Электроды с низким содержанием водорода ТЕМРО

Технические характеристики

По вопросам продаж и поддержки обращайтесь:

Алматы (727)345-47-04
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Саранск (8342)22-96-24
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70
Казахстан +(727)345-47-04
Беларусь +(375)257-127-884
Узбекистан +998(71)205-18-59
Киргизия +996(312)96-26-47

эл.почта: gak@nt-rt.ru || сайт: https://geka.nt-rt.ru

Low Alloyed High Strength Electrode

TEMPO B 48

Standards

TS EN ISO 2560-A	: E 42 6 1 Ni B 32 H5
EN ISO 2560-A	: E 42 6 1 Ni B 32 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** ($L_0=5d_0$) (%)
min. 460	530-640	min. 47 J	min. 22

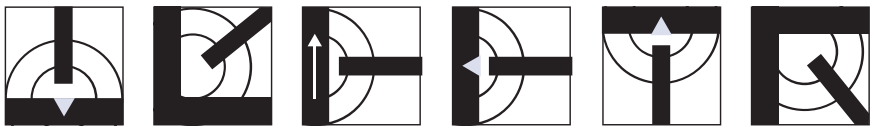
Typical Base Material Grades

- EN 10205: S355J2G3, S355JR, S355J0, S355J2G4, S355K2G3, S355K2G4, ASTM A 572 Gr.50, A709Gr.50, A678Gr.50, A633Gr.D
- API 5L: A, B, X42, X46, X52, X56, 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: 300-350°C / 2h

Welding Positions



Current Type

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

Operating Data

Product Code	**Diameter x Length** (mm) / (inch)		**Welding Current** (A)	**Weight** g / 100 pcs
3010100462	2.50 x 350	3/32 x 14”	60 - 100	2200
3010100465	3.20 x 350	1/8 x 14”	80 - 130	3680
3010100471	4.00 x 350	5/32 x 14”	120- 180	5370

Approvals: TSE, CE, ABS, SEPRO, BV

Low Alloyed High Strength Electrode

TEMPO B 60

Standards

TS EN ISO 2560-A	: E 46 6 1Ni B 42 H5
EN ISO 2560-A	: E 46 6 1Ni 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** ($L_0=5d_0$) (%)
min. 460	530-680	min. 47 J	min. 20

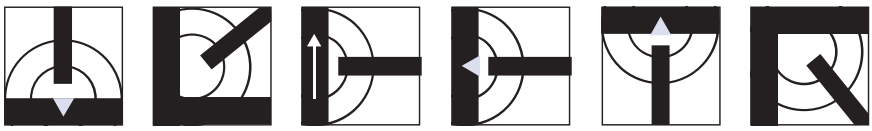
Typical Base Material Grades

- 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 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
3010100483	2.50 x 350	3/32 x 14”	80 - 110	2190
3010100486	3.20 x 350	1/8 x 14”	100 - 140	3570
3010100495	4.00 x 450	5/32 x18”	130- 190	6660
3010100498	5.00 x 450	3/16 x 18”	190-240	10550

Approvals: TSE, CE, DNV-GL, SEPRO

Low Alloyed High Strength Electrode

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/-30°C)	Elongation ($L_0=5d_0$) (%)
min. 500	550-720	min. 47 J	min. 19

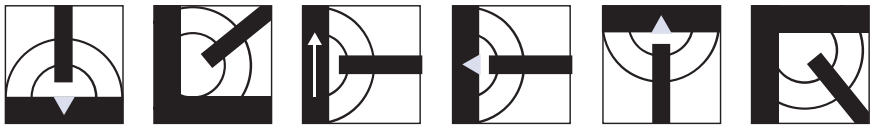
Typical Base Material Grades

- 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 5L: 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
3010100501	2.50 x 350	3/32 x 14”	80-110	2220
3010100504	3.20 x 350	1/8 x 14”	100 - 140	3590
3010100507	4.00 x 450	5/32 x 18”	130-190	6820
3010100510	5.00 x 450	3/16 x 18”	190 - 240	10500

Approvals: TSE, CE, SEPRO

Low AlloyedHighStrength Electrode

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 ($L_0=5d_0$) (%)
min. 550	630-750	min. 47 J	min. 19

* CTOD tested

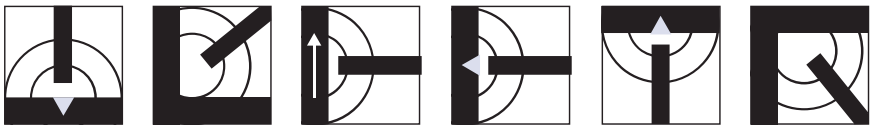
Typical Base Material Grades

- 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 300°C and 350°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
3010100513	2.50 x 350	3/32 x 14”	80 - 110	2200
3010100516	3.20 x 350	1/8 x 14”	100 - 140	3640
3010100522	4.00 x 450	5/32 x 18”	130 - 190	6800
3010100528	5.00 x 450	3/16 x 18”	190-240	10500

Approvals: CE, ABS, SEPRO

Low Alloyed High Strength Electrode

TEMPO B 70 M

Standards

TS EN ISO 18275-A	: E 55 6 Z (1 NiMo) B 42 H5
EN ISO 18275-A	: E 55 6 Z (1 NiMo) B 42 H5
AWS A5.5	: E 9018-M H4

Chemical Composition of Weld Metal % (Typical)

C	Si	Mn	Ni	Mo
0.05	0.3	1.1	1.4	0.3

Mechanical Properties

Yield Strength (N/mm^2)	**Tensile Strength** (N/mm^2)	**Impact Strength** (ISO-V/-60°C)	**Elongation** ($L_0=5d_0$) (%)	**Heat Treatment**
min. 550	620-780	min. 47 J	min. 24	AW

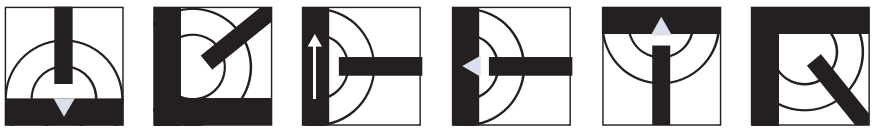
Typical Base Material Grades

- 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 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
3010100546	2.50 x 350	3/32 x 14”	80 - 110	2250
3010100549	3.20 x 350	1/8 x 14”	100- 140	3640
3010100552	4.00 x 450	5/32 x 18”	130 - 190	6880
3010100555	5.00 x 450	3/16 x 18”	190 - 240	10130

Approvals: CE, SEPRO

Low Alloyed High Strength Electrode

TEMPO B 70 S

Standards

TS EN ISO 18275-A	: E 55 6 2 NiMo BT 42 H5
EN ISO 18275-A	: E 55 6 2 NiMo BT 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 ($L_0=5d_0$) (%)	Heat Treatment
min. 550	620-780	min. 47 J	min. 18	560-600°C / 1 h / 300°C (air)

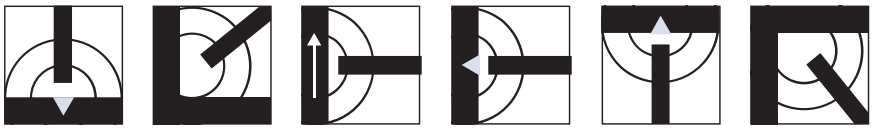
Typical Base Material Grades

- 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 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
3010100570	2.50 x 350	3/32 x 14”	80 - 110	2320
3010100573	3.20 x 350	1/8 x 14”	100- 140	3670
3010100576	4.00 x 450	5/32 x 18”	130 - 190	6790
3010100579	5.00 x 450	3/16 x 18”	190 - 240	10130

Approvals: CE, ABS, SEPRO

Low Alloyed High Strength Electrode

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	0.4	1.6	0.45

Mechanical Properties

Yield Strength (N/mm^2)	Tensile Strength (N/mm^2)	Impact Strength (ISO-V/-50°C)	Elongation ($L_0=5d_0$) (%)	Heat Treatment
min. 550	620-780	min. 47 J	min. 18	560-600°C / 1h / 300°C (air)

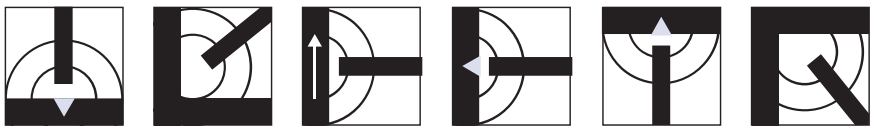
Typical Base Material Grades

- 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 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
3010100558	2.50 x 350	3/32 x 14”	80 - 110	2220
3010100561	3.20 x 350	1/8 x 14”	100 - 140	3670
3010100564	4.00 x 450	5/32 x 18”	130 - 190	6790
3010100567	5.00 x 450	3/16 x 18”	190 - 240	10130

Approvals: CE, SEPRO

Low Alloyed High Strength Electrode

TEMPO B 75

Standards

TS EN ISO 18275-A	: E 62 6 Z 1NiMo B 4 2 H5
EN ISO 18275-A	: E 62 6 Z 1NiMo B 4 2 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 ($L_0=5d_0$) (%)	Heat Treatment
min. 620	690-890	min. 47 J	min. 18	560-600°C / 1h / 300°C (air)

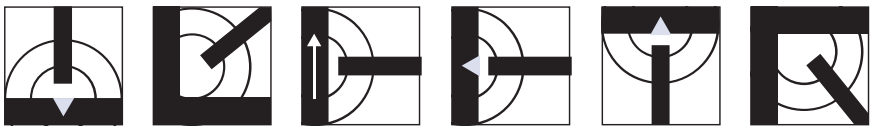
Typical Base Material Grades

- 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 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
3010100582	2.50 x 350	3/32 x 14”	80 - 110	2280
3010100585	3.20 x 350	1/8 x 14”	100 - 140	3580
3010100588	4.00 x 450	5/32 x 18”	130 - 190	6680
3010100591	5.00 x 450	3/16 x 18”	190 - 240	10230

Approvals: CE, SEPRO

Low Alloyed High Strength Electrode

TEMPO B 85 M

Standards

TSENIS018275-A	: E 69 5 Mn2NiCrMo B 42 H5
EN ISO 18275-A	: E 69 5 Mn2NiCrMo B 42 H5
AWS A5.5	: E11018-MH4

Chemical Composition of Weld Metal % (Typical)

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

Mechanical Properties

Yield Strength (N/mm^2)	**Tensile Strength** (N/mm^2)	**Impact Strength** (ISO-V/-50°C)	**Elongation** ($L_0=5d_0$) (%)
min. 690	760-960	min. 47 J	min. 20

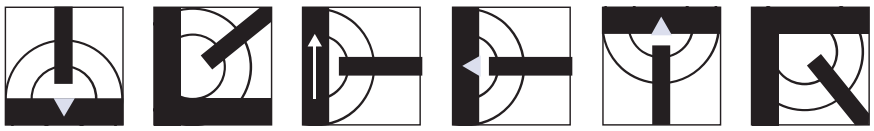
Typical Base Material Grades

- S620QL-S690QL, S620QL 1, 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 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
3010100609	2.50 x 350	3/32 x 14”	80 - 110	2250
3010100612	3.20 x 350	1/8 x 14”	100 - 140	3610
3010100618	4.00 x 450	5/32 x 18”	130 - 190	6850
3010100624	5.00 x 450	3/16 x 18”	190 - 240	10520

Approvals: CE, ABS, SEPRO

Low Alloyed High Strength Electrode

TEMPO B 90

Standards

TS EN ISO 18275-A	: E 69 5 Z Mn2NiCrMo B 4 2 H5
EN ISO 18275-A	: E 69 5 Z Mn2NiCrMo B 4 2 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** ($L_0=5d_0$) (%)	**Heat Treatment**
min. 740	830-950	min. 28 J	min. 17	560-600° C / 1h / 300° C (air)

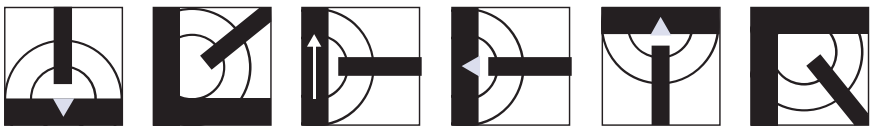
Typical Base Material Grades

- 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 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
3010100627	3.2 x 350	1/8 x 14”	90 - 140	3670
3010100630	4.0 x 450	5/32 x 18”	130 - 190	6740
3010100633	5.0 x 450	3/16 x 18”	170 - 240	10530

Approvals: CE, SEPRO

Low Alloyed High Strength Electrode

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	: E7018-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** ($L_0=5d_0$) (%)
min. 420	510 - 630	min. 47 J	min. 22

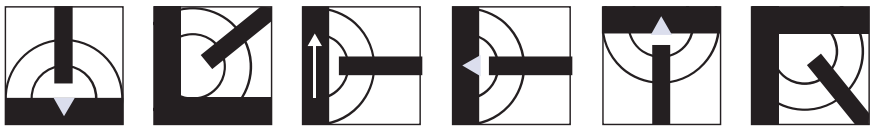
Typical Base Material Grades

- 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 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
3010100636	2.5 x 350	3/32 x 14”	80-110	2240
3010100639	3.2 x 350	1/8 x 14”	130-150	3520
3010100645	4.0 x 450	5/32 x 18”	150-190	6580
3010100648	5.0 x 450	3/16 x 18”	200-250	10100

Approvals: TSE, CE, SEPRO

Low Alloyed High Strength Electrode

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** ($L_0=5d_0$) (%)
min. 460	550 - 680	min. 47 J	min. 20

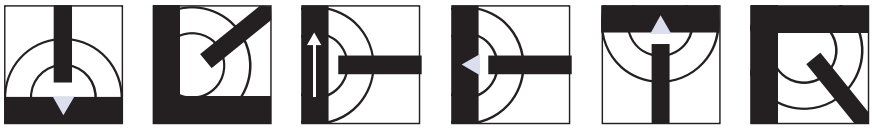
Typical Base Material Grades

- 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 of 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
3010100651	2.50 x 350	3/32 x 14”	80 - 110	2200
3010100654	3.20 x 350	1/8 x 14”	130 - 150	3550
3010100657	4.00 x 450	5/32 x 18”	150 - 190	6700

Approvals: CE, SEPRO, TSE

Low Alloyed High Strength Electrode

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** ($L_0=5d_0$) (%)
min. 470	550-680	min. 47 J	min. 24

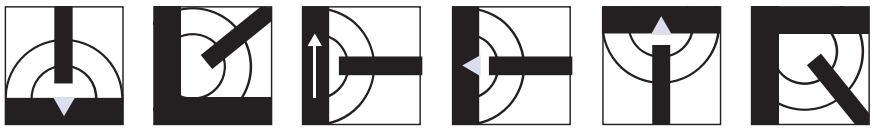
Typical Base Material Grades

- 11 MnNi53, 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 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
3010100660	2.50 x 350	3/32 x 14”	70 - 100	2190
3010100663	3.20 x 350	1/8 x 14”	110 - 140	3440
3010100669	4.00 x 350	5/32 x 14”	140 - 180	5130
3010100672	4.00 x 450	5/32 x 18”	140 -190	6650
3010100678	5.00 x 450	3/16 x 18”	190 - 240	10500

Approvals: TSE, CE, SEPRO

Low Alloyed High Strength Electrode

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	: E8018-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 ($L_0=5d_0$) (%)	Heat Treatment
min. 460	550 - 690	min. 47 J	min. 20	605°C / 2h / 300°C (air)

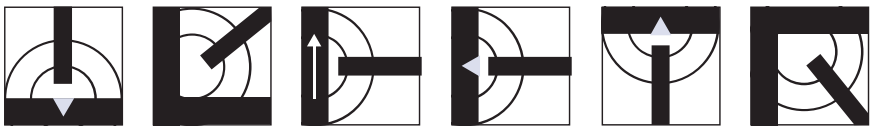
Typical Base Material Grades

- 12Ni14, 14Ni6, 13MnNi6-3, G12Ni14, S255N-S460N, S255NH-S460NH, S255NL-S460NL, S255NL1-S460NL 1,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 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
3010100681	2.50 x 350	3/32 x 14”	70 -100	2170
3010100684	3.20 x 350	1/8 x 14”	110 - 140	3700
3010100687	4.00 x 450	5/32 x 18”	140 - 180	6900
3010100690	5.00 x 450	3/16 x 18”	190 - 230	10500

Approvals: TSE, CE, SEPRO

Low Alloyed High Strength Electrode

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** ($L_0=5d_0$) (%)	**Heat Treatment**
min. 460	550 - 700	min. 47 J	min. 24	605°C / 2h / 300°C (air)

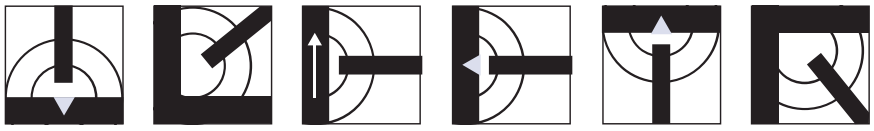
Typical Base Material Grades

- Cold-tough steels: 10 Ni14, 16Ni16, S 255NL1-SS00NL1, 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 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
3010100693	2.50 x 350	3/32 x 14”	70 - 110	2220
3010100696	3.20 x 350	1/8 x 14”	110 - 140	3650
3010100702	4.00 x 450	5/32 x 18”	140 - 180	6600
3010100705	5.00 x 450	3/16 x 18”	190 - 230	10500

Approvals: TSE, CE, SEPRO

По вопросам продаж и поддержки обращайтесь:

Алматы (727)345-47-04
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Саранск (8342)22-96-24
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70

Казахстан +(727)345-47-04

Беларусь +(375)257-127-884

Узбекистан +998(71)205-18-59

Киргизия +996(312)96-26-47

эл.почта: gak@nt-rt.ru || сайт: https://geka.nt-rt.ru