si	Mn	Mo	Ti
ELIFLUX BFF	0.06	0.65	1.85	0.50	0.06
ELIFLUX BFB	0.06	0.50	1.70	0.50	0.06

Typical Base Material Grades :

* Pipe steels: L485MB(X70) * Boiler steels: 16Mo3 * Fine-grained steels: S460N, P460N

Features and Applications :

* Specific applicability in welding high-strength low-alloyed steels and creep-resisting steels.
* Serviceability at temperatures of values up to 500 °C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
304737	2.4	3/32	25	K 435
304485	3.2	1/8	25	*BIG PACK
304486	4.0	5/32	25	

* Packaging alternatives according to the order ; 30 - 350 - 550 - 1000 Kg

Approvals :

S2 Mo TiB : CE, GOST-R,

GeKa®

S 3

Standards :

TS EN ISO 14171-A	:	S 3
EN ISO 14171-A	:	S 3
AWS A5.17	:	EH 10 K

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Cu
0.12	0.20	1.5	<0.30[1]

Mechanical Properties - (Typical) :

Sumerged Arc Flux	AWS A5.17	Yield Strength N/mm²	Tensile Strength N/mm²	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)		
					0°C	-20°C	-40°C
ELIFLUX BAR	F7A0-EH10K	420	520	min.22	60	47	---
ELIFLUX BFB	F7A4-EH10K	420	500	min.22	120	---	47

Chemical Compositon of Weld Metal - % (Typical)

Sumerged Arc Flux	C	Si	Mn
ELIFLUX BAR	0.07	0.30	1.45
ELIFLUX BFB	0.08	0.30	1.50

Typical Base Material Grades :

* Structural Steels : S355JR
* Pipe Steels : X42 - X52
* Boiler Steels : P355GH
* Ship-Construction Steels : A, B, D, E
* Fine-grained Steels : P355N, S355N

Features and Applications :

* Applicability in welding general-purpose structural steels ranging to S355JR as well as in welding fine-grained steels with tensile strength values of up to 520 N/mm², steam boilers made of the material 19 Mn 6, in ship welding and pipe welding.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
	1.6	1/16	25	
	2.0	5/64	25	
	2.4	3/32	25	K 435
	3.2	1/8	25	*BIG PACK
	4.0	5/32	25	
	5.0	3/16	25	

* Packaging alternatives according to the order ; 30 - 350 - 550 - 1000 Kg

Approvals :

S3 : TSE, CE, GOST-R

1) Copper Coated

GeKa®

S 3 Si

Standards :

TS EN ISO 14171-A	:	S 3 Si
EN ISO 14171-A	:	S 3 Si
AWS A5.17	:	EH 12 K

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Cu[1]
0.10	0.30	1.70 - 1.80	<0.30

Mechanical Properties - (Typical) :

Sumerged Arc Flux	AWS A5.17	Yield Strength N/mm²	Tensile Strength N/mm²	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)		
					0°C	-20°C	-40°C
ELIFLUX BFF	F7A4-EH 12K	490	580	26	100	---	70
ELIFLUX BFB	F7A4-EH 12K	460	550	27	---	---	60
ELIFLUX BAB-S	F7A4-EH 12K	545	645	26	---	---	60

Chemical Compositon of Weld Metal - % (Typical)

Sumerged Arc Flux	C	Si	Mn
ELIFLUX BFF	0.10	0.35	1.65
ELIFLUX BFB	0.07	0.40	1.80
ELIFLUX BAB-S	0.07	0.60	1.70

Typical Base Material Grades :

* Fine-grained Steels : S460N, P460N

Features and Applications :

* Inclusion of high contents of Mn-Si alloy.
* Applicability in submerged arc welding processes of medium- and high-strength structural steels and of steels in offshore structures.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
304436	2.0	5/64	25	
303557	2.4	3/32	25	K 435
303559	3.2	1/8	25	*BIG PACK
303561	4.0	5/32	25	
304437	5.0	3/16	25	

* Packaging alternatives according to the order ; 30 - 350 - 550 - 1000 Kg

Approvals :

S3 Si x ELIFLUX BFF : BV, ABS, CE
S3 Si x ELIFLUX BAB-S : ABS, CE

S3 Si : CE, GOST-R, TSE

1) Copper Coated

GeKa®

S 3 Mo

Standards :

TS EN ISO 14171-A	:	S 3 Mo
EN ISO 14171-A	:	S 3 Mo
AWS A5.17	:	E A 4

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Mo	Cu[1]
0.10	0.15	1.50	0.50	<0.30

1 : Bak•r kapl•

Mechanical Properties - (Typical) :

Sumerged Arc Flux	AWS A5.23	Yield Strength N/mm²	Tensile Strength N/mm²	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)		
					0°C	-20°C	-40°C
ELIFLUX BFF	F8 A4-EA4-A4	540	630	27	110	---	65
ELIFLUX PIPE	F8 A4-EA4-A4	530	620	25	100	---	50

Chemical Compositon of Weld Metal - % (Typical)

Sumerged Arc Flux	C	Si	Mn	Mo
ELIFLUX BFF	0.07	0.50	1.75	0.50
ELIFLUX PIPE	0.06	0.40	1.60	0.45

Typical Base Material Grades :

* Fine-grained Steels : S460N, P460N

Features and Applications :

* Suitability to high-quality welding of Mo-alloyed steels, boiler sheet steels, and fine-grained steels.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
305145	2.4	3/32	25	K 435
304576	4.0	5/32	25	*BIG PACK

* Packaging alternatives according to the order ; 30 - 350 - 550 - 1000 Kg

Approvals :

S3 Mo : TSE, CE, GOST-R

1) Copper Coated

GeKa®

S 3 TiB

Standards :

TS EN ISO 26304-A	:	S Z
EN ISO 26304-A	:	S Z
AWS A5.23	:	E - G

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Ti	B
0.08	0.25	1.40	0.14	0.011

Mechanical Properties - (Typical) :

Sumerged Arc Flux	AWS A5.23	Yield Strength N/mm²	Tensile Strength N/mm²	Elongation (L_o=5d_o)(%)	Impact Strength ISO-V(J)		
					20°C	-20°C	-40°C
ELIFLUX PIPE	F8A0-EG-G	520	630	24	80	50	---

Chemical Compositon of Weld Metal - % (Typical)

Sumerged Arc Flux	C	Si	Mn
ELIFLUX PIPE	0.06	0.50	1.30

Typical Base Material Grades :

* Pipe Steels : X52, X56, X60, X65, X70, X80,
L360MB, L385M, L415MB, L450MB, L485MB, L555MB

Features and Applications :

* Used in submerged arc welding of pipe steels.
* It is suitable to use for multi and two run technique and applications with high toughness requirements.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
...	1.6	1/16	25	
...	2.0	5/64	25	
...	2.4	3/32	25	K 435
...	3.2	1/8	25	*DRUM
305792	4.0	5/32	25	
...	5.0	3/16	25	

* Packaging alternatives according to the order ; 400 - 600 Kg

Approvals :

S3 TiB : GOST-R, CE

GeKa®

S 3 Mo TiB

Standards :

TS EN ISO 26304-A	:	S Z
EN ISO 26304-A	:	S Z
AWS A5.23	:	E A 2 TiB mod.

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Mo	Ti	B
0.08	0.25	1.20	0.52	0.14	0.011

Mechanical Properties - (Typical) :

Sumerged Arc Flux	AWS A5.23	Yield Strength N/mm²	Tensile Strength N/mm²	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)		
					20°C	-20°C	-40°C
ELIFLUX PIPE	F8A0-EA2TiB(mod.)-G	545	680	26	100	60	---

Chemical Compositon of Weld Metal - % (Typical)

Sumerged Arc Flux	C	Si	Mn	Mo
ELIFLUX PIPE	0.06	0.60	1.50	0.40

Typical Base Material Grades :

* Pipe Steels : X52, X56, X60, X65, X70, X80,
L360MB, L385M, L415MB, L450MB, L485MB, L555MB

Features and Applications :

* Wire for submerged arc welding of pipeline steels.
* Optimized for multi-arc welding using two-run technique.
* For applications with high toughness requirements.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
305133	2.0	5/64	25	
305134	2.4	3/32	25	K 435
305135	3.2	1/8	25	*BIG PACK
305137	4.0	5/32	25	

* Packaging alternatives according to the order ; 30 - 350 - 550 - 1000 Kg

Approvals :

GOST-R, CE

GeKa®

S 3 NiMo 1

Standards :

TS EN ISO 26304-A	:	S3 Ni1Mo
EN ISO 26304-A	:	S3 Ni1Mo
AWS A5.23	:	EF3

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Mo	Ni
0.12	0.20	1.75	0.55	0.90

Mechanical Properties - % (Typical) :

Sumerged Arc Flux	AWS A5.23	Yield Strength N/mm²	Tensile Strength N/mm²	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)		
					0°C	-20°C	-40°C
ELIFLUX BFF	F9 A4-EF3-F3	580	650	21	---	100	60

Chemical Compositon of Weld Metal - % (Typical)

Sumerged Arc Flux	C	Si	Mn	Mo	Ni
ELIFLUX BFF	0.09	0.25	1.65	0.55	0.90

Typical Base Material Grades :

* Pipe Steels : X52, X56, X60, X65, X70, X80,
  L360MB, L385M, L415MB, L450MB, L485MB, L555MB
* Fine-grained Steels : S550QL1 S380N, S500N, S380NL, S500NL
* Pressure Steels : 20 MnMoNi5-5

Features and Applications :

* S3NiMo 1 is a nickel-molybdenum-alloyed, copper-coated wire designed for submerged arc welding of structural steels and higher tensile steels.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
305139	2.0	5/64	25	
305140	2.4	3/32	25	K 435
305141	3.2	1/8	25	*BIG PACK
305143	4.0	5/32	25	

* Packaging alternatives according to the order ; 30 - 350 - 550 - 1000 Kg

Approvals :

GOST-R, CE

GeKa®

S 3 NiCrMo 2.5

Standards :

TS EN ISO 26304-A	:	S 3 Ni2.5CrMo
EN ISO 26304-A	:	S 3 Ni2.5CrMo
AWS A5.23	:	EM4 (mod.)

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Mo	Ni	Cr
0.11	0.17	1.40	0.55	2.40	0.70

Mechanical Properties - % (Typical) :

Sumerged Arc Flux	AWS A5.23	Yield Strength N/mm²	Tensile Strength N/mm²	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)		
					-20°C	-40°C	-60°C
ELIFLUX BFF	F11A8-EM4(mod.)-M4	740	850	20	90	85	min.27
ELIFLUX BAB-S	F11A4-EM4(mod.)-M4	735	855	18	70	60	---

Chemical Compositon of Weld Metal - % (Typical)

Sumerged Arc Flux	C	Si	Mn	Mo	Ni	Cr
ELIFLUX BFF	0.06	0.30	1.50	0.50	2.20	0.50
ELIFLUX BAB-S	0.05	0.65	1.80	0.48	2.05	0.35

Typical Base Material Grades :

* Fine-grained steels: S550QL1, S690QL1

Features and Applications :

* S3NiCrMo 2.5 is a CrNiMo alloyed, copper-coated wire designed for submerged arc welding of high strength quenched, tempered structural steels and extra high tensile steels.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight Kg	Package Type
...	1.6	1/16	25	
...	2.0	5/64	25	
304545	2.4	3/32	25	K 435
304200	3.2	1/8	25	*BIG PACK
304201	4.0	5/32	25	
...	5.0	3/16	25	

* Packaging alternatives according to the order ; 30 - 350 - 550 - 1000 Kg

Approvals :

S 3 NiCrMo 2.5 : GOST-R, CE

S 3 NiCrMo 2.5 x EL•FLUX BFF : ABS

GeKa®

STAINLESS

Mechanical Properties of Welding Metal (Typical) :

Submerged Arc Welding Wire	Submerged Arc Welding Wire Flux	Standarts (AWS A5.9)	Tensile Strength N/m²	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)		
					0°C	-110°C	-196°C
ELOX UP 308L	ELIFLUX BSS	ER 308L	555	42	72	48	41
ELOX UP 309L	ELIFLUX BSS	ER 309L	545	36	---	---	---
ELOX UP 316L	ELIFLUX BSS	ER 316L	570	39	63	52	40
ELOX UP 2209	ELIFLUX BSS-D	ER 2209	830	32	---	---	---
ELOX UP 410	ELIFLUX BSS-F	ER 410	530	25	---	---	---
ELOX UP 430	ELIFLUX BSS-F	ER 430	460	20	---	---	---

Chemical Composition of Welding Metal % (Typical) :

Product	Submerged Arc Flux	C	Si	Mn	Mo	Cr	Ni	P	S
ELOX UP 308L	ELIFLUX BSS	0.030	0.53	1.55	---	19.25	9.36	0.015	0.008
ELOX UP 309L	ELIFLUX BSS	0.028	0.42	1.65	0.55	24.25	13.16	0.014	0.009
ELOX UP 316L	ELIFLUX BSS	0.030	0.40	1.75	2.15	19.10	11.30	0.018	0.010
ELOX UP 2209	ELIFLUX BSS-D	0.030	0.90	1.85	3.15	21.85	8.50	0.018	0.008
ELOX UP 410	ELIFLUX BSS-F	0.110	0.31	0.39	0.13	13.20	0.37	0.028	0.010
ELOX UP 430	ELIFLUX BSS-F	0.040	0.40	0.50	0.20	16.50	0.18	0.020	0.010

Package Type :

Product	Product Code	Diameter (mm)	Weight (Kg)
ELOX UP 308L	603452 603453	2.40 3.20	25
ELOX UP 309L	605235 603456 603457	2.40 3.20 4.00	25
ELOX UP 316L	603458 603459	2.40 3.20	25
ELOX UP 2209	608138 608139	2.40 3.20	25
ELOX UP 410	603384	4.00	25
ELOX UP 430	604384	4.00	25

Approvals :

GOST-R, CE

GeKa ELOX UP 2209 x GeKa ELIFLUX BSS-D : CE, Class NK

GeKa®

ELIFLUX BAR

Standards :

TS EN ISO 14174 :	SA AR 1 77 AC
EN ISO 14174 :	SA AR 1 77 AC
AWS A5.17 :	F6AZ-EL12 / F7AZ-EM12

Standards :

Basicity
0.7

Mechanical Properties - % (Typical) :

SAW Wire	AWS A5.17	Yield Strength N/mm²	Tensile Strength N/mm²	Elongation (Lo=do)(%)	Impact Strength ISO-V(J)		
					0°C		
S1	F6AZ-EL 12	360	460	26	47		
S2	F7AZ-EM 12	400	500	30	60		

Chemical Composition of Welding Metal % (Typical) :

SAW Wire	C	Si	Mn
S1	0.07	0.50	1.10
S2	0.07	0.60	1.35

Features and Applications :

* A type of SAW rutile flux structured from agglomerated aluminate.
* Applicability in single-pass joint welding and fillet welding of particularly spiral welded pipes, LPG cylinders, general-purpose construction steels, boiler sheet, and shipbuilding steels.
* Low consumption of flux. Basicity : 0.7
* Straight and nonporous welding beads.
* Formation of very easily-removed slag.
* Requirement of re-drying at 250-350 °C for 2 hours.

Operating Data :

Product Code	Package Weight (Kg)	Package Type
304616	25	Kraft Package

Approvals :

S1 x ELIFLUX BAR : BV, DNV-GL, TL, ABS, LR, CE, ELIFLUX BAR : GOST-R , CE

S2 x ELIFLUX BAR : BV, ABS, CE, DB

GeKa®

ELIFLUX BAZ

Standards :

TS EN ISO 14174 :	SA ZS 1 76 DC
EN ISO 14174 :	SA ZS 1 76 DC
AWS A5.17 :	F7 A0--EM13K / F6 A0-EM12

Standards :

Basicity
0.6

Mechanical Properties - % (Typical) :

SAW Wire	Yield Strength N/mm²	Tensile Strength N/mm²	Elongation (Lo=do)(%)	Impact Strength ISO-V(J)	
				(ISO-V/0°C)	(ISO-V/-20°C)
EM13K	435	510	24	60	40
S2	390	470	29	50	35

Chemical Composition of Welding Metal % (Typical) :

SAW	C	Si	Mn
EM13K	0.04	0.8	1.5
S2	0.05	0.6	1.2

Features and Applications :

* SAW flux type composed of agglomerated Zirconium-silicate
*Basicity : 0.6 (According to Boniszewski formula).
*Recommended for high working speed, single pass welds on clean plate and sheet steel up to 50 mm in thickness.
*Especially suitable for LPG cylinders and metal buildings.
*Excellent removal of slags of weld beads formed at high temperatures.

Operating Data :

Product Code	Package Weight (Kg)	Package Type
306094	25	Craft Package

Approvals :

GOST-R, CE
GeKa ELOX UP 2209 x ELIFLUX BSS-D : CE, Class NK

GeKa®

ELIFLUX BBR-AG

Standards :

TS EN ISO 14174	:	SA AB 1 67 AC H5
EN ISO 14174	:	SA AB 1 67 AC H5
AWS A5.17	:	F6AZ-EL12 / F7A0-EM12 F7A0-EM12K

Basicity
1.1

Mechanical Properties - % (Typical) :

SAW Wire	AWS A5.17	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)	
					0°C	-20°C
S 1	F6AZ-EL12	370	480	30	55	---
S 2	F7A0-EM12	410	490	32	---	50
S 2 Si	F7A0-EM12K	420	510	29	---	50

Chemical Composition of Weld Metal % (Typical) :

SAW Wire	C	Si	Mn
S 1	0.06	0.30	0.90
S 2	0.10	0.35	1.20
S 2 Si	0.07	0.40	1.30

Features and Applications :

* Agglomerated aluminate-basic type welding flux.
* Especially suitable for singlepass joining and fillet welding of LPG cylinders, welded spiral pipes (with S2 combination up to XS2 pipe), general constructions, steels, boilerplates and ship plates.
* The weld bead looks more like a rutile type weld bead.
* Easy removable slag.
* Before using : The welding flux should be dried 2h between 300 - 350 °C.

Operating Data :

Product Code	Weight (Kg)	Packaging
305068	25	Craft Bag

Approvals :

GOST-R, CE

GeKa®

ELIFLUX BFB

Standards :

TS EN ISO 14174	:	SA AB 1 68 AC H5
EN ISO 14174	:	SA AB 1 68 AC H5
AWS A5.17	:	F6A2-EL12 / F7A4-EM12 / F7A2-EM12K / F7A4-EH12K
AWS A5.23	:	F8A4-EA2-A2

Basicity
1.4

Mechanical Properties - % (Typical) :

SAW wire	AWS A5.17 / AWS A5.23	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)		
					-20°C	-30°C	-40°C
S1	F6A2-EL12	380	480	28	55	47	---
S2	F7A4-EM 12	460	525	30	70	55	50
S2 Si	F7A2-EM12K	430	530	28	80	70	---
S3 Si	F7A4-EH12K	460	550	27	---	---	60
S2 Mo	F8A4-EA2-A2	490	600	26	90	---	60

Chemical Composition of Weld Metal % (Typical) :

SAW wire	C	Si	Mn	Mo
S1	0.06	0.25	1.20	---
S2	0.07	0.35	1.50	---
S2 Si	0.05	0.40	1.25	---
S3 Si	0.07	0.40	1.80	---
S2 Mo	0.06	0.40	1.40	0.50

Features and Applications :

* Agglomerated aluminate-basic type welding flux.
* Applicability in single-and multi-pass (butt-) joint welding and fillet welding of general-purpose construction steels, shipbuilding stell, boiler sheet, heat-resisting steels, and fine-grained steels.
* Low consumption of flux.
* Basicity : 1.4
* High toughness of weld metal at low temperatures.
* Formation of easily-removed slag.
* Requirement of re-drying at 300-350°C for 2 hours.

Operating Data :

Product Code	Weight (Kg)	Packaging
304614	25	Craft Bag

Approvals :

S2 X EL•FLUX BFB : TL, DNV-GL, BV, ABS, LR, RS, NK, RINA, CE, DB
S2 Si X EL•FLUX BFB : ABS, LR, CE, DB
S2 Mo X EL•FLUX BFB : BV, ABS, CE
EL•FLUX BFB : GOST-R, CE

GeKa®

ELIFLUX PIPE

Standards :

TS EN ISO 14174	:	SA AB 1 78 AC H5
EN ISO 14174	:	SA AB 1 78 AC H5
AWS A5.17	:	F7A4-EM12
AWS A5.23	:	F7A4-EA2-A2 / F8A4-EA4-A4

Basicity
1.7

Mechanical Properties - % (Typical) :

SAW Wire	AWS A5.17 / AWS A5.23	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)		
					0°C	-20°C	-40°C
S2	F7A4-EM 12	460	550	26	---	75	50
S2 Mo	F7A4 EA2-A2	510	640	25	---	---	60
S3 Mo	F8A4-EA4-A4	530	620	25	100	---	50

Chemical Composition of Weld Metal % (Typical) :

SAW Wire	C	Si	Mn	Mo
S2	0.05	0.40	1.35	---
S2 Mo	0.06	0.40	1.40	0.50
S3 Mo	0.06	0.40	1.60	0.45

Features and Applications :

* SAW flux type composed of agglomerated aluminate Basic.
* Basicity of the flux According to Boniszewski Formula is 1.7
* Excellent removal of slags of weld beads formed at high temperatures
* Suitability for use in both bilateral and tandem (AC/DC) welding operations.
* Sufficiently high tougness of weld metals obtained particularly by 2-pass welding operations.
* Suitability for use in welding of high-strength steels.
* Process requirement of re-drying at 300 - 350 °C for 2 hours.

Operating Data :

Product Code	Weight (Kg)	Packaging
304617	25	Craft Bag

Approvals :

CE, GOST-R

GeKa®

ELIFLUX BAB-S

Standards :

TS EN ISO 14174	:	SA AB 1 68 AC H5
EN ISO 14174	:	SA AB 1 68 AC H5
AWS A5.17	:	F7A4-EH12K / F7A4-EM12 F7A4-EM12K
AWS A5.23	:	F8A4-EA2-A3 / F11A4-EM4(mod)-M4 Total

Basicity
2.1

Mechanical Properties - % (Typical) :

SAW Wire	AWS A5.17 / AWS A5.23	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)		
					-20°C	-30°C	-40°C
S2	F7A4-EM12	430	525	29	---	---	60
S2 Si	F7A4-EM12K	440	550	28	100	---	65
S2 Mo	F8A4-EA2-A3	500	600	26	---	---	60
S3 Si	F7A4-EH12K	545	645	26	---	---	60
S3 NiCrMo 2.5	F11A4-EM(mod)-M4	735	855	18	---	70	60

Chemical Composition of Weld Metal % (Typical) :

SAW Wire	C	Si	Mn	Mo	Ni	Cr
S2	0.08	0.40	1.50	---	---	---
S2 Si	0.07	0.45	1.60	---	---	---
S2 Mo	0.07	0.55	1.70	0.50	---	---
S3 Si	0.07	0.60	1.70	---	---	---
S3 NiCrMo 2.5	0.05	0.65	1.80	0.48	2.05	0.35

Features and Applications :

* SAW Flux type is composed of agglomerated Aluminate Basic.
* Weld beads of excellent surface appearance.
* Slag can be removed easily.
* This product has high current carrying capacity.
* GeKa ELIFLUX BAB-S is suitable for multipass and tandem welding especialy for manufacturing of spiral pipe.
* It has suitable of high working speed.
* Suitable for the use of welding of high strength steels.

Operating Data :

Product Code	Weight (Kg)	Packaging
305103	25	Craft Bag

Approvals :

S2 X ELIFLUX BAB-S : ABS
S2Mo X ELIFLUX BAB-S : ABS
S3NiCrMo2.5 X ELIFLUX BAB-S : ABS
S3Si X ELIFLUX BAB-S : ABS
ELIFLUX BAB-S : CE, GOST-R

GeKa®

ELIFLUX BFPP

Standards :

TS EN ISO 14174	:	SA AB 1 66 AC H5
EN ISO 14174	:	SA AB 1 68 AC H5
AWS A5.17	:	F7A2-EM12/F7A2-EM12K
AWS A5.23	:	F8A4-EA2-A2

Basicity
1.6

Mechanical Properties - % (Typical) :

SAW Wire	AWS A5.17 / AWS A5.23	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)	
					-30°C	-40°C
S2	F7A2-EM 12	430	520	29	60	---
S2 Mo	F7A2 EM12K	440	515	30	65	---
S3 Mo	F8A4-EA2-A2	490	595	26	---	60

Chemical Composition of Weld Metal % (Typical) :

SAW Wire	C	Si	Mn	Mo
S 2	0.06	0.35	1.20	---
S 2 Si	0.07	0.40	1.25	---
S 2 Mo	0.07	0.40	1.30	0.50

Features and Applications :

GeKa ELIFLUX BFPP, is agglomerated aluminate basic flux for submerged arc welding. It features high impact toughness and low hydrogen content. It is suitable for double wire welding and narrow gap weldimg of thick steel plates and spiral welded pipes.
With suitable wires, also can be used for welding of pressure vessels.
Flux should be re-dried before use for 2 hours at 300 - 350°C

Operating Data :

Product Code	Weight (Kg)	Packaging
607332	25	Craft Bag

Approvals :

CE, GOST-R

GeKa®

ELIFLUX BFPV

Standards :

TS EN ISO 14174	:	SA FB 1 66 AC H5
EN ISO 14174	:	SA FB 1 66 AC H5
AWS A5.17	:	F7A2-EM12 / F7A2-EM12 K
AWS A5.23	:	F8A4-EA2-A2/F8A-EA4-A3/F11A8-EM4 (mod)-M4

Basicity
2.1

Mechanical Properties - % (Typical) :

SAW Wire	AWS A5.17 / AWS A5.23	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)			
					-30°C	-40°C	-50°C	-60°C
S2	F7A2-EM12	430	520	29	60	---	---	---
S2 Si	F7A2-EM12K	440	515	30	65	---	---	---
S2 Mo	F8A4-EA2-A2	490	595	26	---	60	---	---
S3 Si	F8A5-EA4-A3	500	588	27	---	100	80	---
S3 NiCrMo 2.5	F11A8-EM4(mod)-M4	700	775	23	---	55	45	min.27

Chemical Composition of Weld Metal % (Typical) :

SAW Wire	C	Si	Mn	Mo	Ni	Cr
S2	0.06	0.35	1.20	---	---	---
S2 Si	0.07	0.40	1.25	---	---	---
S2 Mo	0.07	0.40	1.30	0.50	---	---
S3 Si	0.05	0.30	1.75	0.50	---	---
S3 NiCrMo 2.5	0.06	0.40	1.75	0.50	0.40	2.10

Features and Applications :

* GeKa ELIFLUX BFPV, high basic, is agglomerated fluoride basic flux for submerged arc welding. It features high impact toughness and low hydrogen content. It is suitable for double wire welding and narrow gap welding of thick steel plates, pressure vessel.
Flux should be re-dried before use for 2 hours at 300 - 350°C

Operating Data :

Product Code	Package Weight (Kg)	Packaging
607355	25	Craft Bag

Approvals :

GeKa®

ELIFLUX BFF

Standards :

TS EN ISO 14174	:	SA FB 1 65 DC H5
EN ISO 14174	:	SA FB 1 65 DC H5
AWS A5.17	:	F7A4-EM12 / F7A4-EM12K / F7A4-EH12K
AWS A5.23	:	F8A4-EA2-A2 / F9A4-EF3(mod)-F3 / F11A8-EM4(mod)-M4

Basicity
3.0

Mechanical Properties - % (Typical) :

SAW Wire	AWS A5.17 / AWS A5.23	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)			
					-20°C	-30°C	-40°C	-60°C
S2	F7A4-EM12	410	520	24	---	70	60	---
S2 Si	F7A4-EM12K	450	540	23	---		65	---
S2 Mo	F8A4-EA2-A2	480	570	27	---	---	70	---
S3 Si	F7A4-EH12K	490	580	26	---	---	60	---
S3 NiMo 1	F9A4-EF3(mod)-F3	580	650	21	100	---	60	---
S3 NiCrMo 2.5	F11A8-EM4(mod)-M4	740	850	20	90	---	85	min.27

Chemical Composition of Weld Metal % (Typical) :

SAW Wire	C	Si	Mn	Mo	Ni	Cr
S2	0.05	0.20	1.00	---	---	---
S2 Si	0.06	0.30	1.10	---	---	---
S2 Mo	0.07	0.25	1.15	0.45	---	---
S3 Si	0.10	0.60	1.70	---	---	---
S3 NiMo 1	0.09	0.25	1.65	0.55	0.90	---
S3 NiCrMo 2.5	0.06	0.30	1.50	0.50	2.20	0.50

Features and Applications :

* This is fluoride-Basic agglomerated flux. * This flux is suitable for welding high strength low alloy steels. * Prefable to use with wire electrodes having higher manganese level. * Recommended for multi-pass welding, in particular when there are high toughness requirementd. * Process requirement of re-drying at 300 - 350 °C for 2 hours.

Operating Data :

Product Code	Weight (Kg)	Packaging
304633	25	Craft Bag

Approvals :

S2Si X ELIFLUX BFF : BV, ABS, CE
S2Mo X ELIFLUX BFF : DNV-GL, BV, ABS, CE
S3Si X ELIFLUX BFF : BV, ABS, CE
ELIFLUX BFF : GOST-R, CE
S3NiCrMo 2.5 X ELIFLUX BFF : ABS, CE

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ELIFLUX BMS

Standards :

TS EN ISO 14174	:	SA CS/MS 1 68 AC
EN ISO 14174	:	SA CS/MS 1 68 AC
AWS A5.17	:	F6A0-EM12 / F6AZ-EL12

Basicity
1.0

Mechanical Properties - % (Typical) :

SAW Wire	AWS A5.17	Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)		
					0°C	-20°C	-30°C
S1	F6AZ-EL12	395	475	24	38	---	---
S2	F6A0-EM12	390	485	30	---	69	---

Chemical Composition of Weld Metal % (Typical) :

SAW Wire	C	Si	Mn
S1	0.05	0.80	1.10
S2	0.04	0.45	1.27

Features and Applications :

* A type of SAW flux structured from agglomerated manganese silicate and calcium silicate.
* Basicity of the flux according to Boniszewski formula is 1,0.
* Weld beads of excellent surface appearance and with easily removed slags.
* High resistance to porosity caused by oil and rust.
* High capacity of current flow.
* Suitability for use in 2-pass welding operations on thick materials (best choice for base metals in thicknesses of 10-40 mm).
* Requirement of re-drying at 250-350 °C for 2 hours.

Operating Data :

Product Code	Weight (Kg)	Packaging
304632	25	Craft Bag

Approvals :

S2 / EL•FLUX BMS : BV, ABS, CE

EL•FLUX BMS : GOST-R, CE

GeKa®

ELIFLUX BSS

Standards :

TS EN ISO 14174	:	SA FB 2 65 DC
EN ISO 14174	:	SA FB 2 65 DC

Basicity
2.45

Mechanical Properties - % (Typical) :

SAW Wire	Standards	Tensile Strength (N/mm²)	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)		
				0°C	-110°C	-196°C
ELOX UP 308L	AWS A5.9 : ER 308 L	550	41	70	50	40
ELOX UP 309L	AWS A5.9 : ER 309 L	540	35	---	---	---
ELOX UP 309 MoL	AWS A5.9 : ER 309 L Mo	560	35	---	---	---
ELOX UP 316 L	AWS A5.9 : ER 316 L	570	39	60	50	40

Chemical Composition of Weld Metal % (Typical) :

SAW Wire	C	Si	Mn	Mo	Cr	Ni	P	S
ELOX UP 308 L	0.03	0.54	1.57	---	19.20	9.30	0.018	0.009
ELOX UP 309 L	0.03	0.40	1.63	0.50	24.20	13.10	0.017	0.008
ELOX UP 309 MoL	0.03	0.42	1.68	2.50	24.10	13.20	0.020	0.009
ELOX UP 316 L	0.03	0.40	1.73	2.13	19.00	11.20	0.025	0.008

Features and Applications :

* A type of fluoride basic flux for SAW. * General use in submerged welding of stainless steel materials. * Very high corrosion resistance. * Very good mechanical properties. * Formation of easily-removable slags. * Requirement of re-drying at 300-350 °C for 2 hours.

Operating Data :

Product Code	Weight (Kg)	Packaging
603461	25	Craft Bag

Approvals :

ELIFLUX BSS : GOST-R, CE

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ELIFLUX BSS-D

Standards :

TS EN ISO 14174	:	SA FB 2 65 DC
EN ISO 14174	:	SA FB 2 65 DC

Basicity
2.45

Mechanical Properties - % (Typical) :

SAW Wire	AWS A5.9	Tensile Strength (N/mm²)	Elongation (Lo=5do)(%)	Impact Strength ISO-V(J)		
				0°C	-110°C	-196°C
ELOX UP 308 L	ER 308 L	555	42	72	48	41
ELOX UP 309 L	ER 309 L	545	36	---	---	---
ELOX UP 316 L	ER 316 L	570	39	63	52	40
ELOX UP 2209	ER 2209	830	32	---	---	---

Chemical Composition of Weld Metal % (Typical) :

SAW Wire	C	Si	Mn	Mo	Cr	Ni	P	S
ELOX UP 308 L	0.030	0.53	1.55	---	19.25	9.36	0.015	0.008
ELOX UP 309 L	0.028	0.42	1.65	0.55	24.25	13.16	0.014	0.009
ELOX UP 316 L	0.030	0.40	1.75	2.15	19.10	11.30	0.018	0.010
ELOX UP 2209	0.030	0.90	1.85	3.15	21.85	8.50	0.018	0.008

Features and Applications :

* A type of fluoride basic flux for SAW. * General use in submerged welding of stainless steel materials.
* The corrosion resistance and mechanical properties are good. Formation of easily-removable slags..
* Requirement of re-drying at 250-350 °C for 2 hours.

Operating Data :

Product Code	Weight (Kg)	Packaging
608226	25	Craft Bag

Approvals :

GeKa ELIFLUX BSS-D; CE
GeKa ELOX UP 2209 X ELIFLUX BSS-D; CE,CLASS, NK

GeKa®

ELIFLUX 350

Standards :

EN ISO 1417-A	:	SA CS 69 C Cr DC

Mechanical Properties - % (Typical) :

SAW	Hardness (HB)
S 1	350

Chemical Composition of Welding Metal % (Typical) :

Submerged Arc Welding Flux	C	Si	Mn	Cr	Fe
S 1	0.10 - 0.30	0.50 - 1.00	1.00 - 1.80	1.60 - 3.00	Rest

Features and Applications :

* A type of SAW flux structured from agglomerated calcium silicate.
*This submerged arc welding powder and wire specification is used for hardfacing of steels
* Requirement of re-drying at 250-350 °C for 2 hours.

Operating Data :

Product Code	Weight (Kg)	Packaging
304652	25	Craft Bag
601268	25	Craft Bag

Approvals :

ELIFLUX 350 : GOST-R, CE

GeKa®

ELIFLUX BSS-F

Standards :

TS EN ISO 14174	: SA FB 2 / SA FB 3
EN ISO 14174	: SA FB 2 / SA FB 3

Basicity
2.50

Flux Chemical Components :

CaO+MgO+CaF2+MnO	SiO_2	CaF_2
> 50	< 20	> 15

Features and Applications :

* Non-alloyed, fluoride -basic agglomerated flux.
* Used in hardfacing cladding for ferritic stainless steel with SUBCOR 430, SUBCOR 41 NiMo LH, SUBCOR 41 NiMo MH. Also suitable to joint welding.
* All the properties of the wire is transferred to weld pool. Hardness will vary depending on it.
* Suitable for overlay welding with oscillation and single/multi-pass welding.
* Formation of easily removable slag.
* Re-drying at 300-350 oC / 2 h.

Operating Data :

Product Code	Weight Kg	Package Type
306239	25	Kraft Bag

Approvals :

GeKa®

ELIGAS 1

Standards :

TS 3623 EN 12536	:	O I
EN 12536	:	O I
AWS A5.2	:	R 45

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn
0.07	0.1	0.5

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 245	340 - 440	min. 35 J	min. 14

Features and Applications :

* Oxy-acetylene / gas welding rod to be used for flame welding of all types of machinery parts made of unalloyed steels.
* Body, exhaust, thin sheet pipe welding.
* Neutral flame should be used.

Welding Positions :

Flame Adjustment :

Neutral Flame

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (kg)	Package Type
303663	1.60 x 1000	1/16 x 39”	5	Carton Box
303665	2.00 x 1000	5/64 x 39”	5	
303667	2.40 x 1000	3/32 x 39”	5	
303669	3.20 x 1000	1/8 x 39”	5	
303671	4.00 x 1000	5/32 x 39”	5	

Approvals :

CE, GOST-R

GeKa®

ELIGAS 2

Standards :

TS 3623 EN 12536	:	O Z
EN 12536	:	O Z
AWS A5.2	:	R 60

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn
0.07	0.15	1.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 295	440 - 540	min. 39 J	min. 22

Features and Applications :

* High quality welding of unalloyed or Mo-alloyed steels used in the production of boilers, pipe lines and constructions.
* Mo-alloyed oxy-acetylene / gas welding with flame welding technique.
* Excellent yield and welding properties.
* Ideal welding rod for plumbers.
* Neutral flame should be used.

Welding Positions :

Flame Adjustment :

Neutral Flame

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (kg)	Package Type
304986	1.60 x 1000	1/16 x 39''	5	Carton Box
304987	2.00 x 1000	5/64 x 39''	5	
304988	2.40 x 1000	3/32 x 39''	5	
304989	3.20 x 1000	1/8 x 39''	5	
304990	4.00 x 1000	5/32 x 39"	5	
304991	5.00 x 1000	3/16 x 39"	5	

Approvals :

CE, GOST-R

GeKa

ELIGAS 4

Standards :

TS 3623 EN 12536	:	O IV
EN 12536	:	O IV
AWS A5.2	:	R 60-G

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mo	Mn
0.07	0.15	0.5	1.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 295	440 - 540	min. 39 J	min. 22

Features and Applications :

* High quality welding of unalloyed or Mo-alloyed steels used in the production of boilers, pipe lines and constructions.
* Mo-alloyed oxy-acetylene / gas welding with flame welding technique.
* Excellent yield and welding properties.
* Ideal welding rod for plumbers.
* Neutral flame should be used.

Welding Positions :

Flame Adjustment :

Neutral Flame

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (kg)	Package Type
303515	1.60 x 1000	1/16 x 39"	5	Carton Box
303679	2.00 x 1000	5/64 x 39"	5	
303680	2.40 x 1000	3/32 x 39"	5	
303681	3.20 x 1000	1/8 x 39"	5	
303683	4.00 x 1000	5/32 x 39"	5	

Approvals :

CE, GOST-R

Special Welding Products

GeKaTec®

GROOVE

Features and Applications :

* Gouging and removal of old,worn or cracked parts and correction of casting defects.
* Cleaning defective surfaces and removing faulty welding deposits.
* Gouging and chamfering all industry metals.
* Easy striking and restriking , high gouging speed .
* It burns up impurities, degasses metal, leaving it metalurgically clean operates at all positions , even overhead.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
300775	3.20 x 350	1/8 x 14"	180 - 240	5	3820
300776	4.00 x 350	5/32 x 14"	250 - 320	5	5620
300777	5.00 x 350	3/16 x 14"	350 - 450	5	8230

Approvals :

GOST-R, SEPRO

GeKaTec®

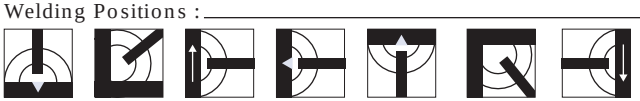
Carbon
Electrode

AIR

Features and Applications :

* Cleaning defective surfaces, removing faulty weld deposits, bevelling, gouging, elimination of tears, cutting metal parts to required size.
* Made of copper-plated graphite. Used along with compressed air.
* Special-type electrode holder is required.
* Should be held horziontally to work.
* Able to operate at all positions.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm)	Pcs/ Box	Welding Current (A)
631658	6.00 x 305	50	300 - 400
631656	8.00 x 305	50	350 - 450
602289	10.00 x 305	50	450 - 600
605477	12.00 x 305	50	800 - 1000

Approvals :

GOST-R

GeKaTec®

St - CAST

Standards :

TS 9463 EN ISO 1071	:	E C Z Fe-1
EN ISO 1071	:	E C Z Fe-1
AWS A5.15	:	E St

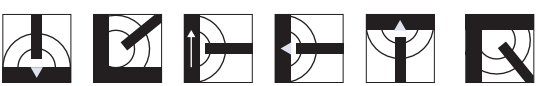
Mechanical Properties :

Hardness (cast iron) (HRC)
55

Features and Applications :

* Electrode with steel core.
* Uses in surfacing of particularly high-hardness zones in cast iron materials.
* High hardness, allowing direct application without a buffer layer on cast irons.
* Specific applicability in surfacing of cast iron moulds used in the automotive industry, at radii, of deep drawing dies, and of casting edges.
* Excellent results obtained in surfacing of launders for sphero- casting as well as in hardfacing applications of cast iron materials.
* Steady behavior of welding and arc start with almost no spattering.

Welding Positions :



Current Type :

D.C.(+)
AC

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
302607	2.50 x 350	3/32 x 14"	70-100	5	1852
302499	3.20 x 350	1/8 x 14"	80-130	5	3100

Approvals :

CE, GOST-R

GeKaTec®

Ni - CAST

Standards :

TS 9463 EN ISO 1071	:	E C Ni-Cl 1
EN ISO 1071	:	E C Ni-Cl 1
AWS A5.15	:	E Ni-Cl

Mechanical Properties :

Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
240-300	min. 5	~170 HB

Features and Applications :

* Low-heat-input manual electrode for joining old cast iron . * Electrode with pure nickel core for assembly and surfacing of broken or worn parts made of grey cast iron , also for reclaimation of casting defects and for welding grey cast iron to steel . * Ni-cast electrode can be machinable by cutting tools. * Before welding large sections , preheating is usefull . * Depending on quality of cast iron postweld may be needed . * Ensure that all areas to be welded are free from contaminant, remove casting defects such as sand inclusions , oil , damages of fatique base material . * Controllable weld pool , excellent bonding , easy slag removal, dense, homogeneous and porosity-free deposit.

Welding Positions :

Current Type :

D.C.(-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
300778	2.50 x 300	3/32 x 12''	60 - 90	4	1830
300779	3.20 x 300	1/8 x 12''	90 - 120	5	2840
300781	4.00 x 350	5/32 x 14''	120 - 150	5	5150

Approvals :

CE, GOST-R

GeKaTec®

Ni-CAST BFNC

Standards :

TS 9463 EN ISO 1071	:	E C Ni-Cl 1
EN ISO 1071	:	E C Ni-Cl 1
AWS A5.15	:	E Ni-Cl

Chemical Composition of Weld Metal-
% (Typical) :

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
285	335	min. 5	~180

Features and Applications :

* Barium free (contain minimal emission for the envoriment), Non-conductive (better safety), basic graphite coated electrode with a nickel core wire.
* Repair welding of problematic cast iron parts of irregular shapes.
* Joint welding of cast iron parts and cast iron parts to steel parts.
* Pre-heating to 200°C is recommended for thick-walled components.
* Welding in short runs and preening are required.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
305770	3.20 x 300	1/8 x 12''	100 - 130	2840

Approvals :

CE

GeKaTec®

Fe - CAST

Standards :

TS 9463 EN ISO 1071	:	E C NiFe-Cl 1
EN ISO 1071	:	E C NiFe-Cl 1
AWS A5.15	:	E NiFe-Cl

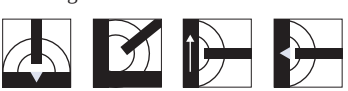
Mechanical Properties :

Tensile Strength (N/mm²)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
450	min. 10	~190 HB

Features and Applications :

* Include machine bases , pump casing , gear housing , gear boxes , engine blocks , compressors , machine frames, dies , flanges , tables , levers and generators .
* Low-heat-input manuel electrode for repair and maintanence of cast iron and for joining cast iron with steels or copper alloys. Its excellent weldability makes it easy to use in position.
* It also suitable for joining and building cast irons .
* Weld deposit can be machinable by cutting tools.
* It has high tensile strength and ductility and nodular graphite deposit resists to cracking .
* For semi-hot and cold welding techinque of parts made of grey cast iron , malleable cast iron or nodular graphite cast iron , some nickel and copper alloys such as housing and frames of machinery , subject to dynamic and heavy load.

Welding Positions :



MIG & TIG Wire :

GeKaTec NiFe SG

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
300773	3.20 x 350	1/8 x 14"	80 - 120	5	3100
300774	4.00 x 350	5/32 x 14"	120 - 150	5	4530

Approvals :

CE, GOST-R

GeKaTec®

Fe - CAST HD

Standards :

TS 9463 EN ISO 1071	:	E C NiFe-Cl 1
EN ISO 1071	:	E C NiFe-Cl 1
AWS A5.15	:	E NiFe-Cl

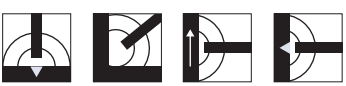
Mechanical Properties :

Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
450	min. 10	~190 HB

Features and Applications :

* Include machine bases , pump casing , gear housing , gear boxes , engine blocks , compressors , machine frames, dies , flanges , tables , levers and generators .
* Low-heat-input manuel electrode for repair and maintanence of cast iron and for joining cast iron with steels or copper alloys. Its excellent weldability makes it easy to use in position.
* It also suitable for joining and building cast irons .
* Weld deposit can be machinable by cutting tools.
* It has high tensile strength and ductility and nodular graphite deposit resists to cracking .
* For semi-hot and cold welding techinque of parts made of grey cast iron , malleable cast iron or nodular graphite cast iron , some nickel and copper alloys such as housing and frames of machinery , subject to dynamic and heavy load.
* Weld metal recovery is more than 100 %.

Welding Positions :



MIG & TIG Wire :

GeKaTec NiFe SG

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
301054	3.20 x 350	1/8 x 14"	80 - 120	5	3100
301055	4.00 x 350	5/32 x 14"	120 - 150	5	4530

Approvals :

CE, GOST-R

GeKaTec®

ANTI-CRACK 7015

Standards :

TS EN ISO 14172	:	E Ni 6182 (mod.) (NiCr15Fe6Mn)
EN ISO 14172	:	E Ni 6182 (mod.) (NiCr15Fe6Mn)
AWS A5.11	:	~E NiCrFe-3

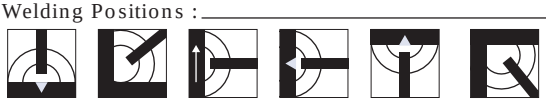
Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
min. 360	660 - 715	40 - 45	200 HB

Features and Applications :

* Also include cement kiln rings , blast furnace components , chemical containers and liquid gas installations .
* A high-alloyed nickel based electrode giving weld metal of Inconel-type resistant to cracking and impact at low temperatures.
* Excellent result in the production of welding bead subject to various corrosive media and temperatures from -196 to 1000°C. * Mechanical properties of weld is not affected by heat treatment.
* High resistance to heat , oxidation , and corrosion, also suitable for nickel alloys such as Inconel and Incoloy. * Joint welding of different steels with each other.
* It is also used in crack reparing and joint welding .

Welding Positions :



Current Type :

D.C.(+)

MIG & TIG Wire :

GeKaTec 7015 SG

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
300753	2.50 x 250	3/32 x 10"	50-60	4	1600
300754	3.20 x 300	1/8 x 12"	70-95	5	2850
300755	4.00 x 350	5/32 x 14"	90-120	5	5000
305183	5.00 x 350	3/16 x 14"	130-160	5	---

Approvals :

CE, GOST-R

GeKaTec®

ANTI-CRACK B90

Standards :

AWS A5.11 : ~E NiCrFe-3

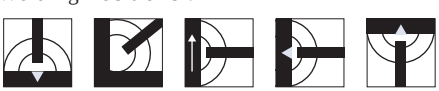
Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Elongation (%)	Impact Strength (ISO-V/+20°C)	Impact Strength (ISO-V/-196°C)
min. 380	550	min.30	>70	>50

Features and Applications :

*Nickel based basic type electrode.
*Applicability in welding high-temperature steels and low- temperature alloyed or unalloyed steels, Nickel & Ni-alloys, casting steels.
*Used for the materials which are difficult to welding.
*Electrode has a stabil arc.
*The weld is resistant to cracking (cracking test results are suitable).
*Weldability in all position exspecially for vertical upward position (PF).

Welding Positions :



Current Type :

D.C.(+)

Diameter, Current & Weight :

Product Code	Ø x I (mm)	Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
306180	2,50X350	70-100	5	2640
306093	3.20X350	80-130	25	4620
306065	3.20X350	80-130	5	4620
306181	4.00X350	130-160	5	5420

GeKaTec®

299 SUPER

Standards :

TS EN ISO 3581 - A	:	E 29 9 R 12
EN ISO 3581 - A	:	E 29 9 R 12
AWS A5.4	:	~E 312-16

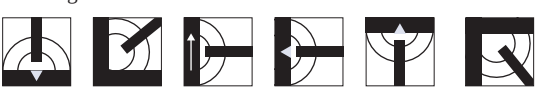
Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
min. 450	790 - 860	20 - 25	250 - 300

Features and Applications :

* Include rebuilding gear teeth,repairing cracks in casing , buffering layers and repairs on earthmoving and drilling equipment and rebuilding worn shafts .
* Materials of low weldability such as unalloyed high carbon steels,low and high alloyed steels,tool steels,high speed steels,manganese hardening steels , rail steels and iron based cast materials .
* It is also extremely usefull for repairs where the base metal is unknown grade steels .
* High alloyed special manuel electrode for joining a broad range of difficult-to-weld metals including special ,austenitic-manganese,air hardnening materials for dissimilar joining .
* Rutile type austenitic-ferritic electrode containing 29 9 Cr-Ni-Cobalt.
* Weld metal hardness increases by work hardening and cold forming . * Depending on the ferrit content suitable for designed for joining difficult-to-weld steels , welding of dissimilar joints and rebuilding or buffering before hardsurfacing.

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
303748	2.50 x 250	3/32 x 10''	40-70	4	1350
303749	3.20 x 350	1/8 x 14"	70-100	5	3350
303750	4.00 x 350	5/32 x 14"	90-140	5	4500

Approvals :

CE, GOST-R

GeKaTec®

299 HD

Standards :

TS EN ISO 3581 - A	:	E 29 9 R 52
EN ISO 3581 - A	:	E 29 9 R 52
AWS A5.4	:	~E 312-26

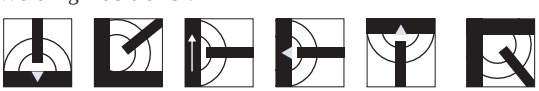
Mechanical Properties :

Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
790 - 830	min. 20	220 - 300

Features and Applications :

* It is also used for joining difficult-to-weld steels ,building thick machine parts, bridge building materials , low and high alloyed structural steels ,cast steels, roller presses , extruder screws , cuppling boxes and sleeves , joining mechanically welded parts and coating turbine components, seats of super heater steam valves and heat exchangers, etc..
* Rutile electrode with high deposition rate containing 29 9 Cr-Ni-Cobalt. Suitable for joining and build up welding of materials have tendency to cracking due to their high tensile and impact strength .

Welding Positions :



Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
300746	3.20 x 350	1/8 x 14"	100-160	5	5100
300747	4.00 x 350	5/32 x 14"	140-200	5	7600

Approvals :

CE, GOST-R

GeKaTec®

UNIBASE 660 HD

Standards :

TS EN ISO 3581 - A	:	E Z 18 9 Mn Mo R 53
EN ISO 3581 - A	:	E Z 18 9 Mn Mo R 53
AWS A5.4	:	~E 307-26

Mechanical Properties :

Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)	
		As Welded	After Working
600 - 700	min. 40	200	410

Features and Applications :

* Rebuilding or buffering before hardsurfacing and surfacing of rails and railway equipments.
* Welding 12-14 % Manganese steels, armour and hard to weld steels.
* In cement industry for welding buffer layer of mill hammers, rollers, and friction plates of crushers etc.
* Rutile type austenitic electrode containing 18 Cr / 8 Ni with manganese.
* The corrosion resistant weld metal is also resistant to impact, pressure, cavitation and thermal shocks.
* Weld metal hardness increases by cold forming and work hardening.

Welding Positions :

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
300790	3.20 x 350	1/8 x 14"	90-130	5	5050
300791	4.00 x 350	5/32 x 14"	130-160	5	7500
300792	5.00 x 350	3/16 x 14"	160-190	5	11500

Approvals :

CE, GOST-R

GeKaTec®

410 HD

Standards :

TS EN ISO 3581 - A	:	E Z 13 B 52
EN ISO 3581 - A	:	E Z 13 B 52
AWS A5.4	:	E 410 - 25 (mod.)

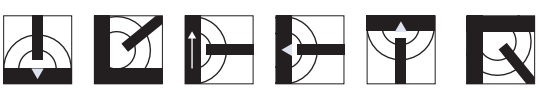
Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)
740	950 - 1100	min. 15

Features and Applications :

* The application, of cavitation resistancy, build up welding on parts working in water, stream and seawater, Hydroelectric power plants and turbine blades,propellers parts.
* Basic type high recovery electrode for use in joint welding and build up welding application to 12-14 % Cr ferritic-martensitic stainless steel and cast steels.
* It is for build up welding on impermeable surfaces of gas, water and stream armatures of unalloyed and low alloyed steels for service temperatures up to 450^o C.

Welding Positions :



Current Type :

D.C.(+) / AC

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
304853	2.50 x 350	3/32 x 14”	60-90	4	2510
300808	3.20 x 350	1/8 x 14”	90-120	5	3700
300809	4.00 x 350	5/32 x 14”	110-160	5	5540
304753	5.00 x 350	3/16 x 14”	150-190	5	6970

Approvals :

CE, GOST-R

GeKaTec®

FAZER 300

Standards :

TS EN 14700	:	E Fe 1
EN 14700	:	E Fe 1
DIN 8555	:	E 1 - UM - 300

Mechanical Properties :

Hardness (HB)
325 - 350

Features and Applications :

* Weld metal has high machinability and high efficiency.
* Risk of cracking is very low.
* Used in joining of high tensile strength steels, some parts exposed to impact and abraison as a buffering and filler electrode.
* Rails, switches and crossings, ladles, gear parts, crane wheels are typical application areas of this electrode.

Welding Positions :

Flux Cored Wire :

GeKa HARDCOR 300 G
GeKa HARDCOR 300 O

Current Type :

D.C.(+) / AC

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
300766	3.20 x 350	1/8 x 14”	100-140	5	3645
300767	4.00 x 350	5/32 x 14”	140-180	5	5300

Approvals :

CE, GOST-R

GeKaTec®

FAZER 17 MnCr

Standards :

TS EN 14700	:	E Fe 9
EN 14700	:	E Fe 9
DIN 8555	:	E 7-UM-250KP

Mechanical Properties :

Hardness (HB)	
As Welded	After Working
250	550

Features and Applications :

* Suitability for uses in hardfacing of high-manganese steels.
* Most common applications in hardfacing of various equipment parts that are exposed to deep impacts, pressure and wearing in cement, mining and earth-moving industries.
* High resistance to impact and to friction.
* Increasing hardness of weld metal after operations including its exposure to impact and friction.
* High toughness.
* Requirement of electrode holding in perpendicular direction to work piece, by maintaining short and uniformly-exposed arc.
* Requirement of two-pass buffer-layering with the electrode GeKaTek 660 HD for providing good connection and crack protection in case of thick-layer hardfacing operations.
* Requirement of re-drying at 300 °C for 2 hours.

Welding Positions :

Flux Cored Wire :

GeKa HARDCOR 660 O

Current Type :

D.C.(+) / AC

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
302594	3.20 x 350	1/8 x 14”	110-140	5	4790
302596	4.00 x 350	5/32 x 14”	150-180	5	7320

Approvals :

CE, GOST-R

GeKaTec®

KAVTAM

Mechanical Properties :

Hardness As Welded	After Working
250 - 300 (HB)	400 - 450 (HB)

Features and Applications :

* Kavtam is Cobalt, Chromium, Manganese and Silicon alloyed manual stick electrode and used for hardfacing work pieces which are subjects to severe cavitation and erosion. The weld deposit is also resistant to corrosion, cavitation and erosion at high temperatures. Main applications are hardfacing of hydraulic turbines, pumps, valves, casings, rotors.
The hardness after welding is 250-300HB and after workhardened is approximately 450HB.
Re-dry for 2 hours at 300 °C.

Welding Positions :

Current Type :

D.C.(+) / AC

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g /100 pcs
304457	3.20 x 350	1/8 x 14”	90 - 130	4930

Approvals :

GOST-R

GeKaTec®

FAZER 55 HD

Standards :

TS EN 14700	:	E Fe 7
EN 14700	:	E Fe 7
DIN 8555	:	E 6-UM-55 GRP

Mechanical Properties :

Hardness (HRC)
55

Features and Applications :

* Applications include shear blades,moulds and related parts for pressure casting, rollers, crusher jaws and other parts which are required to resist the wear under high impact with abrasion, also excavator digger parts made of carbon steel with unalloyed core, all types of alloyed steels or manganese hardened steels.
* Heavy coated high alloy hardfacing electrode for parts requiring extremely hard surface.
* Excellent resistance to wear caused by high pressure shocks, abrasion and cracking.
* It has high deposition rate, easy striking and contact weldability and allows super imposed multi-pass coatings.

Welding Positions :

Flux Cored Wire :

GeKa HARDCOR 600 G

MAG Wire :

GeKaTec 600 G

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
304121	2.50 x 350	3/32 x 14”	90 -120	5	2800
300816	3.20 x 350	1/8 x 14”	125-160	5	4400
300817	4.00 x 350	5/32 x 14”	160-220	5	7000
300818	5.00 x 350	3/16 x 14”	220-250	5	11600

Approvals :

GOST-R, CE

GeKaTec®

FAZER 63 HD

Standards :

TS EN 14700	:	E Z Fe 14
EN 14700	:	E Z Fe 14
AWS A5.13	:	~E FeCr-A8
DIN 8555	:	E 10-UM-60 GRZ

Mechanical Properties :

Hardness (HRC)
62 - 64

Features and Applications :

*Application includes dredger bucket edges , mixer blades,sand pumps,conveyor screws and chains , hammers ,crushers,guide plates used in brick and earth,mine,cement industries.

*Required hardness obtainable in single run.

*Heavy coted electrode with high deposition rate particularly for hardfacing parts subjected to heavy abrasion together with medium impact. It is used for hardfacing of all unalloyed carbon steels and 12-14% manganese steels .

Welding Positions :

Flux Cored Wire :

GeKa HARDCOR 63 O

Current Type :

D.C.(+/-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
300769	3.20 x 350	1/8 x 14"	100 - 130	5	4980
300770	4.00 x 350	5/32 x 14"	130 - 160	5	7710
300771	5.00 x 350	3/16 x 14"	160 - 190	5	11970

Approvals :

GOST-R

GeKaTec®

FAZER 65 B

Standards :

TS EN 14700	:	E Fe 16
EN 14700	:	E Fe 16
DIN 8555	:	E 10-UM-65 R

Mechanical Properties :

Hardness (HRC)	
Pass 1	Pass 2
61 - 65	64 - 68

Features and Applications :

* A special kind of electrode basically containing Chromium-boron carbide alloy. * Applicability in hardfacing of parts that are exports to wearing in mines or quarries, in soil or cement industries,and in similar fields. * Uses in hardfacing of all wear-resistant parts such as buckets or their teeth of heavy construction equipments, drill bits, twists used in brickworks, mud pumps, mixer blades, agricultural machines, crusher jaws and rolls as well as springs. * Very high resistance to wear. * High fusibility. * High recovery of weld metal. * Machinability by grinding only. * Recommended buffer layering through a more basic type of electrode or through the GeKaTek electrode 660 HD. * Holding required in perpendicular direction to that of the welding work. * Limited operation of hardfacing through up to 2 layers, due to possibility of transverse cracking. * Requirement of re-drying at temperatures of 300-350 °C for 2 hours.

Welding Positions :

Current Type :

D.C.(+) / AC

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
302586	3.20 x 350	1/8 x 14”	110 - 150	5	5200
302435	4.00 x 350	5/32 x 14”	140 - 200	5	7160

Approvals :

GOST-R, CE

GeKaTec®

COBALT 21

Standards :

TS EN 14700 :	E Co 1
DIN 8555	: E 20-UM-300-CKTL

Chemical Composition of Weld Metal- % (Typical) :

C	Mo	Co	Cr	Ni
0.3	5.6	Rest	26.0	3.0

Mechanical Properties :

Hardness (HRC)	
After Welding	After Working
30 - 32	45

Features and Applications :

* It is used for hardfacing of materials subject to impact, pressure, abrassion, corrosion and high temperature or combination of these.
* Die molds, extruder, screws, hot cutting and working boil steels, shafts, pumps, valves and seats.
* Weld metal has work hardening ability under impact and friction.
* Before welding, it must be buffering with 307 and 309 electrodes.

Welding Positions :

Current Type :

D.C.(+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
305214	3.20 x 350	1/8 x 14”	90 - 120	5	3500

Approvals :

GOST-R, CE

GeKaTec®

COBALT 6

Standards :

TS EN 14700	:	E Co 2
EN 14700	:	E Co 2
AWS A5.13	:	E CoCr A
DIN 8555	:	E 20-UM-45 CTZ

Chemical Composition of Weld Metal- % (Typical) :

C	Cr	W	Co
1.1	28	4	rest

Mechanical Properties :

Hardness (HRC)
42

Features and Applications :

* Valve shutters and caps, wood working tools, saw chains and slide ways, hot shear blades, pump components, hot pressing tools, valve seats, ingot tong ends, conveyor screws, for chemical and food processing industries.
* GEKATEC Cobalt6 is a versatile cobalt containing alloy with high mechanical impact and high temperature resistance.
* It is used primarily on workpieces exposed to high alternating temperatures and corrosion.
* GEKATEC Cobalt6 deposit is especially suited for carbon steels, stainless steel, nickel, monel and manganese steels.

Welding Positions :

Flux Cored Wire :

GeKa HARDCOR COBALT 6

TIG Wire :

GeKaTec COBALT 6 TIG

Current Type :

D.C.(+) / AC

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
300761	3.20 x 350	1/8 x 14"	90 - 120	5	3500
300762	4.00 x 350	5/32 x 14"	135 - 160	5	5200

Approvals :

GOST-R, CE

GeKaTec®

COBALT 12

Standards :

TS EN 14700	:	E Co 3
EN 14700	:	E Co 3
AWS A5.13	:	E CoCr B
DIN 8555	:	E 20-UM-50 CTZ

Chemical Composition of Weld Metal- % (Typical) :

C	Cr	W	Co
1.4	29	8	Rest

Mechanical Properties :

Hardness (HRC)
48 - 52

Features and Applications :

* Include tools to cut paper, cardboard, floor covering, roofing, wood, screw conveyors for chemical and food industries.
* Electrode with Co-Cr-W alloyed core wire.
* Hard surfacing of parts subjected to either the single or combained effect of heavy to metal wear abraison, high temparatures (ranging from 500 to 800 °C occasionally up to 1100 °C) and corrosive environments.
* 307 and 309 stainless steel electrode can be used as buffering.

Welding Positions :

Flux Cored Wire :

GeKa HARDCOR COBALT 12

TIG Wire :

GeKaTec COBALT 12 TIG

Current Type :

D.C.(+) / AC

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
300758	3.20 x 350	1/8 x 14"	90 - 120	5	3530
302254	4.00 x 350	5/32 x 14"	130 - 160	5	5390

Approvals :

CE, GOST-R

GeKaTec®

COBALT 1

Standards :

TS EN 14700	:	E Co 3
EN 14700	:	E Co 3
AWS A5.13	:	E CoCr C
DIN 8555	:	E 20-UM-55 CTZ

Chemical Composition of Weld Metal- % (Typical) :

C	Cr	W	Co
2.1	31	13	rest

Mechanical Properties :

Hardness (HRC)
50 - 57

Features and Applications :

* GEKATEC COBALT 1 is cobalt based hard facing electrode.
* It is used for hard facing of valves and fittings which requires resistance to high temperature, pressure and corrosion, sliding stressing metal-to-metal and is recommended in welding of cutter tools, screw conveyors, wear rings and guide rails.

Welding Positions :

Flux Cored Wire :

GeKa HARDCOR COBALT 1

TIG Wire :

GeKaTec COBALT 1 TIG

Current Type :

D.C.(+) / AC

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
302251	3.20 x 350	1/8 x 14"	90 - 120	5	3660
302252	4.00 x 350	5/32 x 14"	130 - 160	5	5200

Approvals :

CE, GOST-R

GeKaTec®

THERMO DUR

Standards :

TS EN 14700	:	E Z Fe 8
EN 14700	:	E Z Fe 8
DIN 8555	:	E 3-UM-50 GTZ

Mechanical Properties :

Hardness (HRC)	
As Welded	After Heat Treatment
45 - 50	48 - 54

Features and Applications :

* Include spining rotors, for glass-wool production, draw plates, stamping trimming dies, klin parts, pump shafts, chucks etc.
* Manuel electrode for anti-wear protective coatings on tool-steel parts working under very hot or cold conditions.
* Electrode with Co, Cr, Mo alloys gives excellent metal / metal friction resistance at high temperatures.
* Ideal for use as surfacing with no risk of cracking.

Welding Positions :

Flux Cored Wire :

GeKa HARDCOR 50 G

Current Type :

D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
300782	3.20 x 250	3/32 x 10"	75	4	1600
300783	4.00 x 350	1/8 x 14"	110	5	3680

Approvals :

CE, GOST-R

GeKaTec®

THERMO WELD

Standards :

TS EN 14700	:	E Ni 2
EN 14700	:	E Ni 2
DIN 8555	:	~E 23-UM-250 CKPZ

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Hardness		
		As Welded	After Heating 800°C/4h	After Working
min. 660	min. 740	270 - 320 HB	380 - 450 HB	~550 HV

Features and Applications :

* Dies, mandrels, rad for hot extrusion of profiles, continious casting guide tables, feed rolls, blades for hot shearing, furnace components, rolling vil inlet guides.
* Electrode highly alloyed with chromium, cobalt, nickel, molybdenum and tungsten.
* It is used for anti-wear protective coatings on low and high alloy steels, nickel alloys and refactory steels.
* It gives high strength and high creep resistance and temperatures up to 1200 °C also resistance to thermal cycling shocks and abraison.
* It has work hardenable deposit which is high mechanical pressures and very high resistance to strong oxidising agents, mixture of acids, chlorinated chemicals.

Welding Positions :

Current Type :

D.C.(+) / AC

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
300788	3.20 x 300	1/8 x 12"	120 - 170	5	3600

Approvals :

CE, GOST-R

GeKaTec®

THERMO ROLL

Standards :

TS EN 14700	:	E Fe 7
EN 14700	:	E Fe 7
DIN 8555	:	E5-UM-400

Mechanical Properties %(Typical) :

Weld Metal Hardness (HB)
440 - 460

Features and Applications :

* Rutile type electrode with high recovery.
* Welding for stainless of similar chemical compositions or cast steels having Cr of ~12%.
* Used of surfacing of carbon steels to resist corrosion, erosion and abrasion.
* Used in Chemical Industry, Steel Industry and also at continuous casting rolls and surfacing steel mill rolls.
* A specified hardness value can be obtained in one or two passes depending on carbon content of the base material.

Welding Positions :

Current Type :

D.C. (+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)	Welding Current (A)	Weight g/100 pcs
306136	3.20 x 350	100 - 140	4175
306137	4.00 x 350	140 - 180	6430
306138	4.00 x 450	140 - 180	8750

Approvals :

GeKaTec®

THERMO RESIST

Standards :

TS EN 14700	:	E Z Fe 8
EN 14700	:	E Z Fe 8
DIN 8555	:	E3-UM-40 PT

Mechanical Properties :

Hardness (HB)
~400

Features and Applications :

* Resistant to heat as well as to abraison, due to its technical features also resistant to high temperature and pressure.
* This especially used for the worn out parts of tool steels of surfacing jobs.
* Main application fields are hardfacing of hot cutting blades, hammers, grinders, forming moulds, casting moulds, bravely and cylinder surfaces.
* Also provides economical solutions as it is used on any kind of steel for surfacing without the use of a special tool steel.
* Basic coated, chrome-molly alloyed, calm arc, synthetic electrode with deep penetration.
* Weld metal efficency is - 120%.
* It is recommended that the base metal should be pre-heated up to 400 °C and after welding is completed.
* It should be cooled down slowly.
* Electrode should be baked for 2 hours at 300°C temperature.

Welding Positions :

MIG Wire :

GeKaTec TOOL 40 SG

Current Type :

D.C.(+) / AC

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
301201	2.50 x 350	3/32 x 14"	60 - 90	5	2100
300785	3.20 x 350	1/8 x 14"	100 - 140	5	3760
300786	4.00 x 350	5/32 x 14"	130 - 180	5	5600

Approvals :

CE, GOST-R

GeKaTec®

TOOL 58 S

Standards :

TS EN 14700	:	E Z Fe 8
EN 14700	:	E Z Fe 8
DIN 8555	:	E 3-UM-60 ST

Mechanical Properties :

Hardness (after working) (HRC)
58

Features and Applications :

* A special kind of rutile-coated electrode for hardfacing of hot- and cold-work tool steels.
* Suitability for uses in hardfacing of hot- or cold-work steels, edges of cutting dies, blades of hot-shearing machines, punching tools, rolls and impact punchs, machinery tools for die-casting; at temperatures up to 550 °C.
* Applicability in hardfacing of steel materials such as ST50, ST60, ST70 as well as in re-manufacturing of tools.
* Requirements of pre-annealing at 400 °C of the base metal, welding through hammering, not exceeding the pre-annealing temperature by welding, and of very slow cooling of weld metal.
* Variability of weld metal's hardness through heat treatment.
* Requirement of re-drying of the electrode at 300 °C for 2 hours.

Welding Positions :

MIG Wire :

GeKaTec TOOL 55 SG

Current Type :

D.C.(-) / AC

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
305336	2.50 x 350	3/32 x 14"	50 - 70	4	2070
302339	3.20 x 350	1/8 x 14"	90 - 120	5	3270

Approvals :

CE, GOST-R

GeKaTec®

TOOL 60

Standards :

TS EN 14700	:	E Fe 4
EN 14700	:	E Fe 4
AWS A5.13	:	E Fe 5-A
DIN 8555	:	E 4-UM-60 S

Mechanical Properties :

Hardness (after working) (HRC)
60 - 62

Features and Applications :

* The weld deposit is the similar to the high speed steel so it is used for reconditioning the surface and cutting edges of hot working tool steels and tools made from unalloyed steels.
* Main applications are the tools exposed to heat, adhesion and impact wears.
* It is recommended that preheating to 400 °C before the welding of high carbon steels and tool steels.
* Re-dry for 2 hours at 300-350 °C.

Welding Positions :

MIG Wire :

GeKaTec TOOL 60 SG

Current Type :

D.C.(+) / AC

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)	Weight g /100 pcs
302447	3.20 x 350	1/8 x 14''	90 - 120	5	3290

Approvals :

CE, GOST-R

GeKaTec®

TOOL 66 - KLP

Standards :

TS EN 14700	:	E Fe 7
EN 14700	:	E Fe 7
DIN 8555	:	E5-UM-400

Composition of Weld Metal %(Typical):

C	Mo	Cr
0.35	1.20	7.0

Ni	W
0.60	7.20

Mechanical Properties %(Typical) :

Hardness (as welded) (HRC)
54 - 57

Features and Applications :

* For hot work tool steels with high welding efficiency.
* Especially used in repair welding of molds and hot work tool steels.
* No cracking in the weld metal after welding.
* Re-drying: 300 °C / 2h.

Welding Positions :

Current Type :

D.C. (+)
A.C.

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Weight g/100 pcs
306193	5.00 x 450		180 - 240	12600

Approvals :

GeKaTec®

Cu-WELD

Standards :

AWS A5.6	:	E Cu

Chemical Composition of Weld Metal-% (Typical) :

Cu
min.99

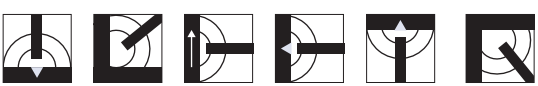
Mechanical Properties :

Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
min. 200	min. 25	55

Features and Applications :

* Electrode made of pure copper.
* Uses in joint-welding and surfacing operations on pure copper or on copper alloys.
* Applicability in joint-welding of boilers, heat exchangers, or, of copper tubes, copper busbars used in electrotechnics, copper busbars as well as in copper surfacing on steel materials.
* Requirement of applying as high current as possible in joint-welding.
* Pre-heating requirement of base materials of copper or copper alloys at temperatures of 400-450 °C for all welding applications on them.

Welding Positions :



Current Type :

D.C.(+) / AC

MIG Wire :
GeKa R1 L

TIG Wire :
GeKaTec S1 L

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)
602469	3.20 x 350	1/8 x 14”	90 - 120	5
605238	4.00 x 350	5/32 x 14”	120 - 150	5

Approvals :
GOST-R

GeKaTec®

BRONZE

Standards :

AWS A5.6	:	E CuSn - C

Chemical Composition of Weld Metal- % (Typical) :

Sn	Cu
7.0-9.0	rest

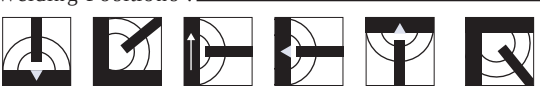
Mechanical Properties :

Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
min. 420	min. 25	155

Features and Applications :

* Tin bronze electrode for coating and repairing parts made of copper, bronze, brass and for joining of these to steels, cast iron, nickel, nickel alloys.
* Good resistance to corrosion, particullary attact by acetone and dry ammoniac, industrial atmospheres and salty air, seawater and acids.
* It is also resistant to metal / metal friction.
* Applications include joining welding of machinery components made of copper and its alloys, steels and cost steels a grey cast iron, such as piston arms, sprockets, guides, turbine and centrifugal, blades, fans, ship's screw propellers, motor collector and valve seats, for the application of braze surfacing on this materials.

Welding Positions :



Current Type :

D.C.(+) / AC

MIG Wire :
GeKa R4 L

TIG Wire :
GeKaTec S4 L

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)
602467	3.20 x 350	1/8 x 14''	80 - 120	5
602468	4.00 x 350	5/32 x 14''	120 - 150	5

Approvals :
GOST-R

GeKaTec®

ALBRONZE

Standards :

AWS A5.6 : E CuAl - A2 (E CuAl8)

Chemical Composition of Weld Metal- % (Typical) :

Fe	Al	Cu
0.5-5.0	6.5-9.5	rest

Mechanical Properties :

Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
min. 650	min. 20	205

Features and Applications :

* It is used for safely repairs all grades of aluminum bronzes and overlays on cast irons, steels and copper which are subject to corrosion, cavitation, erosion, and metal to metal wears.
* Joining and surfacing parts subject to service in marine environments and seawater.

Welding Positions :

Current Type :

D.C.(+) / AC

MIG Wire :
GeKa R4 AL

TIG Wire :
GeKaTec S4 AL

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)
604895	3.20 x 350	1/8 x 14"	70-110	5

Approvals :
GOST-R

GeKaTec®

ALUWELD-Si

Standards :

TS 9604	:	EL-AlSi 5
AWS A5.3	:	E 4043

Chemical Composition of Weld Metal- % (Typical) :

Si	Al
4.5-5.5	rest

Mechanical Properties :

Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
160 - 190	min. 10	50

Features and Applications :

*Include also engine blocks , gear cases , engine gear box unit , miscellaneous components in light alloys , stroge tanks , containers , vessels , repair works on various kind of aluminium materials .

* Manuel welding electrode recommended for production and maintenance applications including repair of cracks , casting defects and building up sections also broken parts . Suitable for made of aluminium applications. Before welding on thick section preheat at about 200 C is recommended .

Welding Positions :

Current Type :

D.C.(+)

MIG Wire :

GeKa AlSi 5

TIG Wire :

GeKa AlSi 5 TIG

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)
602164	2.50 x 350	3/32 x 14"	50 - 80	2
637929	3.20 x 350	1/8 x 14"	70 - 100	2
604870	4.00 x 350	5/32 x 14"	90 - 130	2

Approvals :

GOST-R

GeKaTec®

ALUWELD 12 Si

Standards :

TS 9604	:	EL-AlSi 12

Chemical Composition of Weld Metal- % (Typical) :

Si	Al
11.0-13.5	rest

Mechanical Properties :

Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
160 - 200	5 - 10	55 - 60

Features and Applications :

Low-heat-input manual electrode for joining cast aluminium alloys, plus repair and maintenance of sheet aluminium and aluminium casting, including rebuilding, filling cracks, breaks, shrink holes and missing bits.

Excellent welding properties, good arc striking, clean flat flow, dense poreless seams. Thanks to these caharacteristics it enables perfect joining on plates up to 2 mm thick. The electrode is hardly hygroscopic and therefore stores wel..

Welding Positions :

Current Type :

D.C.(+)

MIG Wire :

GeKa AlSi 12

TIG Wire :

GeKa AlSi 12 TIG

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)
600056	2.50 x 350	3/32 x 14''	70 - 80	2
600057	3.20 x 350	1/8 x 14''	90 - 100	2
600058	4.00 x 350	5/32 x 14''	110 - 130	2

Approvals :

GOST-R

GeKaTec®

ALUWELD 99 Al

Standards :

TS 9604	:	EL-AI 99.5
AWS A5.3	:	E 1100

Mechanical Properties :

Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
70 - 100	min. 30	30 - 80

Features and Applications :

* Include pipes, vessels, hoppers, vats, containers heat exchangers, air conditioning, decorative panels, slideways where electrolytic treatment or anodisation is foreseen.
* Excellent welding properties, excellent resistance to salt-water and industrial corrosion, good arc striking, clean flat flow, dense poreless seams.
* Low-heat-input manual electrode for joining throught aluminium alloys.
* Electrode with special coating for joining and repairing of pure aluminium, Al-mg-mn, Al-mg alloys and aluminium forging parts.

Welding Positions :

Current Type :

D.C.(+)

MIG Wire :
GeKa Al 99.5

TIG Wire :
GeKa Al 99.5 TIG

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Welding Current (A)	Package Weight (kg)
600059	2.50 x 350	3/32 x 14"	60 - 80	2
600060	3.20 x 350	1/8 x 14"	80 - 100	2
600061	4.00 x 350	5/32 x 14"	110 - 130	2

Approvals :
GOST-R

GeKaTec®

Ni SG

Standards :

AWS A5.14	:	ER - Ni 1

Chemical Composition of Welding Wire- % (Typical) :

Ni	C	Si	Mn	Ti
rest	0.02	0.4	0.4	3.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
min. 300	min. 500	min. 250 J	min. 30

Typical Base Material Grades :

* 2.4061, 2.4116, 2.4170 as well as copper and its combinations with steel (casting)s

Features and Applications :

* Use in various applications of joint-welding of the materials Nikel 200/201 or stainless steels. *
Suitability for use in welding of carbon steels or of high-alloyed nickel or nickel-copper alloys. .
* Required use of Ar (I1) as shielding gas in TIG welding.

Welding Positions :

Current Type :

TIG D.C.(-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (kg)
606447	1.20	0.047	15
603764	2.4 x 1000	3/32 x 39"	5

Approvals :

GOST-R

GeKaTec®

NiCu 30 SG

Standards :

TS EN ISO 18274	:	SG-NiCu 30 Mn 3 Ti(SNi4060)
EN ISO 18274	:	SNi 4060 (NiCu 30 Mn 3 Ti)
AWS A5.14	:	ER NiCu 7

Chemical Composition of Welding Wire- % (Typical) :

Al	Si	Cu	C
1.25	1.25	rest	0.15

Ni	Mn	Fe	Ti
65	3.5	2.5	2.0

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/+20°C)	Elongation (L_o=5d_o)(%)
300	500	120 J	35

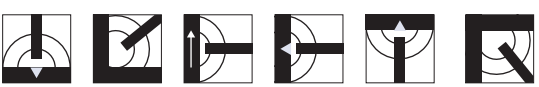
Typical Base Material Grades :

* NiCu 30 Fe (2.4360) - NiCu 30 Al (2.4375) - UNS N04400, N05500 - Alloy 400 ASTM B 127, B 165,MONEL 400, MONEL 405,2.4377

Features and Applications :

* It is used for welding of Nickel Copper alloys to steels and copper alloys to steel, gray iron to steels and stainless steels.
* Weld metal has perfect staimless properties, used in sea water applications, chemical and petrochemical industry and ship equipments.
* Shielding Gas : MIG : Argon / TIG : Argon

Welding Positions :



Current Type :

MIG D.C. (+)
TIG D.C. (-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (kg)
606448	1.00	0.040”	15
602774	1.20	0.047”	15
603765	2.4 x 1000	3/32 x 39’’	5

Approvals :

GOST-R

GeKaTec®

625 SG

Standards :

TS EN ISO 18274	:	SNi 6625 (NiCr 22 Mo 9 Nb)
EN ISO 18274	:	SNi 6625 (NiCr 22 Mo 9 Nb)
AWS A5.14	:	ER NiCrMo 3

Chemical Composition of Welding Wire-Rod % (Typical) :

Ni	C	Cr	Mn
rest	0.02	22.0	0.20

Fe	Mo	Nb
1.0	9.0	3.50

Mechanical Properties :

Yield Strength (N/mm²)	Tensile Strength (N/mm²)	Impact Strength (ISO-V/+20°C)	Impact Strength (ISO-V/-196°C)	Elongation (L_o=5d_o)(%)
540	800	140 J	75 J	38

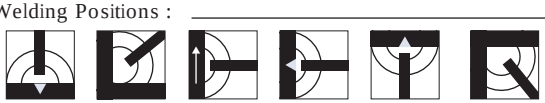
Typical Base Material Grades :

* 1.4583 X10CrNiMoNb18-12, 1.4876 X10NiCrAlTi32-20,1.4529 X1NiCrMoCuN25-20-7, X2CrNiMoCuN20-18-6, 2.4641 NiCr 21 Mo 6 Cu, 2.4856 NiCr 22 Mo 9 Nb, 2.4858 NiCr 21 Mo, 2.4816 NiCr 15 Fe
Welding of Joining : P265GH, P285NH, P295GH, 16Mo3, S355N, X8Ni9 (Inconel 600), (Inconel 625), (Incoloy 800)

Features and Applications :

* Applicability in joint welding of steels with high Mo-contents to steels with Ni-based alloy steels, joint welding of different types of steels, and in welding of low-alloyed problematic steels * Suitability for use in manufacture processes of pressure vessels with service temperatures between -196 °C and +550 °C * High resistance to creep, to high temperatures, and to low temperatures (cryogenic applications) * Resistance to formation of oxide layers at temperatures up to 1200 °C * Loss of elasticity at temperatures between 600-800 °C.
* High strength against hot cracking. * General tendency towards diffusion of carbon at high temperatures or towards heat treatments of different materials. * Very high resistance to stress corrosion and to pitting corrosion (PREN 52). * Resistance to thermal shocks * Austenitic-structured stainless material with low coefficient of thermal expansion. * Very excellent performance in TIG welding. * Use of Ar or Ar+He mix as shielding gas.

Welding Positions :



Current Type :

MIG : D.C. (+)
TIG : D.C. (-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (kg)
603652	1.00	0.040”	15
603653	1.20	0.047”	15
603654	1.6 x 1000	1/16 x 39”	5
603655	2.0 x 1000	5/64 x 39”	5
603656	2.4 x 1000	3/32 x 39”	5

Approvals :

GOST-R

GeKaTec®

7015 SG

Standards :

TS EN ISO 18274	:	S Ni 6082
EN ISO 18274	:	S Ni 6082
AWS A5.14	:	ER NiCr-3

Chemical Composition of Welding Wire-Rod % (Typical) :

Ni	C	Cr
rest	0.02	20.0

Mn	Fe	Nb
3.0	4.0	2.5

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/+20°C)	Elongation ($L_o=5d_o$)(%)
400	650	150 J	40

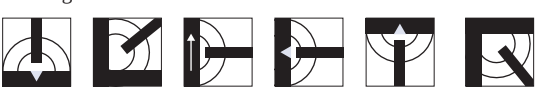
Typical Base Material Grades :

* 2.4816 - 2.4817 - 2.4806 - Alloy 600 - 1.4876 - 1.5662 - 1.5680,2.4951,2.4961,1.4981,1.4985

Features and Applications :

* Especially in welding of Nickel based alloys high temperature and creep resistant steels, problematic steels and dissimilar joints.
* Weld metal mechanical properties are resistant to heat treating.
*Shielding gas :Ar{MIG and TIG}

Welding Positions :



Current Type :

MIG D.C. (+)
TIG D.C. (-)

Welding Electrode :

GeKaTec ANTI-CRACK 7015

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (kg)
603106	1.00	0.040”	15
603093	1.20	0.047”	15
605054	1.6 x 1000	1/16 x 39”	5
605055	2.0 x 1000	5/64 x 39”	5
605056	2.4 x 1000	3/32 x 39”	5

Approvals :

GOST-R

GeKaTec®

NiFe SG

Standards :

TS 9463 EN ISO 1071	:	S C NiFe-1
EN ISO 1071	:	S C NiFe-1

Chemical Composition of Welding Wire- % (Typical) :

C	Cu	Mn
0.05	0.35	0.60

Fe	Ni
44-46.0	min. 53.0

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Hardness (HB)	Elongation ($L_o=5d_o$)(%)
min. 290	min. 425	200	min. 8

Features and Applications :

* NiFe SG MIG-TIG wire is used for joining and build-up of all types of cast irons (gray, tempered, sfero) and cast iron to non alloyed and high alloyed steels, copper and nickel based alloys.
* Especially it is suitable for building up cast mouldsin automotive industry and iron and steel sector.
* Machinability is easy and weld metal surface must be clean and pre-heat at 150-250°C.
* Shielding gas : Ar (MIG and TIG)

Welding Positions :

Current Type :

MIG D.C. (+)
TIG D.C. (-)

Welding Electrode :

GeKaTec Fe-CAST
GeKaTec Fe-CAST HD

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (kg)
602466	1.20	0.047”	15
602782	1.6 x 1000	1/16 x 39”	5
602783	2.0 x 1000	5/64 x 39”	5
603766	2.4 x 1000	3/32 x 39”	5

Approvals :

GOST-R, CE

GeKaTec®

Ti SG

Standards :

AWS A5.16	:	ER Ti 2

Chemical Composition of Welding Wire- % (Typical) :

C	Fe	H	Ti
<0.03	<0.025	<0.008	rest

Mechanical Properties :

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Hardness (HB)	Elongation ($L_o=5d_o$)(%)
275	395 - 540	180	20

Features and Applications :

* Suitability for uses in TIG welding of pure titanium and of titanium alloys.
* Usability with red-coloured tungsten tips containing thorium alloy in the ratio of 2%, according to TS EN ISO 6848.
* Medium-strength wire with high percentage of elongation.
* Requirement of pure Ar as shielding gas in TIG welding.

Welding Positions :

Current Type :

TIG D.C.(-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight(kg)	Package Type
603341	2.0 x 1000	5/64 x 39"	5	Carton Box

Approvals :

GOST-R

GeKaTec®

250 G

Standards :

DIN 8555	: MSG 1-GZ-250

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Cr	Mo
0.09	0.55	1.00	3.00	1.00

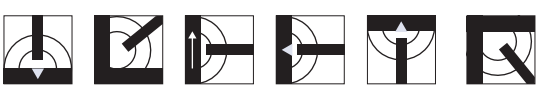
Mechanical Properties :

Hardness (After Welding) HRC
22 - 27

Features and Applications :

* Cr-Mo alloyed steels (1.5%-0.5%) resistant to high temperature, wear, pressure and shocks.
* Good resistance to cracking and to the attack of sulphures agents.
* Guide rollers, excavators, screw conveyers, gears, moulds, rolling surfaces, etc.
* Before the application of welding, it is recommended pre-heating of 300°C.
* If necessary, post-weld stress relief should be made at 690°C.
* Shielding Gas : Ar+CO_2 mix gases can be used.

Welding Positions :



Current Type :

MAG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
606765	1.20	0.047"	15	BS 300 Spool

Approvals :

GeKaTec®

350 G

Standards :

DIN 8555	: MSG 5-GZ-350

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Cr	Mo
0.50	0.55	0.90	6.00	0.90

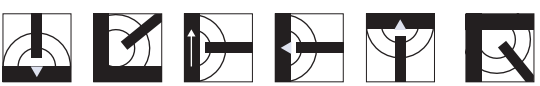
Mechanical Properties :

Hardness (After Welding) HRC
36 - 40

Features and Applications :

* Cr-Mo alloyed steels (2.5%-1.0%) resistant to high temperature, wear, pressure and shocks.
* Good resistance to cracking and to the attack of sulphures agents.
* Guide rollers, excavators, screw conveyers, gears, moulds, rolling surfaces, etc.
* Before the application of welding, it is recommended pre-heating of 200°C.
* If necessary, post-weld stress relief should be made at 660°C.
* Shielding Gas : Ar+CO_2 mix gases can be used.

Welding Positions :



Current Type :

MAG D.C.(+)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
606758	1.20	0.047"	15	BS 300 Spool

Approvals :

GeKaTec®

500 G

Standards :

EN 14700	:	S Fe 2
DIN 8555	:	MSG / WSG 2-GZ-50

Chemical Composition of Welding Wire-
% (Typical) :

C	Si	Mn	Cr	Ti
1.10	0.50	1.90	1.80	0.20

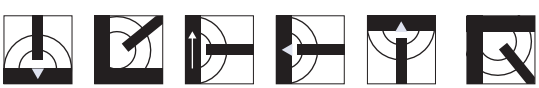
Mechanical Properties :

Hardness (After Welding) HRC
47 - 52

Features and Applications :

* Excellent resistance to wear and shocks.
* Parts of excavators, mordan bucket theeth, drilling and percussion bits, shaping machines, screw conveyors, crushers, moulds, guide rollers, etc.
* Before the application of welding, it is recommended pre-heating of 300°C.
* If necessary, post-weld stress relief should be made at 690°C.
* Shielding Gas : MAG; Ar+CO_2 mix gases & TIG ; % 100 Ar gas can be used.

Welding Positions :



Current Type :

MAG D.C.(+)
TIG D.C. (-)

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Weight (Kg)	Package Type
606767	1.20	0.047"	15	BS 300 Spool
606770	2.00 x 1.000	5/64 x 39"	5	Carton Box

Approvals :

CE

GeKaTec®

600 G

Standards :

TS EN 14700	:	S Fe 8
EN 14700	:	S Fe 8
DIN 8555	:	MSG 6 GZ 60

Chemical Composition of Welding Wire- % (Typical) :

C	Mn	Cr	Si
0.45	0.040	9.20	3.0

Mechanical Properties :

Hardness			
As Welded	Softening (800°C)	1000°C - Oil	Single Pass in unalloyed steel
55 - 60 HRC	~250 HB	62 HRC	~53 HRC

Features and Applications :

* It is used in welding of alloyed and non alloyed metal parts of mining and earth machines, pulsed run drilling and crushing machines.
* Build up cutting tool edges and hard manganese steels cover pass.
* It can be machined by grinding.
* Shielding gas : MAG; Ar+CO_2 mix gases and TIG; %100 Ar gas can be used.

Welding Positions :

Current Type :
MAG D.C. (+)
TIG D.C. (-)

Welding Electrode :
GeKaTec FAZER 55 HD

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Weight (kg)
606759	1.00	0.040"	15
638308	1.20	0.047"	15
606768	2.0 x 1000	5/64 x 39"	5
606769	2.4 x 1000	3/32 x 39"	5

Approvals :
GOST-R, CE

GeKaTec®

TOOL 40 SG

Standards :

DIN 8555	:	MSG 3-GZ-40-PT
	:	WSG 3-GZ-40 PT

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Cr	Mo	Mn
0.010	0.40	6.00	3.00	0.60

Mechanical Properties :

Hardness (as welded) (HRC)
37 - 42

Typical Base Material Grades: 1.2367-1.2365-1.274-1.2344-1.2343-1.2083

Features and Applications :

* Used in build up materials exposed to impact, pressure and abrasion, hot work tool steels for filler metals.
* Application range is forging dies, hammers, v-beds, cast steels, continuous casting rollers etc.
* The weld metal has wear resistance and high toughness at high temperatures.
* 400°CPre-heat temperature must be done before welding.
* Shielding gas : MAG : Ar+CO_2
  TIG : Ar

Welding Positions :

Current Type :

MAG D.C.(+)
TIG D.C.(-)

Welding Electrode :

~GeKaTec THERMO RESIST

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Type	
			MAG	TIG
606772	1.00	0.40”	B 300 15 Kg	Carton Box 5 Kg
602510	1.20	0.047”		
602511	1.6 x 1000	1/16 x 39”		
602512	2.0 x 1000	5/64 x 39”		
602513	2.4 x 1000	3/32 x 39”		

Approvals :

GOST-R

GeKaTec®

TOOL 45 SG

Standards :

DIN 8555	:MSG 3-GZ-50-ST
	:WSG 3-GZ-50-ST

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Cr	Ti	Mo
0.30	0.50	0.70	5.00	0.70	3.60

Mechanical Properties :

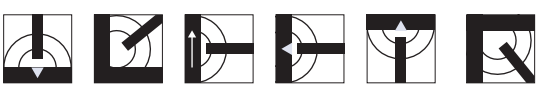
Hardness (as welded) (HRC)
45 - 48

Typical Base Material Grades: 1.2367-1.2365-1.274-1.2344-1.2343-1.2083

Features and Applications :

* Generally are used in build-up for hot work tool steels.
* Application areas forging dies, gravures, hot cutting tools, de-burring tools, punches, aluminum casting moulds, repair of 2344 hot work tool steels.
* Used in steel casting and mold applications with 45-48 HRC strength of hardfacing welds.
* Weld metal has wear and impact resistance at high temperatures.
* 400°C pre-heat must be done before welding.
* It has wear and impact resistance at high temperatures.
* Shielding gas : MAG : Ar + CO_2
  TIG : Ar

Welding Positions :



Current Type :

MAG D.C.(+)
TIG D.C.(-)

Welding Electrode :

~GeKaTec THERMO DUR

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Type	
			MAG	TIG
606771	1.00	0.040"	B 300 15 Kg	Carton Box 5 Kg
602506	1.20	0.047"		
602507	1.6 x 1000	1/16 x 39"		
602508	2.0 x 1000	5/64 x 39"		
602509	2.4 x 1000	3/32 x 39"		

Approvals :

GOST-R

GeKaTec®

TOOL 55 SG

Standards :

DIN 8555	:	MSG 3-GZ-55-T
	:	WSG 3-GZ-55-T

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Cr	Mo
0.35	0.40	1.00	7.00	1.10

Mechanical Properties :

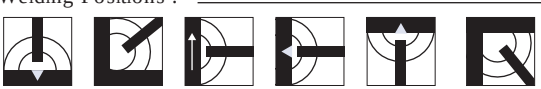
Hardness (as welded) (HRC)
53 - 58

Typical Base Material Grades: 1.2510-1.2363-1.2721-1.2379-1.2842-1.1730-1.2990

Features and Applications :

* Application areas are cold and hot work tool steels which are used in machine parts, cold and hot cutting blades, extrusion dies, rollers, steel castings and moulds.
* It is hard facing wire which has high abrasion resistance and keep hardness at high temperatures.
* 400°C pre-heat temperature must be done before welding if it is needed, stress relieving must be done at 550°C after welding.
* Shielding gas : MAG : Ar + CO_2
  TIG : Ar

Welding Positions :



Current Type :

MAG D.C.(+)
TIG D.C.(-)

Welding Electrode :

GeKaTec TOOL 58 S

Operating Data :

Product Code	Diameter x Length (mm) / (inch)		Package Type	
			MAG	TIG
606773	1.00	0.040"	B 300 15 Kg	Carton Box 5 Kg
602501	1.20	0.047"		
602502	1.6 x 1000	1/16 x 39"		
602503	2.0 x 1000	5/64 x 39"		
602505	2.4 x 1000	3/32 x 39"		

Approvals :

GOST-R

GeKaTec®

TOOL 55 FC TIG

Standards :

TS EN 14700	:	T Fe8
EN 14700	:	T Fe8
DIN 8555	:	TIG 6-GF-55-T

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Cr	Mo
0.55	0.7	1.0	7.0	2.0

Mechanical Properties :

Hardness (as welded) (HRC)
53 - 56

Features and Applications :

* It is hardfacing TIG wire which has high abrasion resistance and keep hardness at high temperatures.
* Application range is cold and hot work tool steels which are used in machine parts, cold and hot cutting blades, extrusion dies, rollers, steel castings, moulds, tools and metal-to-metal friction applications.
* Weld metal is machinable by grinding.
* It is recommended that pre-heating at 400°C before welding and very slow cooling after welding.
* If necessary, it is recommended the stress relief annealing at 550°C after welding.
* Shielding Gas : Argon

Welding Positions :

Current Type :

TIG D.C. (-)

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight (Kg)	Package Type
305865	2.40 x 1000	3/32 x 39"	4	Carton Box

Approvals :

CE

GeKaTec®

TOOL 60 FC TIG

Standards :

TS EN 14700	:	T Fe4
EN 14700	:	T Fe4
DIN 8555	:	TIG 3-GF-60-T

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Cr	Mo	W
0.55	0.5	0.4	4.0	8.0	1.60

Mechanical Properties :

Hardness (as welded) (HRC)
56 - 60

Features and Applications :

* It is hardfacing TIG wire which has high abrasion resistance and keep hardness at high temperatures.
* Application range is cold and hot work tool steels which are used in machine parts, cold and hot cutting blades, extrusion dies, rollers, steel castings, moulds, tools and metal-to-metal friction applications.
* Weld metal is machinable by grinding.
* It is recommended that pre-heating at 400°C before welding and very slow cooling after welding.
* If necessary, it is recommended the stress relief annealing at 550°C after welding.
* Shielding Gas : Argon

Welding Positions :

Current Type :

TIG D.C. (-)

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight (Kg)	Package Type
306040	2.40 x 1000	3/32 x 39”	4	Carton Box

Approvals :

CE

GeKaTec®

TOOL 58 SG

Standards :

DIN 8555 : M / WSG 3-GZ-60-T

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Cr	Mo	V	W
0.37	1.1	0.4	5.2	1.4	0.35	1.3

Mechanical Properties :

Hardness (after welding) (HRC)
57 - 60

Features and Applications :

* High adhesive wear and impact-resistant, cold work tool steals require filling from strength, high temperature, abrasion and impact resistance that requires welding of hot-work tool steels are used.
* The construction of non-alloy steel cutting edge, cutting and stripping tool steels used in the regions.
* Tool steels can be given 300° to 400° C pre-heating source.
* Shielding Gas : MAG; Ar+CO_2 mix gases
  TIG; Ar

Welding Positions :

Current Type :

MAG D.C.(+)
TIG D.C.(-)

Welding Electrode :

GeKaTec TOOL 58 S

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight(kg)
605939	1.20	0.047"	15
605940	1.6x1000	1/16 x 39"	5
605941	2.0x1000	5/64 x 39"	5
605942	2.4x1000	3/32 x 39"	5

Approvals :

GOST-R

GeKaTec®

TOOL 60 SG

Standards :

DIN 8555	:	M/WSG 4-60-S

Chemical Composition of Welding Wire- % (Typical) :

C	Si	Mn	Cr	Mo	V	W
1.0	0.3	0.3	4.0	8.3	1.9	1.8

Mechanical Properties :

Hardness (as welded) (HRC)
60 - 62

Typical Base Material Grades: 1.2436-1.3241-1.3344-1.3207

Features and Applications :

* Application range is production of cutting edges of mild steels, hard facing of cutting edges of cutting dies.
* It is hard facing wire.
* Weld metal structure is similar to high speed steel and has abrasion, wear and pressure resistance.
* Shielding gas : MAG : Ar + CO_2
  TIG : Ar

Welding Positions :

Current Type :

MAG D.C.(+)
TIG D.C.(-)

Welding Electrode :

GeKaTec TOOL 60

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight(kg)
602775	1.6 x 1000	1/16 x 39"	5
602776	2.0 x 1000	5/64 x 39"	5
602777	2.4 x 1000	3/32 x 39"	5

Approvals :

GOST-R

GeKaTec COBALT BASED TIG WELDING RODS

COBALT 6 TIG

AWS A5.21 : E R.Co Cr-A

This wire is suitable for hardfacing of parts subjected to a combination of pressure,impact,abraison, corrosion,erosion,cavitation and high heat up to 900°C,such as tight surfaces of fittigs,valve seats and cones for combustion engines,gliding surfaces of fittigs,valve seats and cones for combustion engines,gliding surfaces of fittings,valve seats and cones for combustion engines,gliding surfaces metal to metal,highly stressed hot working tools without thermal shock,milling,mixing and drilling tools.Excellent gliding characteristics,very good polishability,high toughness,non magnetic.Machinable by grinding and with tungsten carbide tools.

Chemical Composition % C : 1.1, Cr : 28, W : 4, Co : Rest

Hardness : TIG : 40 HRC Oxy-acetylene:40 HRC

Dimensions : 3.20 - 4.0 - 5.0 x 1000 mm

Welding Electrode : GeKaTec COBALT 6
Flux Cored Wire : GeKa HARDCOR COBALT 6

COBALT 12 TIG

AWS A5.21 : E R.Co Cr-B

This wire is suitable for highly wear resistant hardfacing of parts subjected to a combination of pressure,abraison,corrosion,erosion,cavitation and high heat up to 900°C,such as a running sealing and gliding faces of fittings and pumps,valve seats and cones for combustion engines tools for the wood,paper and plastic industry,gliding surfaces metal to metal,milling,mixing and drilling tools,heavy-duty hot working tools without thermal shock.Excellent gliding characteristics,very good polishability,high toughness,non magnetic.Machinable by grinding and with tungsten carbide tools.

Chemical Composition % C : 1.4, Cr : 29, W : 8, Co : Rest

Hardness : TIG : 47 HRC Oxy-acetylene:48 HRC

Dimensions : 3.20 - 4.0 - 5.0 x 1000 mm

Welding Electrode : GeKaTec COBALT 12
Flux Cored Wire : GeKa HARDCOR COBALT 12

COBALT 1 TIG

AWS A5.21 : E R.Co Cr-C

This wire is suitable for highly wear resistant hardfacing of parts subjected to a combination of abraison,corrosion and high heat up to 900°C,such as working parts in the chemical industry running and sealing faces of fittings,valve seats and cones for combustion engines,cutting shearing tools,milling,mixing,drilling tools,heavy-duty hot working tools without thermal shock Excellent gliding characteristics,good polishability,slighty,magnetic.Machinable by grinding and with tungsten carbide tools.

Chemical Composition % C : 2.5, Cr : 30, W : 12, Co : Rest

Hardness : TIG : 54 HRC Oxy-acetylene:53 HRC

Dimensions : 3.20 - 4.0 - 5.0 x 1000 mm

Welding Electrode : GeKaTec COBALT 1
Flux Cored Wire : GeKa HARDCOR COBALT 1

Operating Data :

Product	Diameter (mm)	Diameter (inch)	Package Weight(kg)
COBALT 6 TIG	3.2 x 1000	1/8 x 39”	10
COBALT 6 TIG	4.0 x 1000	5/32 x 39”	10
COBALT 12 TIG	3.2 x 1000	1/8 x 39”	10
COBALT 12 TIG	4.0 x 1000	5/32 x 39”	10
COBALT 1 TIG	3.2 x 1000	1/8 x 39”	10
COBALT 1 TIG	4.0 x 1000	5/32 x 39”	10

Approvals :

GOST-R

GeKaTec TUNGSTEN ELECTRODES

Applications of Tungsten Electrodes :

Product Name	AWS Norm / Colour	Current Type	Applications
GeKaTec TUNGSTEN Red	EWTh-2	AC	- Unalloyed & High alloyed steels - Titanium alloys - Nickel alloys - Copper alloys
GeKaTec TUNGSTEN Green	EWP	AC	- Aluminium alloys - Magnesium alloys
GeKaTec TUNGSTEN Gold	EWLa-1.5	AC/DC	- Non-alloyed & low alloyed steels - Stainless Steels - Aluminium Alloys - Magnesium Alloys - Titanium Alloys - Nickel Alloys - Copper Alloys
GeKaTec TUNGSTEN Blue	EWLa-2	AC/DC	- Non-alloyed & low alloyed steels - Stainless Steels - Aluminium Alloys - Magnesium Alloys - Titanium Alloys - Nickel Alloys - Copper Alloys
GeKaTec TUNGSTEN Gray	EWCe-2	AC/DC	- Unalloyed & High alloyed steels - Titanium alloys - Nickel alloys - Copper alloys - Aluminium alloys - Stainless Steels - Magnesium Alloys

Operating Data :

Product	Product Code	DiameterxLength (mm)	DiameterxLength (inch)	Pcs / Package
Tungsten Red	602063	1.6 x 175	1/16 x 7”	10
Tungsten Red	602450	2.0 x 175	5/64 x 7”	10
Tungsten Red	602062	2.4 x 175	3/32 x 7”	10
Tungsten Red	602060	3.2 x 175	1/8 x 7”	10
Tungsten Green	602834	1.6 x 175	1/16 x 7”	10
Tungsten Green	602835	2.0 x 175	5/64 x 7”	10
Tungsten Green	602451	2.4 x 175	3/32 x 7”	10
Tungsten Green	602066	3.2 x 175	1/8 x 7”	10
Tungsten Gold	606706	2.0 x 175	5/64 x 7”	10
Tungsten Gold	606707	2.4 x 175	3/32 x 7”	10
Tungsten Blue	607090	1.6 x 175	1/16 x 7”	10
Tungsten Blue	606708	2.0 x 175	5/64 x 7”	10
Tungsten Blue	606709	2.4 x 175	3/32 x 7”	10
Tungsten Blue	607091	3.2 x 175	1/8 x 7”	10
Tungsten Gray	607625	1.6 x 175	1/16 x 7”	10
Tungsten Gray	605204	3/32 x 175	3/32 x 7”	10

GeKaTec®

S1 L

Standards :

TS EN ISO 17672	:	Cu 511
EN ISO 17672	:	Cu 511
AWS A5.7	:	ER Cu

Chemical Composition of Weld Metal- % (Typical) :

Sn	Si	Mn	Cu
0.8	0.3	0.3	rest

Mechanical Properties :

Tensile Strength (N/mm^2)	Impact Strength (J)	Elongation (Lo=5do)(%)	Hardness (HB)	Melting Range (°C)	Electrical Conductivity (20°C)(Sm/mm^2)	Thermal Conductivity (W/m.K)	Density (kg/dm^3)
200	70	30	60	1020-1050	15-20	120-170	8.9

Features and Applications :

* Used in joining and filler welds of blister copper.
* The weld metal has strength to the overheat.
* Electrode holders, blast furnace tuyeres, some copper parts of radiator and oil coolers are the primary application area of this consumable.
* 300°C pre-heat must be done to the copper plates thinner than 3 mm.
* Used for steel and nickel brazing.
* Shielding gas : TIG (Ar or %75 Ar+ %25He)

Welding Method :

Gas Welding

Current Type	MIG Wire	Electrode	Welding Positions
TIG D.C.(-)	GekaTec R1 L	GeKaTec Cu-WELD	

Operating Data :

Product Code	Diameter x Length (mm) (inch)		Package Weight(kg)
600422	2.0 x 1000	5/64 x 39”	5

Approvals :

GOST-R

GeKaTec®

S2

Standards :

TS EN ISO 17672	:	Cu 681
EN ISO 17672	:	Cu 681

Chemical Composition of Weld Metal- % (Typical) :

Cu	Sn	Si	Zn
59.0	1.8	0.2	rest

Mechanical Properties :

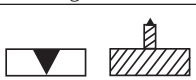
Melting Range (°C)	Density (kg/dm^3)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
870 - 890	8.4	430	30	110

Features and Applications :

* Used in joining and coating of brass, bronze copper, steel and cast iron materials with using Flux F-SH2.
* Normal flame must be choosen for steel and copper, oxidizing flame must be choosen for brass, bronze, galvanized materials.

Welding Method :

Gas Welding

Other Brazing Rods	Welding Positions
S21, S3	

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight(kg)
300850	2.0 x 1000	5/64 x 39"	10
300852	3.0 x 1000	0.118" x 39"	10
300853	4.0 x 1000	5/32 x 39"	10

Approvals :

GOST-R

GeKaTec®

S21

Standards :

TS EN ISO 17672	:	Cu 470
EN ISO 17672	:	Cu 470

Chemical Composition of Weld Metal- % (Typical) :

Cu	Sn	Si	Zn
60.0	0.5	0.2	rest

Mechanical Properties :

Melting Range (°C)	Density (kg/dm^3)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
875 - 895	8.4	400	30	100

Features and Applications :

* Used in joining and coating of brass, bronze copper, steel and cast iron materials with using Flux F-SH2.
* Normal flame must be choosen for steel and copper, oxidizing flame must be choosen for brass, bronze, galvanized materials.

Welding Method :

Gas Welding

Other Brazing Rods	Welding Positions
S2, S3	

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight(kg)
303503	1.5 x 1000	0.059" x 39"	10
300860	2.0 x 1000	5/64 x 39"	10
300861	2.5 x 1000	3/32 x 39"	10
300862	3.0 x 1000	0.118" x 39"	10
300863	4.0 x 1000	5/32 x 39"	10
300864	5.0 x 1000	3/16 x 39"	10

Approvals :

GOST-R

GeKaTec®

S3

Standards :

TS EN ISO 17672	:	~Cu 773
EN ISO 17672	:	~Cu 773

Chemical Composition of Weld Metal- % (Typical) :

Cu	Ni	Si	Zn
52.0	7.0	0.3	rest

Mechanical Properties :

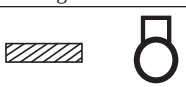
Working Temperatures (°C)	Density (kg/dm^3)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
890 - 920	8.7	690 - 785	15	130

Features and Applications :

* Brass brazing rods with silver and nickel alloyed consumable.
* Corrosion resistance, wear resistance, mechanical properties are very good.
* Used in joining of steels, cast iron, nickel and nickel alloys.
* This consumable can used with Flux F-SH2.
* Normal flame must be choosen.

Welding Method :

Gas Welding

Other Brazing Rods	Welding Positions
S2,S21	

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight(kg)
300855	2.0 x 1000	5/64 x 39"	10
300857	3.0 x 1000	0.118" x 39"	10
300858	4.0 x 1000	5/32 x 39"	10

Approvals :

GOST-R

GeKaTec®

S4 L

Standards :

EN ISO 17672	:	Cu 922
AWS A5.7	:	ER CuSn-A

Chemical Composition of Weld Metal- % (Typical) :

Cu	Sn	P
rest	6.0	0.20

Mechanical Properties :

Melting Range (°C)	Density (kg/dm^3)	Tensile Strength (N/mm^2)	Yield Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
910 - 1040	8.7	300	150	20	80

Features and Applications :

* Highly wear resistant, good anti-friction properties suitable for joining copper-zinc alloys and coating of cast irons and steel materials and dissimilar materials like as steel and bronze.
* Applications include bearing faces, art bronze, axle bearing.
* Shielding Gas for TIG Welding : Ar.
* Normal flame must be choosen.
* 100 - 250°C pre-heat temperature must be done thicker than 10 mm materials.

Welding Method :

TIG Welding, Gas Welding

Current Type	MIG Wire	Electrode	Welding Positions
TIG D.C.(-)	GeKa R4 L	GeKaTec Bronze	

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight(kg)
600435	2.0 x 1000	5/64 x 39"	5

Approvals :

GOST-R

GeKaTec®

S4 AL

Standards :

TS EN ISO 17672	:	~Cu 565
EN ISO 17672	:	~Cu 565
AWS A5.7	:	~ER CuAl-A1

Chemical Composition of Weld Metal- % (Typical) :

Al	Fe	Mn	Ni	Cu
7.5-10	0.5-1.5	<1.0	<1.0	rest

Mechanical Properties :

Working Temperatures (°C)	Density (kg/dm^3)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Hardness (HB)
1030 - 1040	7.5	580	20	130

Features and Applications :

* Weld metal is resistance to sea water, corrosion and cavitation.
* Used in joining of steels, copper to copper alloys.
* Resistant to deformation at elevated temperatures and corrosion resistant for armouring parts of machinery.
* Applications include propellers, thrust plates, picking bails.
* Shielding Gas for TIG Welding : Ar.

Welding Method :

TIG Welding

Current Type	MIG Wire	Electrode	Welding Positions
TIG D.C.(-)	GeKa R4 AL	GeKaTec Albronze	

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight(kg)
605304	2.0 x 1000	5/64 x 39"	5

Approvals :

GOST-R

GeKaTec®

S5

Standards :

TS EN ISO 17672 : Cu P 180
EN ISO 17672 : Cu P 180
AWS A 5.8 : B Cu P-2

Chemical Composition of Weld Metal- % (Typical) :

Cu	P
93.0	7.0

Mechanical Properties :

Working Temperatures (°C)	Density (kg/dm³)	Tensile Strength (N/mm²)	Elongation (L_o=5d_o)(%)	Melting Range (°C)
720	8.1	250	5	710 - 820

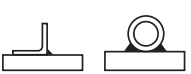
Features and Applications :

* Used in brazing of copper and copper alloys, bronze and casting brass. materials, has high liquidity properties.
* This consumables do not use in brazing of nickel and steel materials.
* There is no need flux for joining of copper to copper.
* Reducing flame must be used.

Welding Method :

Brazing

Welding Positions



Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight(kg)
600282	1.5 x 500	0.059" x 20"603764	1
600281	2.0 x 500	5/64 x 20"	1
600280	3.0 x 500	0.118" x 20"	1

Approvals :

GOST-R

GeKaTec®

L-Ag2P

Standards :

TS EN ISO 17672 : Cu P 279
EN ISO 17672 : Cu P 279

Chemical Composition of Weld Metal- % (Typical) :

Cu	P	Ag
91.8	6.2	2.0

Mechanical Properties :

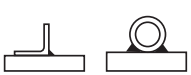
Working Temperatures (°C)	Density (kg/dm³)	Tensile Strength (N/mm²)	Elongation ($L_o=5d_o$)(%)	Melting Range (°C)
710	8.1	250	5	650 - 810

Features and Applications :

* Used in copper and copper alloys, casting brass and bronze brazing.
* It is not used in nickel and steel materials brazing.
* FLUX F-SH1 can used and normal flame must be choosen.

Welding Method :

Brazing

Other Copper-Silver-Phosphor Brazing Rods	Welding Positions
GeKaTec L-Ag5P, L-Ag15P	

Operating Data :

Product Code	Diameter x Length (mm) (inch)		Package Weight(kg)
600259	1.5 x 500	0.059" x 20"	1
600258	2.0 x 500	5/64 x 20"	1
602109	3.0 x 500	0.118" x 20"	1

Approvals :

GOST-R

GeKaTec®

L-Ag5P

Standards :

TS EN ISO 17672	:	Cu P 281
EN ISO 17672	:	Cu P 281
AWS A5.8	:	B CuP-3

Chemical Composition of Weld Metal- % (Typical) :

Ag	P	Cu
5.0	6.0	89.0

Mechanical Properties :

Working Temperature (°C)	Density (kg/dm^3)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Melting Range (°C)
710	8.2	250	8	650 - 810

Features and Applications :

* Used in copper and copper alloys, casting brass and bronze brazing.
* This consumable has higher creep properties according to the L-Ag 2P.
* It is not used in brazing nickel and steel materials.
* Flux F-SH1 can be used and normal flame must be choosen.

Welding Method :

Brazing

Other Copper-Silver-Phosphor Brazing Rods	Welding Positions
GeKaTec L-Ag5P, L-Ag15P	

Operating Data :

Product Code	Diameter x Length (mm) (inch)		Package Weight(kg)
603233	2.0 x 500	5/64 x 20"	1

Approvals :

GOST-R

GeKaTec®

L-Ag15P

Standards :

TS EN ISO 17672	:	Cu P284
EN ISO 17672	:	Cu P284
AWS A5.8	:	B CuP-5

Chemical Composition of Weld Metal- % (Typical) :

Ag	P	Cu
15.0	5.0	80.0

Mechanical Properties :

Working Temperature (°C)	Density (kg/dm³)	Tensile Strength (N/mm²)	Elongation ($L_o=5d_o$)(%)	Melting Range (°C)
710	8.4	250	10	650 - 800

Features and Applications :

* Used in copper and copper alloys, casting brass and bronze brazing.
* This consumable has higher creep properties according to the L-Ag5P
* It is not used in brazing of nickel and steel materials.
* Flux F-SH1 can be used and normal flame must be choosen.

Welding Method :

Brazing

Other Copper-Silver-Phosphor Brazing Rods	Welding Positions
GeKaTec L-Ag5P, L-Ag15P	

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight(kg)
600283	2.0 x 500	5/64 x 20"	1
607618	3.0 x 500	0.118" x 20"	1
607619	4.0 x 500	5/32 x 20"	1

Approvals :

GOST-R

GeKaTec®

L-Ag20

Standards :

EN 1044 : B-Cu 40 ZnAgCd(~AG 309)

Chemical Composition of Weld Metal- % (Typical) :

Ag	Cu	Si	Cd	Zn
20.0	40.0	0.2	15.0	rest

Mechanical Properties :

Working Temperature (°C)	Density (kg/dm^3)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Melting Range (°C)
750	8.8	350 - 430	25	605 - 765

Features and Applications :

* Used in copper and copper alloy, steel, stainless steel and nickel and nickel alloys brazing and joining of these materials each others.
* Flux F-SH1 can be used and reducing flame must be choosen.

Welding Method :

Brazing

Other Silver Alloyed Brazing Rods	Welding Positions
GeKaTec L-Ag20FC, L-Ag30, L-Ag30FC, L-Ag40, L-Ag40FC, L-Ag55, L-Ag55FC	

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight(kg)
600305	1.5 x 500	0.059" x 20"	1
600304	2.0 x 500	5/64 x 20"	1
600303	3.0 x 500	0.118" x 20"	1

Approvals :

GOST-R

GeKaTec®

L-Ag20 FC

Standards :

EN 1044 : B-Cu 40 ZnAgCd(~AG 309)

Chemical Composition of Weld Metal- % (Typical) :

Ag	Cu	Si	Cd	Zn
20.0	40.0	0.2	15.0	rest

Mechanical Properties :

Working Temperatures (°C)	Density (kg/dm³)	Tensile Strength (N/mm²)	Elongation (L_o=5d_o)(%)	Melting Range (°C)
750	8.8	350 - 430	25	605 - 765

Features and Applications :

* Used in copper and copper alloys, nickel and nickel alloys, cast iron, steel, stainless brazing and joining of these materials each others.
* L-Ag20FC is a kind of flux coated brazing rods with %20Ag.
* Reducing flame must be choosen.

Welding Method :

Brazing

Other Silver Alloyed Brazing Rods	Welding Positions
GeKaTec L-Ag20, L-Ag30, L-Ag30FC, L-Ag40, L-Ag40FC, L-Ag55, L-Ag55FC	

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight(kg)
600302	1.5 x 500	0.059" x 20"	1
600301	2.0 x 500	5/64 x 20"	1
600300	3.0 x 500	0.118" x 20"	1

Approvals :

GOST-R

GeKaTec®

L-Ag30

Standards :

TS EN ISO 17672	:	Ag 330
EN ISO 17672	:	Ag 330

Chemical Composition of Weld Metal- % (Typical) :

Ag	Cu	Zn	Si	Cd
30.0	28.0	rest	0.5	21.0

Mechanical Properties :

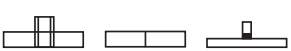
Working Temperature (°C)	Density (kg/dm^3)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Melting Range (°C)
680	9.2	380 - 470	30	600 - 690

Features and Applications :

* Used in copper and copper alloy, steel, stainless steel and nickel and nickel alloys brazing and joining of these materials each others.
* Flux F-SH1 can be used and reducing flame must be choosen.

Welding Method :

Brazing

Other Silver Alloyed Brazing Rods	Welding Positions
GeKaTec L-Ag20, L-Ag20FC, L-Ag30FC, L-Ag40, L-Ag40FC, L-Ag55, L-Ag55FC	

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight(kg)
600299	1.5 x 500	0.059" x 20"	1
600298	2.0 x 500	5/64 x 20"	1
603108	3.0 x 500	0.118" x 20"	1

Approvals :

GOST-R

GeKaTec®

L-Ag30 FC

Standards :

TS EN ISO 17672	:	Ag 330
EN ISO 17672	:	Ag 330

Chemical Composition of Weld Metal- % (Typical) :

Ag	Cu	Zn	Si	Cd
30.0	28.0	rest	0.5	21.0

Mechanical Properties :

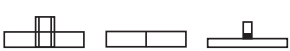
Working Temperatures (°C)	Density (kg/dm^3)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Melting Range (°C)
680	9.2	380 - 470	30	600 - 690

Features and Applications :

* Used in copper and copper alloy, nickel and nickel alloys, cast iron, steel, stainless brazing and joining of these materials each others.
* L-Ag 30FC is a kind of flux coated brazing rods with %30 Ag.

Welding Method :

Brazing

Other Silver Alloyed Brazing Rods	Welding Positions
GeKaTec L-Ag20, L-Ag20FC, L-Ag30, L-Ag40, L-Ag40FC, L-Ag55, L-Ag55FC	

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight(kg)
603110	1.5 x 500	0.059" x 20"	1
600297	2.0 x 500	5/64 x 20"	1
603109	3.0 x 500	0.118" x 20"	1

Approvals :

GOST-R

GeKaTec®

L-Ag40

Standards :

TS EN ISO 17672	:	Ag 340
EN ISO 17672	:	Ag 340

Chemical Composition of Weld Metal-
% (Typical) :

Cu	Ag	Cd	Si	Zn
20.0	40.0	21.0	0.5	rest

Mechanical Properties :

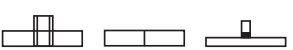
Working Temperatures (°C)	Density (kg/dm^3)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Melting Range (°C)
610	9.3	410 - 510	25	595 - 630

Features and Applications :

* Used in copper and copper alloy, steel, stainless steel and nickel and nickel alloys brazing and joining of these materials each others.
* Flux F-SH1 can be used and reducing flame must be choosen.

Welding Method :

Brazing

Other Silver Alloyed Brazing Rods	Welding Positions
GeKaTec L-Ag20, L-Ag20FC, L-Ag30, L-Ag30FC, L-Ag40FC, L-Ag55, L-Ag55FC	

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight(kg)
600295	1.5 x 500	0.059" x 20"	1
600294	2.0 x 500	5/64 x 20"	1
600293	3.0 x 500	0.118" x 20"	1

Approvals :

GOST-R

GeKaTec®

L-Ag40 FC

Standards :

TS EN ISO 17672	:	Ag 340
EN ISO 17672	:	Ag 340

Chemical Composition of Weld Metal- % (Typical) :

Cu	Ag	Cd	Si	Zn
20.0	40.0	21.0	0.5	rest

Mechanical Properties :

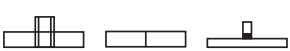
Working Temperatures (°C)	Density (kg/dm³)	Tensile Strength (N/mm²)	Elongation (L_o=5d_o)(%)	Melting Range (°C)
610	9.3	410 - 510	25	595 - 630

Features and Applications :

* Used in copper and copper alloyed, cast irons, steels, stainless steels brazing and joining of these all materials each others.
* L-Ag40FC is flux coated brazing rods with % 40 Ag.
* Reducing flame must be choosen.

Welding Method :

Brazing

Other Silver Alloyed Brazing Rods	Welding Positions
GeKaTec L-Ag20, L-Ag20FC, L-Ag30, L-Ag30FC, L-Ag40, L-Ag55, L-Ag55FC	

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight(kg)
600292	1.5 x 500	0.059" x 20"	1
600291	2.0 x 500	5/64 x 20"	1

Approvals :

GOST-R

GeKaTec®

L-Ag55

Standards :

TS EN ISO 17672	:	Ag 155
EN ISO 17672	:	Ag 155

Chemical Composition of Weld Metal- % (Typical) :

Ag	Cu	Zn	Sn
55.0	21.0	22.0	2.0

Mechanical Properties :

Working Temperatures (°C)	Density (kg/dm^3)	Tensile Strength (N/mm^2)	Elongation ($L_o=5d_o$)(%)	Melting Range (°C)
650	9.4	330 - 430	25	620 - 660

Features and Applications :

* It is a kind of brazing rods does not contain cadmium.
* It is resistance to sea water and corrosion.
* Used in medikits and food sectors and also used copper and copper alloys, nickel and nickel alloys, cast irons, steel, stainless steels brazing and joining each others.
* Flux F-SH1 can be used and reducing flame must be choosen.

Welding Method :

Brazing

Other Silver Alloyed Brazing Rods	Welding Positions
GeKaTec L-Ag20, L-Ag20FC, L-Ag30, L-Ag30FC, L-Ag40, L-Ag40FC, L-Ag55FC	

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight(kg)
...	1.5 x 500	0.059" x 20"	1
600288	2.0 x 500	5/64" x 20"	1
600287	3.0 x 500	0.118" x 20"	1

Approvals :

GOST-R

GeKaTec®

L-Ag55 FC

Standards :

TS EN ISO 17672	:	Ag 155
EN ISO 17672	:	Ag 155

Chemical Composition of Weld Metal- % (Typical) :

Ag	Cu	Zn	Sn
55.0	21.0	22.0	2.0

Mechanical Properties :

Working Temperatures (°C)	Density (kg/dm³)	Tensile Strength (N/mm²)	Elongation (L_o=5d_o)(%)	Melting Range (°C)
650	9.4	330 - 430	25	620 - 660

Features and Applications :

* It is a kind of brazing rods does not contain cadmium.
* It has resistance to sea water and corrosion.
* Used in medikits and food sectors and also used in copper and copper alloys, nickel and nickel alloys, cast irons, steel, stainless steel brazing and joining each others.
* L-Ag 55 FC is a kind of flux coated brazing rod with %55 Ag.

Welding Method :

Brazing

Other Silver Alloyed Brazing Rods	Welding Positions
GeKaTec L-Ag20, L-Ag20FC, L-Ag30, L-Ag30FC, L-Ag40, L-Ag40FC, L-Ag55	

Operating Data :

Product Code	Diameter x Length (mm)	(inch)	Package Weight(kg)
600286	1.5 x 500	0.059" x 20"	1
600285	2.0 x 500	5/64 x 20"	1
600284	3.0 x 500	0.118" x 20"	1

Approvals :

GOST-R

GeKaTec BRAZING FLUXES

FLUX F-SH1 TS EN 1045 : FH 10

This flux is flour based and used with application of silver alloyed brazing materials. Working temperature is between 550 and 750°C.This flux is used on all base metals except aluminium and aluminium alloys.This product is sold as both powder and paste form.

FLUX F-LH1

This is a flour based flux used for welding and brazing applications of aluminium and aluminium alloyed materials.Working temperature is between 500 and 650°C and sold in powder form.

Operating Data :

Product	Application Materials	Package Weight(kg)
FLUX F-SH1(powder)	Silver	1
FLUX F-LH1(powder)	Aluminium	2

Gedik Welding

Gedik Kaynak Sanayi ve Tic. A.Ş.
Ankara Caddesi No: 306 Şeyhli 34906 İstanbul / Turkey
P +90 216 378 50 00 F +90 216 378 20 44 gedik@gedik.com.tr
www.gedikwelding.com

Gedik Casting and Valve

Gedik Döküm ve Vana San. ve Tic. A.Ş.
Ankara Caddesi No: 306 Şeyhli 34906 İstanbul / Turkey
P +90 216 307 12 62 F +90 216 307 28 68-69 termo@gedikdokum.com.tr
Manufacturing Plant
Sakarya 2.OSB 11 No'lu Yol No: 6 54300 Hendek - Sakarya / Turkey
P +90 264 290 12 00 F +90 264 290 12 21 dokum@gedikdokum.com.tr
www.gedikdokum.com

GEV
Gedik Educational Foundation

Gedik Eğitim ve Sosyal Yardımlaşma Vakfı
Ankara Caddesi No: 306 C Blok Şeyhli 34906 İstanbul / Turkey
P +90 216 378 50 00 F +90 216 378 20 44 gev@gedikegitimvakfi.org.tr
www.gedikegitimvakfi.org.tr

İstanbul GEDİK University

İstanbul Gedik Üniversitesi
Cumhuriyet Mahallesi, İlkbahar Sokak No: 1-3-5 34876 Yakacık-Kartal-İstanbul / Turkey
P +90 216 452 45 85 - 444 5 438 F +90 216 452 87 17 info@gedik.edu.tr
www.gedik.edu.tr

Gedik Test Center

Gedik Test Merkezi
Ankara Caddesi No: 306 Şeyhli 34906 İstanbul / Turkey
P +90 216 378 79 41 F +90 216 378 20 44 info@gediktest.com
www.gediktest.com

Gedik Welding

GK-K-ENG 001/01 September 2016

Gedik Kaynak Sanayi ve Tic. A.•.
Ankara Cad. No: 306 •eyhli 34906 Pendik - •stanbul / TURKEY
P +90 216 378 50 00 F +90 216 378 20 44
gedik@gedik.com.tr