



WELICHI WELDING/BRAZING/ TIG RODS AND MIG WIRES

Gas Shielded Welding Wire

Classification: AWS A5.18 ER 70S-6

For welding low carbon steel and high strength steel structures of 500Mpa. It produces quality welds with excellent radiographic and mechanical properties.

C	Mn	Si	S	P	Cu
0.06 ~ 0.15	1.40 ~ 1.85	0.80 ~ 1.15	<0.035 ~ 1.15	<0.025	<0.50
Sizes (mm)	0.8	0.9	1.0	1.2	1.6
Order No.	2071715008	2071715009	2071715010	2071715012	2071715016

* Spool Size: 270mm Dia x 15 kgs Vacuum Sealed

Flux Cored Welding Wire

Classification: AWS A5.20 ER 71T-1C

All position rutile cored Wire for welding medium carbon steel with 100% CO₂ or 80/20% Argon/CO₂ gas mixture as shielding gas. Easy slag removal, gives high deposition rate, consistency free from inclusion and porosity.

C	Mn	Si	S	P
0.05	1.20	0.46	0.013	0.012
Sizes (mm)	0.8	1.0	1.2	1.6
Order No.	2071715108	2071715110	2071715112	2071715116

* Spool Size: 270mm Dia x 15 kgs Vacuum Sealed

Pure Aluminium (Aluminium-P)

Classification: AWS A5.10 ER 1100
DIN 1733 Al99.5

Pure Aluminium welding wire for TIG and MIG welding of unalloyed aluminium. Resistance to corrosion is good. Conductivity is excellent.

Typical % weld metal composition	Si	Fe	Mg	Zn	Mn
	0.03	0.15	0.0013	0.012	0.0019
Suitable for	Oxy - acetylene, MIG, TIG				

Tensile strength N/mm ²	66 - 68
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Size (mm)	1.6 rod	2.4 rod	3.0 rod
Order No.	1070800016	1070800024	1070800030
Size (mm)	0.8 wire	1.0 wire	1.2 wire
Order No.	2071700008	2071700010	2071700012

Silicon Aluminium (Alsi 5)

Classification: AWS A5.10 ER 4043

A silicon alloyed aluminium wire for TIG and MIG welding. Used to weld Al Si and Al Mg Si alloys. It is not recommended when the product is to be anodized.

Typical % weld metal composition	Si	Mn	Mg	Fe	Zn	Al Rest
	5.0	0.1	0.1	0.4	0.2	
Suitable for	Oxy - acetylene, MIG, TIG					

Tensile strength N/mm ²	118 - 147
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Size (mm)	1.6 rod	2.4 rod	3.0 rod
Order No.	1070804316	1070804324	1070804330

Silicon Aluminium (Alsi 12)

Classification: AWS A5.10 ER 4047

A silicon alloyed aluminium wire for aluminium brazing and welding. Suitable for cast aluminium and wrought alloys. Its low melting point minimizes parent metal distortion.

Typical % weld metal composition	Si	Mn	Mg	Fe	Zn	Al Rest
	11.1	0.0027	0.0001	0.26	0.008	
Suitable for	Oxy - acetylene, MIG, TIG					

Tensile strength N/mm ²	167
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Size (mm)	1.6 rod	2.4 rod	3.0 rod
Order No.	1070804716	1070804724	1070804730
Size (mm)	0.8 wire	1.0 wire	1.2 wire
Order No.	2071704708	2071704710	2071704712

Magnesium Aluminium (ALMG 5)

Classification: AWS A5.10 ER 5356

Magnesium and Manganese alloyed aluminium welding wire for TIG and MIG processes. Used to weld plates where maximum weld strength is required.

Typical % weld metal composition	Si	Mn	Mg	Fe	Zn	Al Rest
	0.05	0.14	5.0	0.10	0.00	
Suitable for	Oxy - acetylene, MIG, TIG					

Tensile strength N/mm ²	167
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Size (mm)	1.6 rod	2.4 rod	3.0 rod	
Order No.	1070805616	1070805624	1070805630	
Size (mm)	0.8 wire	1.0 wire	1.2 wire	1.6 wire
Order No.	2071705608	2071705610	2071705612	2071705616

WELICHI WELDING/BRAZING/TIG RODS AND MIG WIRES

308L Stainless Steel (SS 308 L)

Welding of 18-8 and 18-10 stainless steels.

Classification: AWS A5.10 ER308L
DIN 8556 SG x 2CrNi 19.9

Typical % weld metal composition	C	Mn	Si	Cr	Ni	Mo
	0.014	1.620	1.490	20.150	9.620	0.100
	Cu	Co	N	W	V	Sn
	0.100	0.038	0.051	0.020	0.044	0.011

Size (mm)	1.2 rod	1.6 rod	2.0 rod	
Order No.	1070830812	1070830816	1070330820	
Size (mm)	2.4 rod	0.8 wire	1.0 wire	1.2 wire
Order No.	1070830824	1071730808	1071730810	1071730812

309L Stainless Steel (SS 309 L)

Welding of 24-12 stainless steel and steels difficult to weld

Classification: AWS A5.10 ER309L
DIN 8556 SG x 2CrNi Mo 24.12

Typical % weld metal composition	C	Mn	Si	P	Cr	Ni
	0.013	1.660	0.400	0.017	23.240	13.520
	Mo	Cu	Co	N	W	V
	0.110	0.110	0.100	0.084	0.010	0.073

Size (mm)	1.6 rod	2.4 rod	3.2 rod
Order No.	1070830916	1070830924	1070830932

316L Stainless Steel (SS 316L)

Welding Cr-Ni-Mo 20-10-3 Stainless steels. Sea corrosion resistant

Classification: AWS A5.10 ER316L
DIN 8556 SG x 2CrNi Mo 19.12

Typical % weld metal composition	Mn	Si	S	P	Cr	Ni
	1.640	0.480	0.011	0.022	18.350	12.220
	Mo	Cu	Co	N	W	V
	2.510	0.140	0.057	0.040	0.030	0.045

Size (mm)	1.2 rod	1.6 rod	2.0 rod	2.4 rod
Order No.	1070831612	1070831616	1070831620	1070831624
Size (mm)	3.2 rod	0.8 wire	1.0 wire	1.2 wire
Order No.	1070831632	1071731608	1071731610	1071731612

93/7 Copper Phosphorus (L-CuP7)

Welding of Copper to Copper or Copper base materials

Classification: AWS A5.8-04 BCuP-2
DIN 8513 L-CuP7

Order No.	Size (mm)	Nominal Composition		Melting Range (°C)	Brazing Temp	Density (g/cm ³)	Tensile Strength
		Cu	P				
1070893712	1.25x3.2x500	93	7	710 - 810	~ 730° C	8.1 g/cm ³	58 kg/mm ²

Silicon Bronze

Welding of Copper, Copper- Silicon, and Copper- Zinc base metals.

Classification: AWS SFA 5.7 ERCuSi-A
UNS C65600

Typical % weld metal composition	Zn	Sn	Mn	Fe	Cu + Ag Bal
	1.0	1.0	1.5	0.50	
	Si	Al	Pb	OeT	
	2.8 - 4.0	0.01	0.02	0.50	

Size (mm)	1.2 rod	1.6 rod	2.4 rod	3.2 rod
Order No.	1070805012	1070805016	1070805024	1070805032

Low Fuming Bronze

Welding of Steel, Copper Alloys, Cast Iron, Nickel Alloys and Stainless steel and general purpose brazing.

Classification: AWS SFA 5.7 ERCuSi-A
UNS C68100

Typical % weld metal composition	Cu	Mn	Sn	Fe
	56.0 - 60.0	0.01 - 0.50	0.80 - 1.10	0.25 - 1.20
	Si	Zn Bal	Al	OeT
	0.04 - 0.15	Bal	0.01	0.50

Size (mm)	1.2 rod	1.6 rod	2.4 rod	3.2 rod
Order No.	1070805112	1070805116	1070805124	1070805132

308L Stainless Steel (308L-16)

This electrodes provide a weld deposit, with reduced carbon levels (0.04% max), that offers increased resistance to intergranular corrosion.

Type 308L is ideal for Welding Type 304L stainless steel

Classification: AWS/ ASTM SFA 5.6 E308L-16
UNS W30813 ABS Approved

Typical % weld metal composition	C	Cr	Ni	Mn	
	0.04	18.0 - 21.0	9.0 - 11.0	0.5 - 2.5	
	Si	Cu	Mo	S	
	1.0	0.75	0.75	0.03	
Size (mm)	2.0	2.6	3.2	4.0	4.8
Order No.	2072030820	2072030824	2072030832	2072030840	2072030848

309L Stainless Steel (309L-16)

Reduce carbon levels (0.04% max) that offer increased resistance to intergranular corrosion.

Type 309/309L is ideal for joining stainless steels to themselves or to carbon or low alloy steels, and can be used at temperatures of up to 371°C. Reduced carbon levels help prevent intergranular corrosion.

Classification: AWS/ ASME SFA 5.4 E309L-16
UNS W30913 ABS Approved

Typical % weld metal composition	C	Cr	Ni	Mn	Mo
	0.04	22.0 - 25.0	12.0 - 14.0	0.5 - 2.5	
	Si	P	S	Cu	0.75
	1.0	0.75	0.03	0.75	
Size (mm)	2.0	2.6	3.2	4.0	4.8
Order No.	2072030920	2072030924	2072030932	2072030940	2072030948

310L Stainless Steel (310L-16)

Used for welding stainless steel of similar composition in cast and wrought forms.

The weld deposit is fully austenitic, and as such, calls for minimal heat input during welding.

Classification: AWS/ ASME SFA 5.4 E310-16
UNS W31010

Typical % weld metal composition	C	Mn	Si	Cr	Mo
	0.08 - 0.20	1.0 - 2.5	0.75	25.0 - 280	
	Ni	S	P	Cu	0.75
	20.0 - 22.5	0.03	0.03	0.75	
Size (mm)	2.0	2.6	3.2	4.0	4.8
Order No.	2072031020	2072031024	2072031032	2072031040	2072031048

316L Stainless Steel (316L-16)

For welding 316L base metals. The 2-3% molybdenum in the electrode improves pitting corrosion resistance of the weld deposit.

Low carbon content reduces the possibility of carbide precipitation and intergranular corrosion.

Classification: AWS/ ASME SFA 5.4
E316/316L-16 UNS W31613 ABS Approved

Typical % weld metal composition	C	Cr	Ni	Mo	Cu
	0.04	17.0 - 20.0	11.0 - 14.0	2.0 - 3.0	
	Mn	Si	P	S	0.75
	0.5 - 2.5	1.0	0.04	0.03	
Size (mm)	2.0	2.6	3.2	4.0	4.8
Order No.	2072031620	2072031624	2072031632	2072031640	2072031648

Nickel Alloys-55 (Cast Iron)

Used for Welding of cast irons to other cast irons as well as for joining cast iron to mild steel.

Readily used for repair of castings.

The weld are moderately hard and require carbide tipped tools for machining.

A preheat and inter-pass temperature of not less than 350°F is required during welding to prevent cracking.

Classification: AWS/ ASME SFA 5.4 ENiFe-CI
UNS W82002

Typical % weld metal composition	Ni	C	Mn	Fe	OET
	45.0 - 60.0	2.0	2.5	Bal	
	S	Si	Cu	Al	1.0
	0.03	4.0	2.5	1.0	
Size (mm)	2.6	3.2	4.0	4.8	
Order No.	2072005524	2072005532	2072005540	2072005548	

Nickel Alloys-99 (Cast Iron)

Used for Welding of cast irons to other cast irons as well as for joining cast iron to mild steel.

Readily used for repair of castings.

The weld produced are generally more machinable than a Nickel Alloys (Cast Iron-55) deposit.

A preheat and inter-pass temperature of not less than 350°F is required during welding to prevent cracking.

Classification: AWS/ ASME SFA 5.15 ENi-CI
UNS W82001

Typical % weld metal composition	Ni	C	Mn	Fe	OET
	85.0	2.0	2.5	8.0	
	S	Si	Cu	Al	1.0
	0.03	4.0	2.5	1.0	
Size (mm)	2.6	3.2	4.0	4.8	
Order No.	2072009924	2072009932	2072009940	2072009948	

Copper Nickel Alloys 90/10

For welding 70/30, 80/20, and 90/10 copper-nickel alloys.

Can be used for MIG overlay on steel after a first layer with Nickel 208. Dissimilar welding applications include joining Copper-Nickel Alloys to Nickel 200 or Nickel-Copper Alloys.

Classification: AWS/ ASTM SFA 5.7 ERCuNi
UNS C71581

Typical % weld metal composition	Ni + Co	Mn	Fe	Si	Cu+Ag Bal
	29.0 - 32.0	1.0	0.40 - 0.75	0.25	
	Ti	Pb	OET	P	
	0.20 - 0.50	0.02	0.50	0.02	
Size (mm)	1.6		2.4		3.2
Order No.	20720901016		20720901024		20720901032

Aluminium Alloy 4043

A 5% silicon aluminium recommended for welding 3003, 3004, 5052, 6061, 6063 and casting alloys 43, 355, 356, and 214. Has a melting range of 1065 - 1170°F and a density of .097 lb./cu. inch. The post-anodizing color tint of the weld area is gray.

Classification: AWS/ AWSME SFA 5.10
ER4043 UNS A94043

Typical % weld metal composition	Si	Fe	Cu	Mn	Mg
	4.5 - 6.0	0.8	0.30	0.05	0.05
	Zn	Ti	OEE	OET	Al
	0.10	0.20	0.05	0.15	Bal
Size (mm)	1.6		2.5		3.2
Order No.	20720404316		20720404325		20720404332

Sugarode CCR

Sugarode is specially designed for the Sugar Industries, the deposited metal contains mainly C and Cr. It has extremely high hardness caused by precipitation of Chrome Carbide. The characteristic covers good arc stability and high deposition level.

Typical % weld metal composition	C	Si	S	P	Mn	Cr	Others
	4.00	0.76	0.010	0.022	1.20	32.6	1.0 - 2.0
Size (mm)	3.2		4.0		5.0		
Order No.	20720SUGA32		2072SUGA40		20720SUGA50		

Mild Steel E6013

E6013 is a high titania type electrode which provides not only high workability, but is also low in spatter, has good slag removal, produces beautiful beads appearance and easy for tack welding.

Classification: AWS A 5.1 E6013
JIS Z 3211 D4313

Typical % weld metal composition	C	Si	S	P	Mn
	0.08	0.30	0.011	0.015	0.45
Size (mm)	2.0	2.5	3.2	4.0	5.0
Order No.	20720601320	20720601325	20720601332	20720601340	20720601350