

Covered Electrodes

Mild Steel
High Tensile Steel
Low Hydrogen Steel
Stainless Steel



KISWEL
WELDING PRODUCTS

Supplier... For The Highest Demands

Covered Electrodes

AWS E6010

KCL-10

AWS E6011

KCL-11

Mild Steel

AWS E6013

KR-3000

Typical Applications

Used in pressure piping, ship building, tank assembly, galvanized steels and casting repairs.

Welding of steel plates and sheet, piping and ship construction.

Used for light to medium construction work for all position. Excellent operator appeal. Works well with poor fit-up applications.

Characteristics Of Usage

1. Excellent penetration with good fusion makes this the preferred choice for pipeline welding.
2. Low slag volume results and easy slag removal with good bead appearance.

1. Excellent all position general construction electrode designed for use on both DC and AC current.
2. Slightly higher slag volume than E6010 with good bead appearance.
3. Produces good mechanical properties, meets x-ray requirements.

1. Excellent striking and restriking properties.
2. Excellent slag removal and arc transfer.
3. Excellent bead appearance without undercut.

Weld Metal Composition

Carbon	0.10 %
Silicon	0.20 %
Manganese	0.47 %
Phosphorus	0.014 %
Sulphur	0.012 %

Carbon	0.08 %
Silicon	0.37 %
Manganese	0.66 %
Phosphorus	0.015 %
Sulphur	0.013 %

Carbon	0.07 %
Silicon	0.32 %
Manganese	0.45 %
Phosphorus	0.015 %
Sulphur	0.012 %

Mechanical Properties

Y-P (psi)	60,916
T-S (psi)	72,519
EI	24 %
V-Notch	37 ft/lb @ -20°F

Y-P (psi)	59,465
T-S (psi)	72,519
EI	24 %
V-Notch	37 ft/lb @ -20°F

Y-P (psi)	62,366
T-S (psi)	69,618
EI	29 %
V-Notch	52 ft/lb @ -20°F

Available Sizes / Rec. Parameters

Dia inches	Amp	
	Flat	V&OH
3/32 (2.4)	50-80	40-70
1/8 (3.2)	70-110	60-100
5/32 (4.0)	110-150	90-130
3/16 (5.0)	160-200	140-170

Dia inches	Length inches	Amp	
		Flat	V&OH
3/32 (2.4)	11.8 (300)	50-80	
1/8 (3.2)	13.8 (350)	70-110	
5/32 (4.0)	13.8 (350)	110-150	
3/16 (5.0)	13.8 (350)	160-200	

Dia inches	Length inches	Amp	
		Flat	V&OH
3/32 (2.4)	13.8 (350)	60-100	60-90
1/8 (3.2)	13.8 (350)	80-130	80-120
5/32 (4.0)	15.7 (400)	130-180	90-140
3/16 (5.0)	15.7 (400)	160-220	120-190
1/4 (6.0)	17.7 (450)	210-280	-

Packaging

10# (5 kg) Carton

10# (5 kg) Carton

10# (5 kg) Carton

[Detailed Packaging Information](#)

[Detailed Packaging Information](#)

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Welding Positions

Flat, Vertical, Horizontal and Overhead

Flat, Vertical, Horizontal and Overhead

Flat, Vertical, and Overhead

Approved

ABS, BV, CWB, LR, NK, JIS

ABS, CWB, DNV, LR, JIS

ABS, BV, CWB, DNV, GL, KR, LR, NK, JIS, KS



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Covered Electrodes

AWS E7024

K-7024

High Tensile Steel

Typical Applications

Flat and horizontal fillet welding of ship structures, bridges, structural steels for buildings and general structures.

Characteristics Of Usage

1. Designed for high efficiency in single and multiple pass welds.
2. Quiet and stable arc with good bead appearance and excellent operator appeal.
3. Easy slag removal, self-releasing.

Weld Metal Composition

Carbon	0.08 %
Silicon	0.35 %
Manganese	0.78 %
Phosphorus	0.016 %
Sulphur	0.012 %

Mechanical Properties

Y-P (psi) 69,618
T-S (psi) 82,672
EI 28 %
V-Notch 52 ft/lb @ 32°F

Available Sizes / Rec. Parameters

Dia in (mm)	Length in (mm)	Amp	
		Flat	H-Fil
1/8 (3.2)	11.8 (300)	100-150	100-150
5/32 (4.0)	13.8 (350)	140-190	140-190
3/16 (5.0)	13.8 (350)	200-250	200-250
7/32 (5.6)	13.8 (350)	230-270	230-270

Packaging

10# (5 kg) Carton

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Welding Positions

Flat and Horizontal Welding Positions

Approved

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Covered Electrodes

AWS E7018

K-7018

AWS E7018-1

K-7018N

Low Hydrogen

AWS E8018-G

K-8018

Typical Applications

Welding of 71 ksi class high tensile strength steels of ships, bridges, storage tanks, building, industrial machinery and mining machinery.

Welding of nuclear reactor vessels, pressure vessels, LPG tankers, LPG storage tanks and similar installations at low temperature.

Welding of 78 ksi class high strength low alloy steel of ships, bridges, storage tanks and buildings.

Characteristics Of Usage

1. Excellent usability with direct current applications.

1. Excellent impact value at -51°F.
2. Excellent mechanical properties.

1. Excellent mechanical properties with good crack resistance of deposited weld metal.

Weld Metal Composition

Carbon	0.07 %
Silicon	0.57 %
Manganese	0.97 %
Phosphorus	0.012 %
Sulphur	0.010 %

Carbon	0.07 %
Silicon	0.58 %
Manganese	1.38 %
Nickel	0.15 %

Carbon	0.06 %
Silicon	0.54 %
Manganese	1.08 %
Nickel	0.31 %
Molybdenum	0.20 %

Mechanical Properties

Y-P (psi)	69,618
T-S (psi)	82,672
EI	30%
V-Notch	66 ft/lb @ -20°F

Y-P (psi)	73,969
T-S (psi)	85,572
EI	32 %
V-Notch	96 ft/lb @ -51°F

Y-P (psi)	71,068
T-S (psi)	85,572
EI	28 %
V-Notch	110 ft/lb @ -20°F

Available Sizes / Rec. Parameters

Dia in (mm)	Length in (mm)	Amp	
		Flat	V&OH
3/32 (2.4)	13.8 (350)	60-100	50-80
1/8 (3.2)	13.8 (350)	90-130	80-120
5/32 (4.0)	15.7 (400)	130-180	110-170
3/16 (5.0)	15.7 (400)	200-250	160-210

Dia in (mm)	Length in (mm)	Amp	
		Flat	V&OH
3/32 (2.4)	13.8 (350)	70-100	60-90
1/8 (3.2)	13.8 (350)	90-130	85-120
5/32 (4.0)	15.7 (400)	150-190	110-160
3/16 (5.0)	15.7 (400)	160-220	130-180
1/4 (6.0)	17.7 (450)	180-230	-

Dia in (mm)	Length in (mm)	Amp	
		Flat	V&OH
3/32 (2.4)	13.8 (350)	60-90	50-80
1/8 (3.2)	13.8 (350)	90-130	80-110
5/32 (4.0)	15.7 (400)	140-190	120-170
3/16 (5.0)	15.7 (400)	180-230	160-200
1/4 (6.0)	17.7 (450)	250-300	-

Packaging

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Welding Positions

All Welding Positions

All Welding Positions

All Welding Positions

Approved

ABS, BV, CWB, DNV, GL, KR, LR, NK, JIS, KS

CWB, DNV, LR

ABS, JIS



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Covered Electrodes

AWS E9018-M

K-9018M

AWS E11018-M

K-11018M

Low Hydrogen

Typical Applications

Welding of 85.5 ksi class high strength low alloy steel of pressure vessels, bridges, machinery and penstocks.

Welding of low alloy high strength steels having tensile properties of about 107-114 ksi steels such as HY80, etc.

Characteristics Of Usage

1. Excellent mechanical properties especially in notch toughness.
2. Meets stringent radiographic standards for welding of alloy steels.

1. Excellent operational performance in all positions.
2. Good impact value at -60° F.

Weld Metal Composition

Carbon	0.07 %
Silicon	0.51 %
Manganese	1.10 %
Chromium	0.10 %
Nickel	1.58 %
Molybdenum	0.20 %

Carbon	0.08 %
Silicon	0.41 %
Manganese	1.49 %
Chromium	0.32 %
Nickel	1.86 %
Molybdenum	0.32 %

Mechanical Properties

Y-P (psi)	82,672
T-S (psi)	97,175
EI	30 %
V-Notch	66 ft/lb @ -60°F

Y-P (psi)	104,427
T-S (psi)	118,931
EI	23 %
V-Notch	44 ft/lb @ -60°F

Available Sizes / Rec. Parameters

Dia in (mm)	Length in (mm)	Amp	
		Flat	V&OH
3/32 (2.4)	13.8 (350)	50-100	40-80
1/8 (3.2)	13.8 (350)	90-130	80-115
5/32 (4.0)	15.7 (400)	140-190	110-160
3/16 (5.0)	15.7 (400)	190-240	140-170
1/4 (6.0)	17.7 (450)	250-310	-

Dia in (mm)	Length in (mm)	Amp	
		Flat	V&OH
3/32 (2.4)	13.8 (350)	50-100	40-90
1/8 (3.2)	13.8 (350)	90-130	80-120
5/32 (4.0)	15.7 (400)	130-180	110-160
3/16 (5.0)	15.7 (400)	180-240	140-200
1/4 (6.0)	17.7 (450)	250-320	-

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Welding Positions

Flat, Vertical, Horizontal and Overhead

Flat, Vertical, Horizontal and Overhead

Approved



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Covered Electrodes

AWS E307-15

KST-307-15

Typical Applications

Welding of dissimilar steel and joining work hardenable steels, armor plate, austenitic manganese steels, and heat-resisting steels for temperatures up to 662°F.

Characteristics Of Usage

1. For use on direct current electrode positive only.

Weld Metal Composition

Carbon	0.06 %
Silicon	0.78 %
Manganese	4.68 %
Chromium	18.50 %
Nickel	9.30 %
Molybdenum	0.60 %

Mechanical Properties

T-S (psi)	94,275
EI	48 %

Available Sizes / Rec. Parameters

Dia in (mm)	Length in (mm)	Amp	
		Flat	V&OH
3/32 (2.4)	11.8 (300)	55-80	45-60
1/8 (3.2)	13.8 (350)	80-120	70-90
5/32 (4.0)	13.8 (350)	110-150	90-130
3/16 (5.0)	13.8 (350)	140 -180	-

Packaging

10# (5 kg) Carton

Detailed Packaging Information

Welding Positions

All Welding Positions

Approved

AWS E308-15

KST-308-15

Welding of 18%Cr-8%Ni stainless steel, (AISI 301, 302, 304 ,308).

1. Good performance without hardening brittleness due to austenitic structure of the deposited weld metal.
2. Good heat resistance and corrosion resistance.

Carbon	0.06 %
Silicon	0.38 %
Manganese	1.54 %
Chromium	20.50 %
Nickel	9.60 %

T-S (psi)	87,023
EI	38 %

Dia in (mm)	Length in (mm)	Amp	
		Flat	
5/64 (2.0)	9.8 (250)	40-50	
3/32 (2.4)	11.8 (300)	50-80	
1/8 (3.2)	13.8 (350)	80-110	
5/32 (4.0)	13.8 (350)	110-150	
3/16 (5.0)	13.8 (350)	140 -180	

10# (5 kg) Carton

Detailed Packaging Information

All Welding Positions

Stainless Steel

AWS E308-16

KST-308-16

Welding of 18%Cr-8%Ni stainless steel (AISI 301, 302, 304 ,308)

1. Good performance without hardening brittleness due to austenitic structure of the deposited weld metal.
2. Good heat resistance and corrosion resistance.

Carbon	0.05 %
Silicon	0.78 %
Manganese	1.22 %
Chromium	19.30 %
Nickel	9.30 %

T-S (psi)	84,122
EI	44 %
40 % HNO ₃	0.09 g/m ² · hr

Dia in (mm)	Length in (mm)	Amp	
		Flat	V&OH
5/64 (2.0)	9.8 (250)	40-50	35-45
3/32 (2.4)	11.8 (300)	50-80	40-60
1/8 (3.2)	13.8 (350)	80-110	70-100
5/32 (4.0)	13.8 (350)	110-150	90-130
3/16 (5.0)	13.8 (350)	140-180	-

10# (5 kg) Carton

Detailed Packaging Information

All Welding Positions

ABS, BV, CWB, DNV, GL, KR



Covered Electrodes

AWS E308L-15

KST-308L-15

AWS E308L-16

KST-308L-16

Stainless Steel

AWS E308Mo-16

KST-308Mo-16

Typical Applications

Welding of low carbon 18%Cr-8%Ni stainless steel, (AISI 301, 302, 304, 308, (AISI(SUS)304L).

Welding of low carbon 18%Cr-8%Ni stainless steel (AISI (SUS) 304L).

Butt and Fillet welding of ASTM CF8M stainless steel castings. Used for welding wrought materials such as Type 316L stainless when increased ferrite is desired.

Characteristics Of Usage

1. Excellent welding efficiency because of high deposition rate.
2. Remove water, rust, oil and all foreign matters from the groove prior to welding.
3. Preheating is not necessary in general.

1. Excellent welding efficiency because of high deposition rate.
2. Remove water, rust, oil and all foreign matters from the groove prior to welding.

1. Welds without brittleness due to structure of deposited weld metal.
2. Good heat and corrosion resistance.
3. All welds should be cleaned with a clean stainless steel wire brush.

Weld Metal Composition

Carbon	0.03 %
Silicon	0.41 %
Manganese	1.67 %
Chromium	20.6 %
Nickel	9.5 %

Carbon	0.05 %
Silicon	0.78 %
Manganese	1.22 %
Chromium	19.3 %
Nickel	9.3 %

Carbon	0.05 %
Silicon	0.36 %
Manganese	1.42 %
Chromium	19.8 %
Nickel	9.4 %
Molybdenum	2.1 %

Mechanical Properties

T-S (psi)	79,771
EI	44 %
40% HNO ₃	0.06 g/m ² · hr

T-S (psi)	79,771
EI	44 %
40% HNO ₃	0.06 g/m ² · hr

T-S (psi)	88,473
EI	38 %
5% H ₂ SO ₄	5.0 g/m ² · hr

Available Sizes / Rec. Parameters

Dia in (mm)	Length in (mm)	Amp	
		Flat	V&OH
5/64 (2.0)	9.8 (250)	40-50	35-45
3/32 (2.4)	11.8 (300)	55-80	45-60
1/8 (3.2)	13.8 (350)	90-130	70-90
5/32 (4.0)	13.8 (350)	110-150	90-130
3/16 (5.0)	13.8 (350)	140-170	-

Dia in (mm)	Length in (mm)	Amp	
		Flat	V&OH
5/64 (2.0)	9.8 (250)	40-50	35-45
3/32 (2.4)	11.8 (300)	55-80	45-60
1/8 (3.2)	13.8 (350)	90-130	70-90
5/32 (4.0)	13.8 (350)	110-150	90-130
3/16 (5.0)	13.8 (350)	140-180	-

Dia in (mm)	Length in (mm)	Amp	
		Flat	V&OH
3/32 (2.4)	13.8 (350)	50-80	40-70
1/8 (3.2)	13.8 (350)	70-110	60-90
5/32 (4.0)	13.8 (350)	110-150	90-130
3/16 (5.0)	13.8 (350)	140-180	-

Packaging

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Welding Positions

All Welding Positions

All Welding Positions

All Welding Positions

Approved

ABS, BV, CWB, GL, LR, TUV



Covered Electrodes

AWS E309-15

KST-309-15

Typical Applications

Welding of 22%Cr-12%Ni stainless steel and heat-resisting castings, clad side of type 304 clad steels. Welding of dissimilar steels such as Cr-Mo steel or carbon steel to stainless steel.

Characteristics Of Usage

1. The deposited weld metal contains optimized levels of ferrite to resist weld metal cracking.
2. Good heat resistance and corrosion resistance.

Weld Metal Composition

Carbon	0.05 %
Silicon	0.36 %
Manganese	1.83 %
Chromium	24.5 %
Nickel	13.3 %

Mechanical Properties

T-S (psi)	88,473
EI	39 %

Available Sizes / Rec. Parameters

Dia in (mm)	Length in (mm)	Amp	
		Flat	V&OH
5/64 (2.0)	9.8 (250)	40-50	35-45
3/32 (2.4)	11.8 (300)	55-80	45-60
1/8 (3.2)	13.8 (350)	80-110	70-90
5/32 (4.0)	13.8 (350)	110-150	90-130
3/16 (5.0)	13.8 (350)	140-180	-

Packaging

10# (5 kg) Carton

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Welding Positions

All Welding Positions

Approved

AWS E309-16

KST-309-16

Welding of 22%Cr-12%Ni stainless steel and heat-resisting castings, clad side of type 304 clad steels. Welding of dissimilar steels such as Cr-Mo steel or carbon steel to stainless steel.

1. The deposited weld metal contains optimized levels of ferrite to resist weld metal cracking.
2. Good heat resistance and corrosion resistance.

Carbon	0.06 %
Silicon	0.72 %
Manganese	1.36 %
Chromium	23.6 %
Nickel	12.6 %

T-S (psi)	79,771
EI	44 %
40% HNO ₃	0.08 g/m ² · hr

Dia in (mm)	Length in (mm)	Amp	
		Flat	V&OH
5/64 (2.0)	9.8 (250)	40-50	35-45
3/32 (2.4)	11.8 (300)	55-80	45-60
1/8 (3.2)	13.8 (350)	90-130	70-90
5/32 (4.0)	13.8 (350)	110-150	90-130
3/16 (5.0)	13.8 (350)	140-170	-

10# (5 kg) Carton

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All Welding Positions

Stainless Steel

AWS E309L-15

KST-309L-15

Welding of 22%Cr-12%Ni steel and heat-resisting castings, clad stainless steel. Welding of dissimilar metal such as carbon steel to stainless steel.

1. The deposited weld metal contains optimized levels of ferrite to resist weld metal cracking.

Carbon	0.03 %
Silicon	0.40 %
Manganese	1.92 %
Chromium	24.3 %
Nickel	13.3 %

T-S (psi)	85,572
EI	38 %

Dia in (mm)	Length in (mm)	Amp	
		Flat	V&OH
5/64 (2.0)	9.8 (250)	30-50	25-45
3/32 (2.4)	11.8 (300)	50-80	40-60
1/8 (3.2)	13.8 (350)	80-110	70-90
5/32 (4.0)	13.8 (350)	100-150	80-130
3/16 (5.0)	13.8 (350)	140-180	-

10# (5 kg) Carton

[Detailed Packaging Information](#)

All Welding Positions



Covered Electrodes

AWS E309L-16

KST-309L-16

AWS E309Mo-15

KST-309Mo-15

Stainless Steel

AWS E309Mo-16

KST-309Mo-16

Typical Applications

Welding of 22%Cr-12%Ni steel and heat-resisting castings, clad stainless steel. Welding of dissimilar metal such as carbon steel to stainless steel.

Build-up welding of Cr-Mo steel or carbon steel. Welding of AISI(SUS)316 clad steel or dissimilar steels.

Build-up welding of Cr-Mo steel or carbon steel. Welding of AISI(SUS)316 clad steel or dissimilar steels.

Characteristics Of Usage

1. The deposited weld metal has optimal ferrite levels to resist weld metal cracking.
2. Product also has excellent resistance to corrosion and intergranular attack.

1. Excellent crack resistance especially in the welding of dissimilar steels such as stainless steel to carbon steel.
2. Product intended for use with direct current only.

1. Excellent crack resistance especially in the welding of dissimilar steels such as stainless steel to carbon steel.

Weld Metal Composition

Carbon	0.03 %
Silicon	0.71 %
Manganese	1.34 %
Chromium	23.7 %
Nickel	12.6 %

Carbon	0.06 %
Silicon	0.35 %
Manganese	1.84 %
Chromium	22.2 %
Nickel	12.4 %
Molybdenum	2.4 %

Carbon	0.06 %
Silicon	0.78 %
Manganese	1.47 %
Chromium	23.2 %
Nickel	12.4 %
Molybdenum	2.3 %

Mechanical Properties

T-S (psi)	79,771
EI	44 %
40% HNO ₃	0.06 g/m ² · hr

T-S (psi)	91,374
EI	36 %
5% H ₂ SO ₄	5.5 g/m ² · hr

T-S (psi)	91,374
EI	34 %
5% H ₂ SO ₄	5.5 g/m ² · hr

Available Sizes / Rec. Parameters

Dia in (mm)	Length in (mm)	Amp	
		F/H-Fil	V&OH
5/64 (2.0)	9.8 (250)	30-50	25-45
3/32 (2.4)	11.8 (300)	50-80	40-60
1/8 (3.2)	13.8 (350)	80-110	70-90
5/32 (4.0)	13.8 (350)	110-150	90-130
3/16 (5.0)	13.8 (350)	140-180	-

Dia in (mm)	Length in (mm)	Amp	
		Flat	V&OH
3/32 (2.4)	11.8 (300)	60-80	50-60
1/8 (3.2)	13.8 (350)	80-110	70-90
5/32 (4.0)	13.8 (350)	100-140	90-130
3/16 (5.0)	13.8 (350)	140-180	-

Dia in (mm)	Length in (mm)	Amp	
		Flat	V&OH
3/32 (2.4)	11.8 (300)	50-70	40-60
1/8 (3.2)	13.8 (350)	80-100	70-90
5/32 (4.0)	13.8 (350)	110-140	90-130
3/16 (5.0)	13.8 (350)	140-170	-

Packaging

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Welding Positions

All Welding Positions

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Approved

ABS, CWB

DNV



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Covered Electrodes

AWS E309MoL-16

KST-309MoL-16

AWS E310-16

KST-310-16

Stainless Steel

AWS E312-16

KST-312-16

Typical Applications

Build-up welding of AISI(SUS)316 clad steel or dissimilar steels.

Welding of AISI(SUS) 3105, SCS 18 and clad side of 18%Cr-8%Ni stainless clad steels.

Welding of 29%Cr-9%Ni type cast steels and difficult-to-weld steels. Joint welding and hardfacing of stainless steel and heat-resisting steels.

Characteristics Of Usage

1. Excellent crack resistance especially in the welding of dissimilar steels such as stainless steel to carbon steel.

1. The deposited weld metal has optimized austenitic structure.
2. Good mechanical property and heat resistance of the deposited weld metal.

1. Improved crack resistance due to high quantity of ferrite in the deposited weld metal.

Weld Metal Composition

Carbon	0.03 %
Silicon	0.76 %
Manganese	1.78 %
Chromium	23.2 %
Nickel	13.1 %
Molybdenum	2.4 %

Carbon	0.11 %
Silicon	0.40 %
Manganese	1.86 %
Chromium	25.6 %
Nickel	20.8 %

Carbon	0.08 %
Silicon	0.45 %
Manganese	1.30 %
Chromium	29.1 %
Nickel	8.5 %

Mechanical Properties

T-S (psi)	85,572
EI	41 %

T-S (psi)	85,572
EI	40 %
40% HNO ₃	0.08 g/m ² · hr

T-S (psi)	111,679
EI	24 %

Available Sizes / Rec. Parameters

Dia in (mm)	Length in (mm)	Amp	
		Flat	V&OH
5/64 (2.0)	9.8 (250)	30-55	25-45
3/32 (2.4)	11.8 (300)	55-80	45-60
1/8 (3.2)	13.8 (350)	90-120	70-90
5/32 (4.0)	13.8 (350)	100-140	90-130
3/16 (5.0)	13.8 (350)	140 -180	-

Dia in (mm)	Length in (mm)	Amp	
		Flat	V&OH
5/64 (2.0)	9.8 (250)	30-50	25-45
3/32 (2.4)	11.8 (300)	50-80	40-60
1/8 (3.2)	13.8 (350)	80-110	70-90
5/32 (4.0)	13.8 (350)	110-140	90-130
3/16 (5.0)	13.8 (350)	140 - 180	-

Dia in (mm)	Length in (mm)	Amp	
		F	V&OH
3/32 (2.4)	11.8 (300)	40-80	35-75
1/8 (3.2)	13.8 (350)	70-110	70-90
5/32 (4.0)	13.8 (350)	110-140	80-120
3/16 (5.0)	13.8 (350)	140 -180	-

Packaging

10# (5 kg) Carton

10# (5 kg) Carton

10# (5 kg) Carton

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Welding Positions

All Welding Positions

All Welding Positions

All Welding Positions

Approved

KR

CWB



KISWEL
WELDING PRODUCTS

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Covered Electrodes

AWS E316-15

KST-316-15

Typical Applications

Welding of 18%Cr-12%Ni-Mo stainless steel (AISI(SUS) 316). Welding of dissimilar steels.

Characteristics Of Usage

1. Especially suitable for flat and horizontal fillet welding.
2. Excellent corrosion resistance against sulphurous acid, phosphoric acid and acetic acid.

Weld Metal Composition

Carbon	0.06 %
Silicon	0.39 %
Manganese	1.18 %
Chromium	18.9 %
Nickel	11.5 %
Molybdenum	2.3 %

Mechanical Properties

T-S (psi)	84,122
EI	41 %
5% H ₂ SO ₄	0.06 g/m ² · hr

Available Sizes / Rec. Parameters

Dia in (mm)	Length in (mm)	Amp	
		F	V&OH
5/64 (2.0)	9.8 (250)	40-50	35-45
3/32 (2.4)	11.8 (300)	50-70	40-60
1/8 (3.2)	13.8 (350)	80-120	70-90
5/32 (4.0)	13.8 (350)	110-140	90-130
3/16 (5.0)	13.8 (350)	140 -170	-

Packaging

10# (5 kg) Carton

Detailed Packaging Information

Welding Positions

All Welding Positions

Approved

AWS E316-16

KST-316-16

Welding of 18%Cr-12%Ni-Mo stainless steels (AISI316). Welding of dissimilar steels.

1. Especially suitable for flat and horizontal fillet welding.
2. Excellent corrosion resistance against sulphurous acid, phosphoric acid and acetic acid.

Carbon	0.06 %
Silicon	0.73 %
Manganese	1.18 %
Chromium	18.3 %
Nickel	12.5 %
Molybdenum	2.3 %

T-S (psi)	82,672
EI	41 %
5% H ₂ SO ₄	4.6 g/m ² · hr

Dia in (mm)	Length in (mm)	Amp	
		F	V&OH
5/64 (2.0)	9.8 (250)	40-50	35-45
3/32 (2.4)	11.8 (300)	50-80	45-60
1/8 (3.2)	13.8 (350)	80-120	70-90
5/32 (4.0)	13.8 (350)	110-150	90-130
3/16 (5.0)	13.8 (350)	140 -180	-

10# (5 kg) Carton

Detailed Packaging Information

All Welding Positions

ABS, BV, CWB, GL

Stainless Steel

AWS E316L-15

KST-316L-15

Welding of low carbon 18%Cr-12%Ni-Mo stainless steels, austenitic stainless steels which are required and places where heat treatment after welding is impossible.

1. Good crack resistance and usability.
2. Better resistance to intergranular corrosion than the E316 grade.

Carbon	0.03 %
Silicon	0.40 %
Manganese	1.21 %
Chromium	19.2 %
Nickel	11.4 %
Molybdenum	2.3 %

T-S (psi)	85,572
EI	39 %
5% H ₂ SO ₄	5.0 g/m ² · hr

Dia in (mm)	Length in (mm)	Amp	
		F	V&OH
5/64 (2.0)	9.8 (250)	40-50	35-45
3/32 (2.4)	11.8 (300)	55-70	45-60
1/8 (3.2)	13.8 (350)	80-100	70-90
5/32 (4.0)	13.8 (350)	110-150	90-130
3/16 (5.0)	13.8 (350)	140 -170	-

10# (5 kg) Carton

Detailed Packaging Information

All Welding Positions



Covered Electrodes

AWS E316L-16

KST-316L-16

AWS E317L-16

KST-317-16

Stainless Steel

AWS E317L-16

KST-317L-16

Typical Applications

Welding of low carbon 18%Cr-12%Ni-Mo stainless steels, austenitic stainless steels which are required and places where heat treatment after welding is impossible.

Welding of AISI(SUS)317. Welding of dissimilar steels such as carbon steel to stainless steels.

Welding of low carbon 18%Cr-12%Ni-3%Mo which requires excellent corrosion resistance to sulfuric acid and solutions containing these salts.

Characteristics Of Usage

1. Optimum ferrite in the austenitic structure helps resist weld metal cracking.
2. Better resistance to intergranular corrosion than the E316 grade.

1. Good weldability and performance.
2. Reduced susceptibility of pitting.

1. Good weldability and performance.
2. Reduced susceptibility of pitting.

Weld Metal Composition

Carbon	0.03 %
Silicon	0.72 %
Manganese	1.08 %
Chromium	18.4 %
Nickel	12.5 %
Molybdenum	2.3 %

Carbon	0.06 %
Silicon	0.74 %
Manganese	1.20 %
Chromium	18.5 %
Nickel	12.3 %
Molybdenum	3.2 %

Carbon	0.03 %
Silicon	0.75 %
Manganese	1.24 %
Chromium	18.6 %
Nickel	12.4 %
Molybdenum	3.3 %

Mechanical Properties

T-S (psi)	78,320
EI	43%
5% H ₂ SO ₄	5.0 g/m ² · hr

T-S (psi)	84,122
EI	42%
5% H ₂ SO ₄	4.6 g/m ² · hr

T-S (psi)	81,221
EI	44%
5% H ₂ SO ₄	4.0 g/m ² · hr

Available Sizes / Rec. Parameters

Dia in (mm)	Length in (mm)	Amp	
		F	V&OH
5/64 (2.0)	9.8 (250)	40-50	35-45
3/32 (2.4)	11.8 (300)	50-70	40-60
1/8 (3.2)	13.8 (350)	80-120	70-90
5/32 (4.0)	13.8 (350)	110-140	90-130
3/16 (5.0)	13.8 (350)	140-170	-

Dia in (mm)	Length in (mm)	Amp	
		F	V&OH
5/64 (2.0)	9.8 (250)	40-50	35-45
3/32 (2.4)	11.8 (300)	55-90	45-60
1/8 (3.2)	13.8 (350)	80-110	70-90
5/32 (4.0)	13.8 (350)	110-150	90-130
3/16 (5.0)	13.8 (350)	140-180	-

Dia in (mm)	Length in (mm)	Amp	
		F	V&OH
5/64 (2.0)	9.8 (250)	40-60	35-45
3/32 (2.4)	11.8 (300)	55-80	40-60
1/8 (3.2)	13.8 (350)	80-110	70-90
5/32 (4.0)	13.8 (350)	110-150	90-130
3/16 (5.0)	13.8 (350)	140-180	-

Packaging

10# (5 kg) Carton

10# (5 kg) Carton

10# (5 kg) Carton

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Welding Positions

All Welding Positions

All Welding Positions

All Welding Positions

Approved

ABS, BV, CWB, GL, KR, LR, TUV



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Covered Electrodes

AWS E318-16

KST-318-16

Typical Applications

Welding of AISI 318, 316, 316L stainless steel.

Characteristics Of Usage

1. The deposited weld metal is highly resistant to pitting and general types of corrosion.
2. Highly resistant to intergranular corrosion due to the addition of Nb.

Weld Metal Composition

Carbon	0.05 %
Silicon	0.76 %
Manganese	1.32 %
Chromium	18.5 %
Nickel	11.9 %
Molybdenum	2.3 %

Mechanical Properties

T-S (psi)	91,374
EI	38 %
40% HNO ₃	0.08 g/m ² · hr

Available Sizes / Rec. Parameters

Dia in (mm)	Length in (mm)	Amp	
		F	V&OH
5/64 (2.0)	9.8 (250)	40-60	35-45
3/32 (2.4)	11.8 (300)	50-80	45-60
1/8 (3.2)	13.8 (350)	80-110	60-90
5/32 (4.0)	13.8 (350)	120-150	90-130
3/16 (5.0)	13.8 (350)	140-180	-

Packaging

10# (5 kg) Carton

Detailed Packaging Information

Welding Positions

All Welding Positions

Approved

AWS E347-16

KST-347-16

Welding of AISI(SUS)304L, 321, 347 stainless steel and the place where heat treatment after welding is not possible.

1. Excellent intergranular corrosion resistance.

Carbon	0.06 %
Silicon	0.42 %
Manganese	1.98 %
Chromium	19.9 %
Nickel	9.5 %
Molybdenum	0.6 %

T-S (psi)	91,374
EI	36 %
40% HNO ₃	0.08 g/m ² · hr

Dia in (mm)	Length in (mm)	Amp	
		F	V&OH
5/64 (2.0)	9.8 (250)	40-60	35-45
3/32 (2.4)	11.8 (300)	50-70	45-60
1/8 (3.2)	13.8 (350)	70-110	65-90
5/32 (4.0)	13.8 (350)	100-150	90-130
3/16 (5.0)	13.8 (350)	140-180	-

10# (5 kg) Carton

Detailed Packaging Information

All Welding Positions

Stainless Steel

AWS E347L-16

KST-347L-16

Welding of low carbon AISI(SUS)304L, 321, 347 stainless steel and the place where heat treatment after welding is not possible.

1. Excellent intergranular corrosion resistance.

Carbon	0.03 %
Silicon	0.46 %
Manganese	1.68 %
Chromium	19.4 %
Nickel	9.8 %
Niobium	0.7 %

T-S (psi)	88,473
EI	36 %
40% HNO ₃	0.08 g/m ² · hr

Dia in (mm)	Length in (mm)	Amp	
		F	V&OH
5/64 (2.0)	9.8 (250)	40-60	35-45
3/32 (2.4)	11.8 (300)	55-80	45-60
1/8 (3.2)	13.8 (350)	80-110	70-90
5/32 (4.0)	13.8 (350)	110-140	90-130
3/16 (5.0)	13.8 (350)	140 -170	-

10# (5 kg) Carton

Detailed Packaging Information

All Welding Positions



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Covered Electrodes

AWS E410-16

KST-410-16

Typical Applications

Welding of 13%Cr steel and surfacing of the part where cavitation or corrosion resistance is required.

Characteristics Of Usage

1. Excellent oxidation corrosion and abrasion resistance of the deposited weld metal.
2. Preheat at 212-392°F and postheat treat at 1292-1472°F due to self-hardening.

Weld Metal Composition

Carbon	0.08 %
Silicon	0.70 %
Manganese	0.76 %
Chromium	12.1 %

Mechanical Properties

T-S (psi)	81,221
EI	24 %
PWHT	1346 °F x 1 hr S-R

Available Sizes / Rec. Parameters

Dia in (mm)	Length in (mm)	Amp	
		F	V&OH
3/32 (2.4)	11.8 (300)	60-90	45-60
1/8 (3.2)	13.8 (350)	80-110	70-90
5/32 (4.0)	13.8 (350)	110-150	90-130
3/16 (5.0)	13.8 (350)	150-180	-

Packaging

10# (5 kg) Carton

[Detailed Packaging Information](#)

Welding Positions

All Welding Positions

Approved

Stainless Steel

AWS E430-16

KST-430-16

Welding of 17%Cr stainless steel.
Welding of AISI(SUS)403, 405

1. Preheat at 392-572°F and postheat treat at 1292-1472°F.

Carbon	0.07 %
Silicon	0.42 %
Manganese	0.40 %
Chromium	17.4 %

T-S (psi)	76,870
EI	31 %
PWHT	1400°F x 1 hr S-R

Dia in (mm)	Length in (mm)	Amp	
		F	V&OH
3/32 (2.4)	11.8 (300)	55-70	45-60
1/8 (3.2)	13.8 (350)	80-100	70-90
5/32 (4.0)	13.8 (350)	110-140	90-130
3/16 (5.0)	13.8 (350)	140-170	-

10# (5 kg) Carton

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All Welding Positions



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Tubular Wires
AWS E70T-1C/1M, 9C/9M
KX-200H

AWS E71T-1/1M
K-71TLF

Mild Steel
AWS E71T-1M
K-71TM

Typical Applications

Designed for welding of 70,000 psi tensile steel with outstanding mechanical properties. Typical applications include machinery, shipbuilding, offshore structures, bridges and general fabrication.

Formulated for welding of 71 ksi high tensile steel with outstanding mechanical properties. Typical applications include machinery, shipbuilding, offshore structures, bridges and general fabrications.

Designed for welding of 71 ksi high tensile steel with only Ar/CO₂ mixtures. Typical applications include machinery, shipbuilding, offshore structures, bridges and general fabrications.

Characteristics Of Usage

1. Designed for flat and horizontal position welding.
2. Better CVN toughness at lower temp.
3. Good porosity resistance and used for fillet welding of inorganic zinc-primer coated steels.
4. For semi-automatic, automatic, single- and multiple pass welding.

1. Titania type for all-position welding.
2. Low fume generation, good impact strength at low temperatures.
3. Stable arc, less spatter levels, better bead appearance.
4. 100%CO₂ shielding gas should be used.

1. Titanic type for all-position welding.
2. It provides soft, smooth welding arc with less spatter levels.
3. Efficient welding with deposition rates.
4. Ar+20-25%CO₂ should be used.

Weld Metal Composition

SG	CO ₂
Carbon	0.037 %
Silicon	0.56 %
Manganese	1.60 %
Phosphorus	0.013 %
Sulphur	0.012 %

SG	CO ₂
Carbon	0.03 %
Silicon	0.38 %
Manganese	1.35 %
Phosphorus	0.015 %
Sulphur	0.010 %

SG	Ar+20 % CO ₂
Carbon	0.03 %
Silicon	0.59 %
Manganese	1.44 %
Phosphorus	0.013 %
Sulphur	0.014 %

Mechanical Properties

Y-P (psi)	73,000
T-S (psi)	84,000
EI	28 %
V-notch	68 ft/lb @ -22 °F

Y-P (psi)	75,420
T-S (psi)	82,672
EI	28 %
V-notch	59 ft/lb @ -4 °F

Y-P (psi)	72,519
T-S (psi)	75,420
EI	28 %
V-notch	59 ft/lb @ -4 °F

Available Sizes / Rec. Parameters

Dia in (mm)	F	Amp	
		H-Fil	V
.045 (1.2)	140-300	160-300	
.052 (1.4)	160-380	180-360	
1/16 (1.6)	180-420	220-400	

Dia in (mm)	F	Amp	
		H	V
.045 (1.2)	120-300	120-300	120-220
1/16 (1.6)	200-450	200-400	180-220

Dia in (mm)	F	Amp	
		H-Fil	V
.045 (1.2)	120-300	120-300	120-220
1/16 (1.6)	200-450	200-450	180-240

Packaging

Detailed Packaging Information

Detailed Packaging Information

Detailed Packaging Information

Welding Positions

Flat and Horizontal

Flat, Horizontal, Vertical, Overhead and Vertical Down

Flat, Horizontal, Vertical, Overhead and Vertical Down

Approved

ABS, KR, DNV, GL, LR

ABS, BV, CCS, DNV, GL, KR, LR, NK, RINA, TUV, JIS, KS

ABS, BV, DNV, LR, RINA, TUV, JIS, KS



Tubular Wires
 AWS E71T-11
K-NGS11

Self Shielded

Typical Applications

Self-shielded flux cored wire for lap and fillet welds of mild and medium tensile steels not exceeding 74 ksi. Suitable for prefab, building fabrication, tanks, ornamental iron, farm equipment, repairs and general fabrication.

Characteristics Of Usage

1. Wire is for all position welding of single and multiple pass fabrications.
2. Welding arc is smooth and stable.
3. It is designed for on site general fabrication and structural work requiring no impact properties.
4. Designed for use with DCEN.

Weld Metal Composition

Carbon	0.10 %
Silicon	0.10 %
Manganese	0.55 %
Phosphorus	0.016 %
Sulphur	0.006 %
Aluminum	1.2 %

Mechanical Properties

Y-P (psi)	72,519
T-S (psi)	76,870
EI	23 %

Available Sizes / Rec. Parameters

Dia in (mm)	Amp F
.045 (1.2)	80-200
1/16 (1.6)	160-270
5/64 (2.0)	180-280

Packaging

[Detailed Packaging Information](#)

Welding Positions

All Welding Positions

Approved



Tubular Wires

AWS E70C-6M

KX-706M Plus

Metal Cored

Typical Applications

KX-706M Plus is designed for welding of 70,000 psi tensile steel with only Ar/CO₂ gas mixtures. It is especially suitable for fillet welding and has a high tolerance to primer. Typical applications include machinery, shipbuilding, offshore structures, bridges and fabrication.

Characteristics Of Usage

1. Provides excellent feedability and good penetration, high resistance to porosity, good wetting action and low hydrogen.
2. Slag content generation is same as a solid wire and is a multiple pass wire that can be used without removing slag.
3. Can be used semi-automatically, automatically, single- and multiple pass.

Weld Metal Composition

SG	Ar+20 % CO ₂
Carbon	0.04 %
Silicon	0.45 %
Manganese	1.45 %
Phosphorus	0.014 %
Sulphur	0.013 %

Mechanical Properties

Y-P (psi)	73,000
T-S (psi)	83,000
EI	27 %
V-notch	60 ft/lb @ -22 °F

Available Sizes / Rec. Parameters

Dia in (mm)	Amp	
	F	H
.045 (1.2)	140-300	160-300
.052 (1.4)	160-380	180-360
1/16 (1.6)	180-400	220-380

Packaging

[Detailed Packaging Information](#)

Welding Positions

Flat and Horizontal

Approved



KISWEL
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Tubular Wires

AWS E309LT0-1 /-4

K-309LT0

AWS EC309L

K-309LMT

Stainless Steel

AWS E309LT1-1/-4

K-309LT1

Typical Applications

Designed for MAG welding of low carbon 22%Cr-12%Ni stainless steel. Dissimilar joint welds. Cladding for corrosion resistant weld claddings on ferritic-perlitic steels in boiler and pressure vessel parts up to finegrained steel S500N.

Designed for MAG welding of low carbon 22%Cr-12%Ni stainless steels. It is suitable for automotive exhaust fabricators such as front pipe, bellows, flange. (AISI 409, 436, cladding and dissimilar joint welds).

Designed for low carbon 22%Cr-12%Ni stainless steels. Dissimilar joint welds. Cladding for the first layer of corrosion resistant weld claddings on ferritic-perlitic steels in boiler and pressure vessel parts up to fine-grained steel S500N.

Characteristics Of Usage

1. Designed for use on most carbon steels to type 304 stainless steels.
2. Increased Cr and Ni levels provide good resistance to cracking.
3. Not recommended for use above 750°F.

1. Designed for welding most mild steels to austenitic stainless alloys
2. Increased Cr and Ni provides improved resistance to cracking
3. Not intended for use above 750°F.

1. Designed for welding most mild steels to austenitic stainless alloys
2. Increased Cr and Ni provides improved resistance to cracking
3. Not intended for use above 750°F.

Weld Metal Composition

SG	CO ₂	Ar+20 % CO ₂
Carbon	0.03 %	0.03 %
Silicon	0.65 %	0.72 %
Manganese	1.55 %	1.60 %
Chromium	24.0 %	24.2 %
Nickel	13.2 %	13.3 %

SG	Ar+2 % CO ₂
Carbon	0.03 %
Silicon	0.48 %
Manganese	1.57 %
Chromium	23.9 %
Nickel	12.4 %

SG	CO ₂	Ar+20 % CO ₂
Carbon	0.03 %	0.03 %
Silicon	0.60 %	0.80 %
Manganese	1.40 %	1.92 %
Chromium	23.6 %	23.8 %
Nickel	13.1 %	13.3 %

Mechanical Properties

SG	CO ₂	Ar+20 % CO ₂
T-S (psi)	91,374	92,824
EI	40 %	38 %

SG	Ar+2 % CO ₂
T-S (psi)	81,221
EI	40 %

SG	CO ₂	Ar+20 % CO ₂
T-S (psi)	79,771	87,023
EI	40 %	38 %

Available Sizes / Rec. Parameters

Dia in (mm)	Electrode Extension	Amp
.045 (1.2)	.39" - .79"	100-220
1/16 (1.6)	.59" - .98"	160-260

Dia in (mm)	Electrode Extension	Amp
.045 (1.2)	.39" - .79"	140-220
1/16 (1.6)	.59" - .98"	180-260

Dia in (mm)	Electrode Extension	Amp
.045 (1.2)	.39" - .79"	100-220
1/16 (1.6)	.59" - .98"	160-260

Packaging

.045" (1.2 mm) x 33# (15 kg) spool
1/16" (1.6 mm) x 33# (15 kg) spool

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.045" (1.2 mm) x 33# (15 kg) spool
1/16" (1.6 mm) x 33# (15 kg) spool

[Detailed Packaging Information](#)

.045" (1.2 mm) x 33# (15 kg) spool
1/16" (1.6 mm) x 33# (15 kg) spool

[Detailed Packaging Information](#)

Welding Positions

Flat, Horizontal Fillets and Groove Welds

Flat, Horizontal Fillets and Groove Welds

Flat, Vertical and Overhead

Approved

JIS

KR, JIS



Tubular Wires

AWS E316LTO-1/-4

K-316LT0

AWS E316LTI -1 /-4

K-316LT1

Stainless Steel

AWS E316T0-1 / -4

K-316T

Typical Applications

Designed for MAG welding of low carbon 18%Cr-12%Ni-2%Mo stainless steel. Low carbon content which gives good resistance to most types of corrosion of the weld metal.

Designed for MAG welding of low carbon 18%Cr-12%Ni-2%Mo stainless steels. Low carbon content gives good resistance to most types of corrosion of the weld metal (AISI 316L, 316Ti, 316Cb)

Formulated for MAG welding of 18%Cr-12%Ni-2%Mo stainless steels where increased resistance to pitting corrosion is required (AISI 316, 316L)

Characteristics Of Usage

1. Designed for applications where pitting corrosion is evident as found in pulp and paper mills
2. Increased creep resistance at elevated temperature.

1. Designed for welding type 316L stainless. Addition of Mo resists pitting corrosion typically brought on by sulphuric and sulphurous acids
2. Weldability is excellent with lower crack susceptibility.

1. Low spatter, easy slag removal and good weld soundness.
2. Weldability is excellent with lower crack susceptibility.

Weld Metal Composition

SG	CO ₂	Ar+20% CO ₂
Carbon	0.03 %	0.03 %
Silicon	0.65 %	0.70 %
Manganese	1.58 %	1.62 %
Chromium	19.4 %	19.2 %
Nickel	12.4 %	12.8 %
Molybdenum	2.42 %	2.50 %

SG	CO ₂	Ar+20% CO ₂
Carbon	0.03 %	0.03 %
Silicon	0.65 %	0.75 %
Manganese	1.20 %	1.85 %
Chromium	18.3 %	18.7 %
Nickel	12.2 %	11.4 %
Molybdenum	2.8 %	2.5 %

SG	CO ₂	Ar+20% CO ₂
Carbon	0.05 %	0.04 %
Silicon	0.60 %	0.76 %
Manganese	1.47 %	1.82 %
Chromium	18.4 %	18.6 %
Nickel	12.0 %	11.5 %
Molybdenum	2.5 %	2.5 %

Mechanical Properties

SG	CO ₂	Ar+20% CO ₂
T-S (psi)	87,023	89,923
EI	39 %	38 %

SG	CO ₂	Ar+20% CO ₂
T-S (psi)	79,771	89,923
EI	40 %	38 %

SG	CO ₂	Ar+20% CO ₂
T-S (psi)	84,122	88,473
EI	38 %	37 %

Available Sizes / Rec. Parameters

Dia in (mm)	Electrode Extension	Amp
.045 (1.2)	.39" - .79"	100-220
1/16 (1.6)	.59" - .98"	160-260

Dia in (mm)	Electrode Extension	Amp
.045 (1.2)	.39" - .79"	100-240
1/16 (1.6)	.59" - .98"	160-260

Dia in (mm)	Electrode Extension	Amp
.045 (1.2)	.39" - .79"	100-240
1/16 (1.6)	.59" - .98"	160-260

Packaging

.045" (1.2 mm) x 33# (15 kg) spool
1/16" (1.6 mm) x 33# (15 kg) spool

Detailed Packaging Information

.045" (1.2 mm) x 33# (15 kg) spool
1/16" (1.6 mm) x 33# (15 kg) spool

Detailed Packaging Information

.045" (1.2 mm) x 33# (15 kg) spool
1/16" (1.6 mm) x 33# (15 kg) spool

Detailed Packaging Information

Welding Positions

Flat, Horizontal Fillets and Groove Welds

Flat, Horizontal, Overhead, Vertical Down

Flat, Horizontal Fillets and Groove Welds

Approved

JIS

ABS, BV, CWB, DNV, KR, NK, RINA, TUV, JIS
(80%Ar + 20%CO₂ : CWB, TUV)

ABS, KR, JIS



Tubular Wires

AWS EC409

K-409Ti

AWS EC409

K-409TiC

Stainless Steel

AWS E410T0-1/4

K-410T

Typical Applications

Developed to meet the needs of the automotive exhaust fabricators that desired a metal cored wire. It excels in the pulsed GMAW mode.

Developed to meet the needs of the automotive exhaust fabricators that desired a metal cored wire. It excels in the pulsed GMAW mode.

Designed for MAG welding of martensite stainless alloys of the 13%Cr types. It is used for surfacing of sealing faces of valves for gas, water and steam piping system at service temperatures up to 842°F.

Characteristics Of Usage

1. Designed for high speed welding of ferritic steels with low spatter and good bead appearance.
2. Can out perform solid wires and be more tolerant of joint variations with use of proper procedures.

1. Designed also for high speed automotive applications where good bead appearance and tolerance to joint fit-up variations is desirable.

1. Designed primarily for welding of martensitic alloys such as the 13 % chrome types
2. Preheat is recommended. Consult material manufacturer for proper procedures.

Weld Metal Composition

SG	Ar+2 % O ₂
Carbon	0.05 %
Silicon	0.50 %
Manganese	0.45 %
Chromium	12.1 %
Titanium	0.7 %

SG	Ar+2 % O ₂
Carbon	0.03 %
Silicon	0.55 %
Manganese	0.60 %
Chromium	11.4 %
Titanium	1.0 %

SG	CO ₂	Ar+20 % CO ₂
Carbon	0.07 %	0.07 %
Silicon	0.20 %	0.32 %
Manganese	0.47 %	0.69 %
Chromium	13.0 %	13.2 %

Mechanical Properties

SG	Ar+2 % O ₂
T-S (psi)	81,221
EI	20 %

SG	Ar+2 % O ₂
T-S (psi)	79,771
EI	20 %

SG	CO ₂	Ar+20 % CO ₂
Y-S (psi)	76,870	82,672
EI	24 %	22 %
PWHT	1382°Fx1hr.	1382°Fx1hr.

Available Sizes / Rec. Parameters

Dia in (mm)	Electrode Extension	Amp
.045 (1.2)	.39" - .79"	180-260
1/16 (1.6)	.59" - .98"	

Dia in (mm)	Electrode Extension	Amp
.045 (1.2)	.39" - .79"	160-240
1/16 (1.6)	.59" - .98"	

Dia in (mm)	Electrode Extension	Amp
.045 (1.2)	.39" - .79"	100-240
1/16 (1.6)	.59" - .98"	180-270

Packaging

.045" (1.2 mm) x 33# (15 kg) spool
1/16" (1.6 mm) x 33# (15 kg) spool

[Detailed Packaging Information](#)

.045" (1.2 mm) x 33# (15 kg) spool
1/16" (1.6 mm) x 33# (15 kg) spool

[Detailed Packaging Information](#)

.045" (1.2 mm) x 33# (15 kg) spool
1/16" (1.6 mm) x 33# (15 kg) spool

[Detailed Packaging Information](#)

Welding Positions

Flat, Horizontal

Flat, Horizontal

Flat, Horizontal

Approved

ABS

JIS



K-439T

Typical Applications

Designed for MAG welding of stainless steels of the 18%Cr-1%Ti types. It is suitable for automotive exhaust fabricators such as front pipe, bellows, flange. (AISI 430, 430Ti, 431)

Characteristics Of Usage

1. Produces moderately soft arc and low spatter levels.
2. Deposition rate can be higher than solid wires with proper welding procedures.
3. Maintains high tensile strength in high temperature atmosphere.

Weld Metal Composition

	SG	Ar+2 % O ₂
Carbon	0.03 %	
Silicon	0.33 %	
Manganese	0.64 %	
Chromium	17.8 %	
Nickel	0.3 %	

Mechanical Properties

	SG	Ar+2 % O ₂
Y-P (psi)	69,908	
T-S (psi)	72,664	
EI	22 %	

Available Sizes / Rec. Parameters

Dia in (mm)	Electrode Extension	Amp	Volt
.045 (1.2)	.39" - .79"	100-240	20-28
1/16 (1.6)	.59" - .98"	160-260	23-30

Packaging

- .045" (1.2 mm) x 33# (15 kg) spool
- 1/16" (1.6 mm) x 33# (15 kg) spool

[Detailed Packaging Information](#)

Welding Positions

Flat, Horizontal Fillets and Groove Welds

Approved



MIG Wires
AWS ER70S-3
KC-25C

AWS ER70S-3
KC-25M

Mild Steel
AWS ER70S-G
KC-26

Typical Applications

Used in virtually all areas of steel construction from automotive to pressure vessel shops, transportation bridges, buildings, railcar and shipbuilding.

Used in virtually all areas of steel construction from automotive to pressure vessel shops, transportation bridges, buildings, railcar and shipbuilding.

Used in virtually all areas of steel construction from automotive to pressure vessel shops, transportation bridges, buildings, railcar and shipbuilding.

Characteristics Of Usage

1. Suitable for high speed welding of steel sheet by short circuiting transfer in all positions.
2. Stable arc and low spatter loss.
3. Applicable to mixture gas(Ar+20% CO₂).

1. Wide range of operability depending on applications and procedures. Can be used in all positions with pulse equipment.
2. Stable arc and low spatter loss.

1. Wide range of operability depending on applications and procedures. Can be used in all positions with pulse equipment.
2. Stable arc and low spatter loss.
3. Suitable for high speed welding of thick plates.

Weld Metal Composition

Carbon	0.07 %
Silicon	0.67 %
Manganese	1.20 %
Phosphorus	0.015 %
Sulphur	0.011 %

Carbon	0.07 %
Silicon	0.67 %
Manganese	1.20 %
Phosphorus	0.015 %
Sulphur	0.011 %

Carbon	0.06 %
Silicon	0.80 %
Manganese	1.53 %
Phosphorus	0.014 %
Sulphur	0.010 %

Mechanical Properties

SG	CO₂	Ar+20% CO₂
Y-P (psi)	62,366	63,817
T-S (psi)	75,420	78,320
EI	33 %	30 %
V-notch	66 ft/lb @ 0 °F	74 ft/lb @ 0 °F

SG	Ar+20% CO₂
Y-P (psi)	63,817
T-S (psi)	78,320
EI	30 %
V-notch	74 ft/lb @ 0 °F

SG	CO₂	Ar+20% CO₂
Y-P (psi)	71,068	75,420
T-S (psi)	81,221	84,122
EI	29 %	30 %
V-notch	81 ft/lb @ 0 °F	89 ft/lb @ 0 °F

Available Sizes / Rec. Parameters

Dia in (mm)	Amp	
	F	V&OH
.030 (0.8)	50-120	50-100
.035 (0.9)	50-140	50-120
.040 (1.0)	80-250	60-150
.045 (1.2)	100 -350	70-200
.052 (1.4)	140-400	100-250
1/16 (1.6)	200-450	120-300

Dia in (mm)	Amp	
	F	V&OH
.030 (0.8)		
.035 (0.9)	50-200	
.040 (1.0)	70-250	
.045 (1.2)	100-350	
.052 (1.4)	140-400	
1/16 (1.6)	200-550	

Dia in (mm)	Amp	
	F	V&OH
.030 (0.8)		
.035 (0.9)	50-200	50-120
.040 (1.0)	70-250	50-150
.045 (1.2)	100-350	50-180
.052 (1.4)	140-400	100-250
1/16 (1.6)	200-550	120-300

Packaging

Detailed Packaging Information

Detailed Packaging Information

Detailed Packaging Information

Welding Positions

All position with proper equipment and procedures.

All position with proper equipment and procedures.

All position with proper equipment and procedures.

Approved

ABS, CWB, DNV, KR, LR, NK, JIS, KS

ABS, BV, DNV, GL, KR, LR, NK, JIS, KS



MIG Wires
AWS ER70S-G
ZO-55

AWS ER80S-G
ZO-60

Typical Applications

Butt and Fillet welding of mild steel and 768 ksi class high tensile strength steel. Construction equipment, bridges and buildings.

Construction machinery, bridges and storage tanks. Butt and H-fillet welding of 839 ksi class high tensile strength steel.

Characteristics Of Usage

1. Excellent mechanical properties obtained under high heat input and interpass temp.
2. Excellent productivity in both fillet and groove welding in both low and high heat inputs.

1. Arc is very stable, spatter is less and weldability is excellent even in high welding current range.
2. High working efficiency is obtained by automatic and semi-automatic welding due to high deposition rate and deep penetration.

Weld Metal Composition

Carbon	0.07 %
Silicon	0.92 %
Manganese	1.92 %
Titanium	0.18 %

Carbon	0.07 %
Silicon	0.84 %
Manganese	1.95 %
Molybdenum	0.31 %
Titanium	0.17 %

Mechanical Properties

SG	CO ₂	CO ₂
Y-P (psi)	84,122	68,168
T-S (psi)	92,824	81,221
EI	27 %	29 %
IV	170(17) 32 °F	120(12) 32 °F
Welding	18KJ/cm,302 °F	40KJ/cm,662 °F

SG	CO ₂	Ar+20% CO ₂
Y-P (psi)	79,771	84,122
T-S (psi)	92,824	95,725
EI	27 %	28 %
V-notch	81 ft/lb @ 0 °F	103 ft/lb @ 0 °F

Available Sizes / Rec. Parameters

Dia in (mm)	Amp	
	F	V&OH
.030 (0.8)		
.035 (0.9)		
.040 (1.0)		
.045 (1.2)	100-350	50-180
.052 (1.4)	140-400	100-250
1/16 (1.6)	200-550	120-300

Dia in (mm)	Amp	
	F	V&OH
.030 (0.8)		
.035 (0.9)		
.040 (1.0)		
.045 (1.2)	120-350	80-180
.052 (1.4)	150-400	100-250
1/16 (1.6)	200-500	120-300

Packaging

Detailed Packaging Information

Detailed Packaging Information

Welding Positions

All position with proper equipment and procedures.

All position with proper equipment and procedures.

Approved

NK, JIS



MIG Wires
AWS ER2209
M-2209

Typical Applications

Welding of 23%Cr-9%Ni-3%Mo stainless steels (UNS S31803, STS 329J1/329J2L). Various applications of chemical engineering, shipbuilding and nuclear plant industries, etc.

Characteristics Of Usage

1. 2209 is a duplex stainless steel for welding type 2205 duplex stainless.
2. Has a high resistance to corrosive medias such as chlorides and hydrogen sulfides
3. Good resistance to intergranular, pitting and stress corrosion cracking.

Weld Metal Composition

Carbon	0.01 %
Silicon	0.40 %
Manganese	1.75 %
Nickel	8.70 %
Chromium	22.70 %
Molybdenum	3.20 %

Mechanical Properties

SG	Ar+2% O₂
T-S (psi)	121,832
EI	28 %
IV (J)	-51°F:110
	-321°F:50

Available Sizes / Rec. Parameters

Dia in (mm)
.030 (0.8)
.035 (0.9)
.040 (1.0)
.045 (1.2)
.052 (1.4)
1/16 (1.6)

Packaging

Detailed Packaging Information

Welding Positions

All position welding is possible with the use of proper welding equipment and procedures.

Approved

AWS ER308
M-308

Welding of 18%Cr-8%Ni stainless steels (AISI 301, 302, 304). It provides better weldability together with excellent corrosion resistance.

1. Designed for welding types 301, 302, 304, 304L, 308 and 308L grades of austenitic grades of stainless steels
2. Can also be used to weld grades 321 and 347 when service temperatures do not exceed 600°F.

Carbon	0.04 %
Silicon	0.38 %
Manganese	1.90 %
Nickel	9.80 %
Chromium	19.80 %

SG	Ar+2% O₂
T-S (psi)	88,473
EI	40 %
IV (J)	RT:110
	-40°F:82

Dia in (mm)
.030 (0.8)
.035 (0.9)
.040 (1.0)
.045 (1.2)
.052 (1.4)
1/16 (1.6)

Detailed Packaging Information

All position welding is possible with the use of proper welding equipment and procedures.

Stainless Steel
AWS ER308H
M-308H

Welding of high carbon 18%Cr-8%Ni stainless steels (AISI 304H). It provides better weldability together with excellent corrosion resistance.

1. Product is designed primarily for welding of type 304H and and 347H austenitic stainless steels when high temperature services are required.

Carbon	0.05 %
Silicon	0.42 %
Manganese	2.06 %
Nickel	9.70 %
Chromium	19.90 %

SG	Ar+2% O₂
T-S (psi)	85,572
EI	44 %
IV (J)	-

Dia in (mm)
.030 (0.8)
.035 (0.9)
.040 (1.0)
.045 (1.2)
.052 (1.4)
1/16 (1.6)

Detailed Packaging Information

All position welding is possible with the use of proper welding equipment and procedures.



MIG Wires AWS ER309LSi **M-309LSi**

AWS ER310 **M-310**

Stainless Steel AWS ER312 **M-312**

Typical Applications

Welding of austenitic stainless alloys of the 22%Cr-12%Ni low carbon types and for joining stainless steels to non-alloy or low-alloy steels. The high silicon content improves the welding properties, such as wetting.

Welding of heat-resistant austenitic steels of the 25%Cr-20%Ni types(STS310S). It has good general oxidation resistance, especially at high temperature.

Welding of stainless steel of the 29%Cr-9%Ni types. Wire is widely used for joining of dissimilar metals such as carbon steel to stainless steel.

Characteristics Of Usage

1. Designed primarily for the joining of 309 stainless where good wetting and bead appearance are important.
2. The additional silicon aids in smooth bead contour and superior wetting into the adjacent base metal.
3. Service temperatures below 750°F.

1. Developed primarily for welding type 310 stainless.
2. Can also be used to join types 410 and 430 stainless when preheating and heat treatment are not practical.

1. Type 312 was originally designed to join high temperature heat resistant alloys as well as strength high alloy steels to themselves and some dissimilar metals
2. 312 can also be used to join some abrasion resistant steels.

Weld Metal Composition

Carbon	0.02 %
Silicon	0.75 %
Manganese	2.28 %
Nickel	13.70 %
Chromium	23.20 %

Carbon	0.10 %
Silicon	0.10 %
Manganese	1.73 %
Nickel	20.90 %
Chromium	26.60 %

Carbon	0.10 %
Silicon	0.43 %
Manganese	1.72 %
Nickel	8.70 %
Chromium	30.40 %

Mechanical Properties

SG	Ar+2 % O₂
T-S (psi)	85,572
EI	40 %
IV (J)	32 °F:90

SG	Ar+2 % O₂
T-S (psi)	87,023
EI	40 %
IV (J)	32 °F:110

SG	Ar+2 % O₂
T-S (psi)	105,878
EI	30 %
IV (J)	-

Available Sizes / Rec. Parameters

Dia in (mm)	
.030 (0.8)	
.035 (0.9)	
.040 (1.0)	
.045 (1.2)	
.052 (1.4)	
1/16 (1.6)	

Dia in (mm)	
.030 (0.8)	
.035 (0.9)	
.040 (1.0)	
.045 (1.2)	
.052 (1.4)	
1/16 (1.6)	

Dia in (mm)	
.030 (0.8)	
.035 (0.9)	
.040 (1.0)	
.045 (1.2)	
.052 (1.4)	
1/16 (1.6)	

Packaging

Detailed Packaging Information

Detailed Packaging Information

Detailed Packaging Information

Welding Positions

Can be used in all positions with pulsed welding equipment and good welding procedures. Non- pulsed welding is more limited to flat and horizontal welding.

Can be used in all positions with pulsed welding equipment and good welding procedures. Non- pulsed welding is more limited to flat and horizontal welding.

Can be used in all positions with pulsed welding equipment and good welding procedures. Non- pulsed welding is more limited to flat and horizontal welding.

Approved



MIG Wires
AWS ER317L
M-317L

Typical Applications

Welding of stainless alloys of the 19%Cr-12%Ni-3.5%Mo low carbon types (STS317, 317L). Various applications of chemical engineering, shipbuilding and nuclear plant industries, etc.

Characteristics Of Usage

1. Recommended for welding type 317 and 317L stainless steels with up to .04 % carbon in the weld deposit.
2. The higher Molybdenum content increases the resistance to pitting corrosion.

Weld Metal Composition

Carbon	0.02 %
Silicon	0.48 %
Manganese	1.09 %
Nickel	13.10 %
Chromium	18.90 %
Molybdenum	3.40 %

Mechanical Properties

SG	Ar+2 % O₂
T-S (psi)	92,824
EI	40 %
IV (J)	-

Available Sizes / Rec. Parameters

Dia in (mm)
.030 (0.8)
.035 (0.9)
.040 (1.0)
.045 (1.2)
.052 (1.4)
1/16 (1.6)

Packaging

Detailed Packaging Information

Welding Positions

Can be used in all positions with the use of pulsed welding equipment and proper welding procedures.

Approved

AWS ER347
M-347

Welding of stainless alloys of the 18%Cr-9%Ni-Nb(Ti) types (STS 321, 347). Nb component improves the resistance to intergranular corrosion of the weld metal.

1. Designed for welding of grades 347 and 321 stabilized austenitic stainless steels.
2. Operating temperatures should not exceed 750 °F.

Carbon	0.05 %
Silicon	0.46 %
Manganese	2.24 %
Nickel	9.30 %
Chromium	19.30 %
Niobium/Tantalum	0.60 %

SG	Ar+2 % O₂
T-S (psi)	92,824
EI	41 %
IV (J)	-

Dia in (mm)
.030 (0.8)
.035 (0.9)
.040 (1.0)
.045 (1.2)
.052 (1.4)
1/16 (1.6)

Detailed Packaging Information

Can be used in all positions with the use of pulsed welding equipment and proper welding procedures.

Stainless Steel
AWS ER409Nb
M-409Nb

Welding of ferrite stainless alloys of the 13%Cr types (AISI409). It is suitable for automotive exhaust fabricators such as front pipe, bellows, flange.

1. This product was designed for welding Niobium stabilized stainless.
2. The added Nb helps to form stable carbides that promote improved resistance to corrosion with stronger properties at elevated temperatures.

Carbon	0.01 %
Silicon	0.45 %
Manganese	0.46 %
Nickel	0.23 %
Chromium	11.40 %
Niobium/Tantalum	0.36 %

SG	Ar+2 % O₂
T-S (psi)	4,438 (1562°F)
EI	56 %
IV (J)	-

Dia in (mm)
.030 (0.8)
.035 (0.9)
.040 (1.0)
.045 (1.2)
.052 (1.4)
1/16 (1.6)

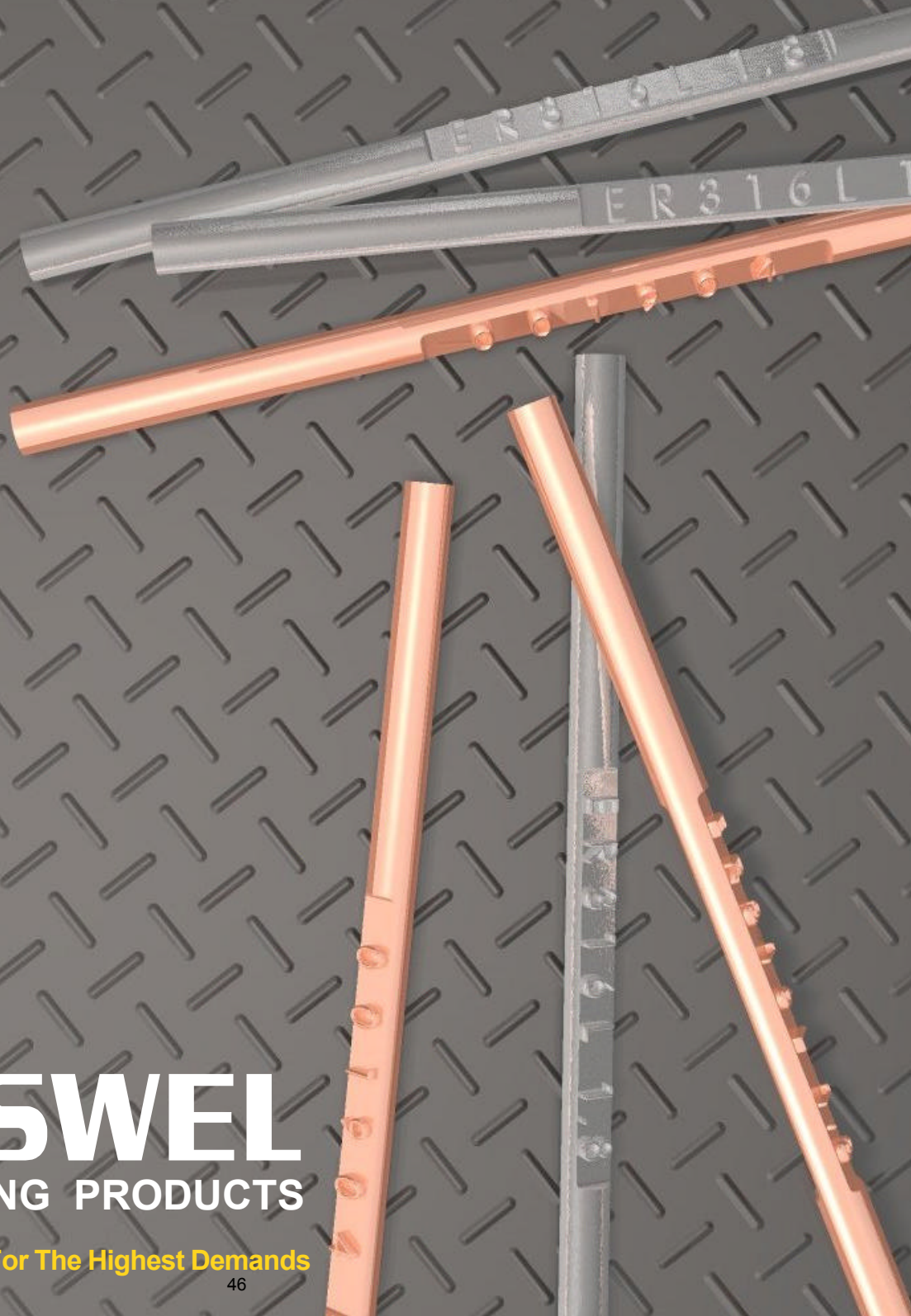
Detailed Packaging Information

Can be used in all positions with the use of pulsed welding equipment and proper welding procedures.



TIG Wires

Mild Steel
Stainless Steel



KISWEL
WELDING PRODUCTS

Supplier... For The Highest Demands

TIG Wires
 AWS ER90S-B3
T90SB3

Mild Steel

Typical Applications

Designed for welding 2.25% Cr, 1% Mo alloy steels

Characteristics Of Usage

1. Designed for single and multi-pass welding of 2.25% Cr, 1% Mo alloy steels.
2. Excellent mechanical and toughness properties after PWHT.
3. Preheat at 300° to 570°F and post weld heat treatment at 1256° to 1346°F .

Weld Metal Composition

Carbon	0.09 %
Silicon	0.47 %
Manganese	0.66 %
Chromium	2.31 %
Molybdenum	1.0 %

Mechanical Properties

Y-P (psi)	79,771
T-S (psi)	97,175
EI	26 %
V-Notch	133 ft/lb @ 32°F

Available Sizes / Rec. Parameters

Dia in (mm)	Length in (mm)	Amp F	V&OH
1/16" (1.6)	39(1000)	30-150	30-130
3/32" (2.4)	39(1000)	40-200	40-180
1/8" (3.0)	39(1000)	50-250	50-210
5/32"(4.0)	39(1000)	70-325	70-280

Packaging

10# (5 kg) carton

[Detailed Packaging Information](#)

Welding Positions

All Welding Positions

Approved



TIG Wires
AWS ER308L
T-308L

AWS ER308LSi
T-308LSi

Stainless Steel
AWS ER309
T-309

Typical Applications

Welding of low carbon 18%Cr-8%Ni stainless steels (AISI 301, 302, 304L, 308L). It provides better weldability together with excellent corrosion resistance.

Welding of low carbon 18%Cr-8%Ni stainless steels (AISI 304L, 308L). The high silicon content improves the welding properties, such as wetting.

Welding of similar alloys in wrought or cast forms. Welding of dissimilar steels, such as 304L to mild steel or low alloy steels.

Characteristics Of Usage

304 stainless steel are typically used in fabrication of:
1. Sinks and kitchen appliances
2. Cutlery and flatware
3. Brewery, dairy product equipment, food and pharmaceutical production equipment

1. Designed for use with most austenitic grades that normally use the 308 grade, but with added silicon that greatly enhances wetting of the weld bead. This enhances the cosmetics of the bead appearance when required .

1. Used for welding of carbon steel to stainless steels.
2. Also used for overlay cladding of carbon and alloy steels.
3. Intended for service temperatures below 600° F.

Weld Metal Composition

Carbon	0.02 %
Silicon	0.38 %
Manganese	1.90 %
Nickel	9.80 %
Chromium	19.80 %

Carbon	0.02 %
Silicon	0.75 %
Manganese	1.95 %
Nickel	10.4 %
Chromium	19.7 %

Carbon	0.05 %
Silicon	0.36 %
Manganese	1.84 %
Nickel	13.3 %
Chromium	23.60 %

Mechanical Properties

SG	Ar
T-S (psi)	84,122
EI	44 %
IV (J)	32 °F:160 -321 °F:80

SG	Ar
T-S (psi)	84,122
EI	43 %
IV (J)	32 °F:180 -321 °F:80

SG	Ar
T-S (psi)	88,473
EI	40 %
IV (J)	32 °F:150

Available Sizes / Rec. Parameters

Dia in (mm)	Length in (mm)	Weight lb(kg)
.045 (1.2)	39 (1000)	11 (5)
1/16 (1.6)	39 (1000)	11 (5)
5/64 (2.0)	39 (1000)	11 (5)
3/32 (2.6)	39 (1000)	11 (5)
1/8 (3.2)	39 (1000)	11 (5)
5/32 (4.0)	39 (1000)	11 (5)

Dia in (mm)	Length in (mm)	Weight lb(kg)
.045 (1.2)	39 (1000)	11 (5)
1/16 (1.6)	39 (1000)	11 (5)
3/32 (2.0)	39 (1000)	11 (5)
1/8 (3.2)	39 (1000)	11 (5)
5/32 (4.0)	39 (1000)	11 (5)

Dia in (mm)	Length in (mm)	Weight lb(kg)
.045 (1.2)	39 (1000)	
1/16 (1.6)	39 (1000)	
3/32 (2.0)	39 (1000)	
1/8 (3.2)	39 (1000)	
5/32 (4.0)	39 (1000)	

Packaging

10# (5 kg) carton

10# (5 kg) carton

10# (5 kg) carton

[Detailed Packaging Information](#)

[Detailed Packaging Information](#)

[Detailed Packaging Information](#)

Welding Positions

All Welding Positions

All Welding Positions

All Welding Positions

Approved

BV, LR, DNV, KR, TUV

CWB



TIG Wires
AWS ER312
T-312

AWS ER316
T-316

Stainless Steel
AWS ER316L
T-316L

Typical Applications

Welding of stainless steel of the 29%Cr-9%Ni types. Wire is widely used for joining of dissimilar metals such as carbon steel to stainless steel.

Welding of stainless steel of 18%Cr-12%Ni-Mo types (STS316). The low ferrite content improves the crack-resistance and corrosion resistance.

Welding of austenitic stainless alloys of the 18%Cr-12%Ni-Mo low carbon types. The alloy has particularly good corrosion-resistance and heat-resistance.

Characteristics Of Usage

1. Type 312 was originally designed to join high temperature heat resistant alloys as well as strength high alloy steels to themselves and some dissimilar metals
2. 312 can also be used to join some abrasion resistant steels.

Designed for use on type 316 austenitic stainless steels.

Designed for use on type 316 L and 316 grade austenitic stainless steels.

Weld Metal Composition

Carbon	0.10 %
Silicon	0.43 %
Manganese	1.73 %
Nickel	8.7 %
Chromium	30.4 %

Carbon	0.04 %
Silicon	0.40 %
Manganese	1.62 %
Nickel	12.10 %
Chromium	18.40 %
Molybdenum	2.30 %

Carbon	0.02 %
Silicon	0.39 %
Manganese	1.85 %
Nickel	12.20 %
Chromium	18.70 %
Molybdenum	2.30 %

Mechanical Properties

SG	Ar
T-S (psi)	114,580
EI	25 %
IV (J)	-

SG	Ar
T-S (psi)	82,672
EI	40 %
IV (J)	32 °F:140 -321 °F:50

SG	Ar
T-S (psi)	81,221
EI	40 %
IV (J)	32 °F:150 -321 °F:50

Available Sizes / Rec. Parameters

Dia in (mm)	Length in (mm)	Weight lb(kg)
.045 (1.2)	39 (1000)	11 (5)
1/16 (1.6)	39 (1000)	11 (5)
3/32 (2.0)	39 (1000)	11 (5)
1/8 (3.2)	39 (1000)	11 (5)
5/32 (4.0)	39 (1000)	11 (5)

Dia in (mm)	Length in (mm)	Weight lb(kg)
.045 (1.2)	39 (1000)	11 (5)
1/16 (1.6)	39 (1000)	11 (5)
3/32 (2.0)	39 (1000)	11 (5)
1/8 (3.2)	39 (1000)	11 (5)
5/32 (4.0)	39 (1000)	11 (5)

Dia in (mm)	Length in (mm)	Weight lb(kg)
.045 (1.2)	39 (1000))
1/16 (1.6)	39 (1000))
3/32 (2.0)	39 (1000))
1/8 (3.2)	39 (1000))
5/32 (4.0)	39 (1000))

Packaging

10# (5 kg) carton

10# (5 kg) carton

10# (5 kg) carton

Detailed Packaging Information

Detailed Packaging Information

Detailed Packaging Information

Welding Positions

All Welding Positions

All Welding Positions

All Welding Positions

Approved

ABS, BV, LR, DNV, KR, TUV



TIG Wires
AWS ER410
T-410

Typical Applications

Welding of martensite stainless alloys of the 13%Cr types (STS 403, 410). The alloy is suitable for the first layer of corrosion resistant weld claddings.

Characteristics Of Usage

1. Alloy 410 is used to weld Types 403, 405, 410 and 416.
2. Alloy 410 is also used for welding overlay on carbon steels to resist corrosion, erosion, or abrasion.

Weld Metal Composition

Carbon	0.02 %
Silicon	0.34 %
Manganese	0.39 %
Nickel	-
Chromium	12.80 %

Mechanical Properties

SG	Ar
T-S (psi)	76,870
EI	37 %
Remark	PWHT:1373 °F x 1hr

Available Sizes / Rec. Parameters

Dia in (mm)	Length in (mm)	Weight lb(kg)
.045 (1.2)	39 (1000)	11 (5)
1/16 (1.6)	39 (1000)	11 (5)
3/32 (2.0)	39 (1000)	11 (5)
1/8 (3.2)	39 (1000)	11 (5)
5/32 (4.0)	39 (1000)	11 (5)

Packaging

10# (5 kg) carton

[Detailed Packaging Information](#)

Welding Positions

All Welding Positions

Approved



AWS ER420
T-420

Welding of martensite stainless alloys of the 13%Cr types (STS 420). The alloy is suitable for the first layer of corrosion resistant weld claddings.

1. Type 420 is a martensitic stainless steel that provides corrosion resistance similar to Type 410 plus increased strength and hardness
2. Typical uses include cutlery, surgical and dental instruments, scissors, tapes and straight edges.

Carbon	0.33 %
Silicon	0.41 %
Manganese	0.37 %
Nickel	-
Chromium	12.70 %

SG	Ar
T-S (psi)	-
EI	-
IV(J)	-

Dia in (mm)	Length in (mm)	Weight lb(kg)
.045 (1.2)	39 (1000)	11 (5)
1/16 (1.6)	39 (1000)	11 (5)
3/32 (2.0)	39 (1000)	11 (5)
1/8 (3.2)	39 (1000)	11 (5)
5/32 (4.0)	39 (1000)	11 (5)

10# (5 kg) carton

[Detailed Packaging Information](#)

All Welding Positions

Stainless Steel
AWS ER430
T-430

Welding of ferrite stainless alloys of the 17%Cr types (ASI 430, dissimilar steels). It is suitable for automotive exhaust fabricators such as front pipe, bellows, flange.

1. Ferritic stainless which provides good ductility in heat-treated condition.
2. It is also used in the application of welding similar alloys as well as for overlays and thermal spraying.
3. A minimum of 300°F is recommended before welding.

Carbon	0.02 %
Silicon	0.33 %
Manganese	0.44 %
Nickel	-
Chromium	16.60 %

SG	Ar
T-S (psi)	72,519
EI	33 %
Remark	PWHT:1373 °F x 1hr

Dia in (mm)	Length in (mm)	Weight lb(kg)
.045 (1.2)	39 (1000)	11 (5)
1/16 (1.6)	39 (1000)	11 (5)
3/32 (2.0)	39 (1000)	11 (5)
1/8 (3.2)	39 (1000)	11 (5)
5/32 (4.0)	39 (1000)	11 (5)

10# (5 kg) carton

[Detailed Packaging Information](#)

All Welding Positions

Covered Electrodes

Specific Product Packaging Information

3/32" (2.6mm)	10# (5 kg) cartons
1/8" (3.2mm)	10# (5 kg) cartons
5/32" (4.0mm)	10# (5 kg) cartons
3/16" (5.0mm)	10# (5 kg) cartons
7/32" (5.6mm)	10# (5 kg) cartons
1/4" (6.0mm)	10# (5 kg) cartons

Detailed Packaging Information

Pounds	Metric	Type	Per Carton	Per Pallet	Total Weight
10 lb	5 kg	Carton	6	60	3,000 lbs (1361 kg)



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Tubular Wires
AWS E70T-5M
K-70TB

Mild Steel

**Specific
Product
Packaging
Information**

.045" (1.2 mm)	33# (15 kg) spool
1/16" (1.6 mm)	60# (27.2 kg) coil
3/32" (2.4 mm) x	60# (27.2 kg) coil

**Detailed
Packaging
Information**

Pounds	Metric	Type	Per Carton	Per Pallet	Total Weight
33 lb	15 kg	Spool		72	2,376 lbs (1078 kg)
60 lb	27 kg	Coil		42	2,520 lbs (1145 kg)



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**Specific
 Product
 Packaging
 Information**

.045" (1.2 mm)	33# (15 kg) spool
.052" (1.4 mm)	33# (15 kg) spool
1/16" (1.6 mm)	60# (27.2 kg) coil

**Detailed
 Packaging
 Information**

Pounds	Metric	Type	Per Carton	Per Pallet	Total Weight
33 lb	15 kg	Spool		72	2,376 lbs (1078 kg)
60 lb	27 kg	Coil		42	2,520 lbs (1145 kg)



**Specific
Product
Packaging
Information**

.030" (0.8 mm)	11# (5 kg), 33# (15 kg), 44# (20 kg) spool
.035" (0.9 mm)	10# (4.5 kg), 33# (15 kg) spool
.045" (1.2 mm)	10# (4.5 kg), 33# (15 kg) spool 60# (27.2 kg) coil 500# (227 kg) drum pack
.052" (1.4 mm)	10# (4.5 kg), 33# (15 kg) spool 60# (27.2 kg) coil 500# (227 kg) drum pack
1/16" (1.6 mm)	10# (4.5 kg), 33# (15 kg) spool 60# (27.2 kg) coil 500# (227 kg) drum pack

**Detailed
Packaging
Information**

Pounds	Metric	Type	Per Carton	Per Pallet	Total Weight
10 lb	4.5 kg	Spool		200	2,000 lbs (906 kg)
11 lb	5 kg	Spool		200	2,200 lbs (1000 kg)
33 lb	15 kg	Spool		72	2,376 lbs (1078 kg)
44 lb	20 kg	Spool		60	2,640 lbs (1197 kg)
60 lb	27 kg	Coil		42	2,520 lbs (1145 kg)
500 lb	249 kg	Drum		2	1,100 lbs (500 kg)



**Specific
Product
Packaging
Information**

.035" (0.9 mm)	10# (4.5 kg), 33# (15 kg) spool
.045" (1.2 mm)	10# (4.5 kg), 33# (15 kg) spool 60# (27.2 kg) coil 500# (227 kg) drum pack
1/16" (1.6 mm)	10# (4.5 kg), 33# (15 kg) spool 60# (27.2 kg) coil 500# (227 kg) drum pack

**Detailed
Packaging
Information**

Pounds	Metric	Type	Per Carton	Per Pallet	Total Weight
10 lb	4.5 kg	Spool		200	2,000 lbs (906 kg)
33 lb	15 kg	Spool		72	2,376 lbs (1078 kg)
60 lb	27 kg	Coil		42	2,520 lbs (1145 kg)
500 lb	249 kg	Drum		2	1,100 lbs (500 kg)



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**Specific
Product
Packaging
Information**

1/16" (1.6 mm) 33# (15 kg) spool

**Detailed
Packaging
Information**

Pounds	Metric	Type	Per Carton	Per Pallet	Total Weight
33 lb	15 kg	Spool		72	2,376 lbs (1078 kg)



**Specific
 Product
 Packaging
 Information**

.045" (1.2 mm)	10# (4.5 kg), 33# (15 kg) spool
1/16" (1.6 mm)	10# (4.5 kg), 33# (15 kg) spool
5/64" (2.0 mm)	33# (15 kg) spool

**Detailed
 Packaging
 Information**

Pounds	Metric	Type	Per Carton	Per Pallet	Total Weight
10 lb	4.5 kg	Spool		200	2,000 lbs (906 kg)
33 lb	15 kg	Spool		72	2,376 lbs (1078 kg)



**Specific
 Product
 Packaging
 Information**

.045" (1.2 mm)	33# (15 kg) spool
1/16" (1.6 mm)	33# (15 kg) spool

**Detailed
 Packaging
 Information**

Pounds	Metric	Type	Per Carton	Per Pallet	Total Weight
33 lb	15 kg	Spool		72	2,376 lbs (1078 kg)



Tubular Wires
AWS E70C-6M

Metal Cored

KX-706M Plus

Specific Product Packaging Information

.045" (1.2 mm)	10# (4.5 kg), 33# (15 kg) spool
.052" (1.4 mm)	10# (4.5 kg), 33# (15 kg) spool
1/16" (1.6 mm)	10# (4.5 kg), 33# (15 kg) spool

Detailed Packaging Information

Pounds	Metric	Type	Per Carton	Per Pallet	Total Weight
10 lb	4.5 kg	Spool		200	2,000 lbs (906 kg)
33 lb	15 kg	Spool		72	2,376 lbs (1078 kg)



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WELDING PRODUCTS

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Tubular Wires

Stainless Steel

Specific Product Packaging Information

.045" (1.2 mm)	33# (15 kg) spool
1/16" (1.6 mm)	33# (15 kg) spool

Detailed Packaging Information

Pounds	Metric	Type	Per Carton	Per Pallet	Total Weight
33 lb	15 kg	Spool		72	2,376 lbs (1078 kg)



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TIG Wires

Specific Product Packaging Information

.045" (1.2 mm)	10# (5 kg) cartons
1/16" (1.6 mm)	10# (5 kg) cartons
3/32" (2.4 mm)	10# (5 kg) cartons
1/8" (3.2 mm)	10# (5 kg) cartons
5/32" (4.0 mm)	10# (5 kg) cartons
3/16" (5.0 mm)	10# (5 kg) cartons
7/32" (5.6 mm)	10# (5 kg) cartons
1/4" (6.0 mm)	10# (5 kg) cartons

Detailed Packaging Information

Pounds	Metric	Type	Per Carton	Per Pallet	Total Weight
10 lb	5 kg	Carton	6	60	3,000 lbs (1361 kg)



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