weldcote metals

July 2023

PRODUCT CATALOG

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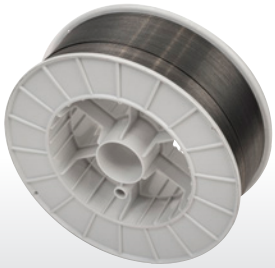

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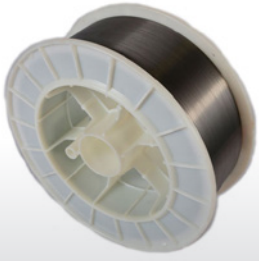

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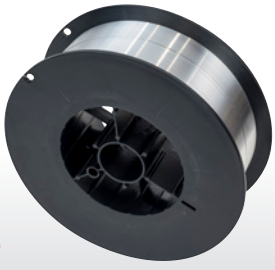

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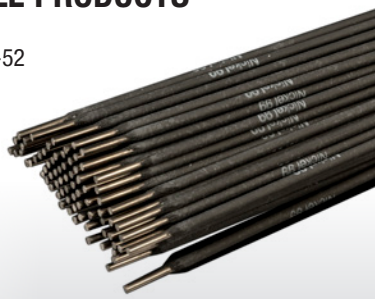

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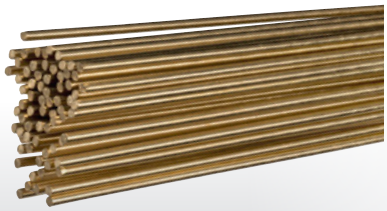

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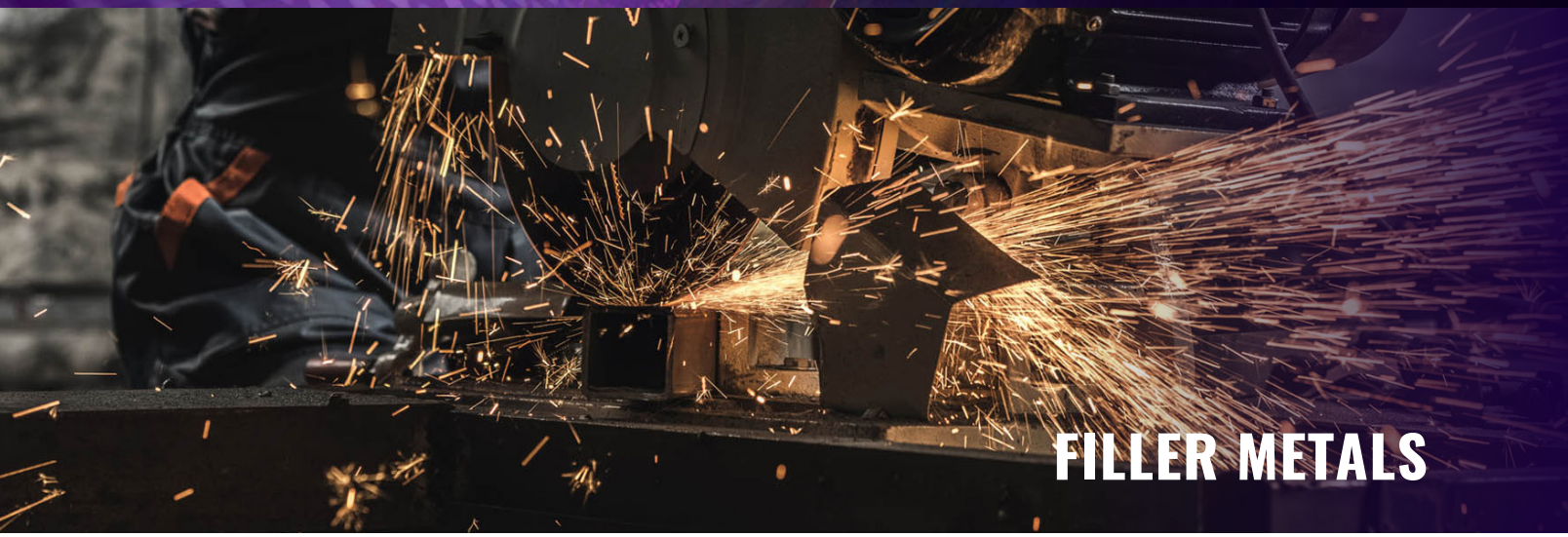


CARBON STEEL MIG & TIG WIRE

ER70S-6 Overview

Spec/Classification: Alloy ER70S-6, AWS 5.18, ASME SFA 5.18

- ER70S-6 is a copper coated carbon steel solid wire or rod that contains higher levels of manganese and silicon than the other standard grades of carbon steel wires.
- This wire features excellent tolerance of rust and scale.
- ER70S-6 is used for butt and fillet welding of sheet and plate of a variety of thickness.

Applications:

- Applications include general carbon steel fabrication.
- It also performs well on rusty and oily areas on carbon steels.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	P	S	Cu	Ni	Cr	Mo	V
ASW Spec.	0.06 - 0.15	1.40-1.85	0.08-1.15	0.025	0.035	0.05	0.15	0.15	0.15	0.03
Result (%)	0.066	1.45	0.96	0.014	0.01	0.012	0.14	0.055	<0.001	<0.007

AWS[1] Chemical Composition Requirements Range with single value maximum. Cu includes any copper coating.

Typical Mechanical Properties of Weld Metal:

Shielding Gas	CO^2	75%Ar / 25%CO^2	98%Ar / 2%CO^2	AWS Requirements[2]
Tensile Strength (psi)	80-85,000	85-90,000	85-90,000	70,000
Yield Strength (psi)	65-70,000	70-75,000	70-75,000	58,000
Elongation in 2" (%)	28.50%	28%	28%	22%
Reduction of Area	55-77%	55-70%	55-70%	Not Required
Charpy V-notch ft. lbs.	20-30	25-35	30-40	20

AWS Requirements[2] single value minimum. Charpy V-notch ft. lbs for Impact Test done at required -20°F.

Recommended Welding Parameters: ER70S-6

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Short Circuit Transfer

Diameter	Amps	Volts	75%Ar / 25%CO^2	Wire Feed (ipm)
.023	45-90	13-17	25	160-362
.030	65-145	14-17	25	160-365
.035	85-170	15-20	25-30	165-320
.045	120-225	17-20	30-35	115-210
1/16	275-400	24-32	30-40	200-330

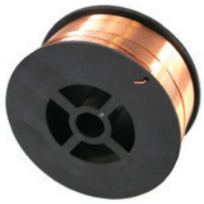
GMAW (TIG) Parameters (DCSP) 2% Lanthanated Tungsten Electrode Negative[3]

Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	100-140	3/8	20
3/32"	1/16"	1/16"	100-160	3/8	20
1/8"	3/32"	1/16"	125-200	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	150-250	1/2	25
3/8"	1/8"	1/8"	150-275	1/2	25
1/2"	1/8"	1/8"	150-300	1/2	25

ER70S-6

#44 pools

#11 Spools



#2 Spools

ER70S-6 I 33# Spools (Skid Size is 2,376 Pounds)		UPC #	Part #	U/M	Size
ER70S-6 .023 × 33# Spool	One Spool	877511001693	**E70S6023X33SP**	LB	.023
ER70S-6 .030 × 33# Spool		877511004991	**E70S6030X33SPLW**	LB	.030
ER70S-6 .035 × 33# Spool		877511004953	**E70S6035X33SPLW**	LB	.035
ER70S-6 .045 × 33# Spool		877511004977	**E70S6045X33SPLW**	LB	.045

ER70S-6 I 44# Spools (Skid Size is 2,640 Pounds)		UPC #	Part #	U/M	Size
ER70S-6 .030 × 44# Spool	One Spool	812922011664	**E70S6030X44SPLW**	LB	.030
ER70S-6 .035 × 44# Spool		877511004960	**E70S6035X44SPLW**	LB	.035
ER70S-6 .045 × 44# Spool		877511004984	**E70S6045X44SPLW**	LB	.045
ER70S-6 .052 × 44# Spool		877511004946	**E70S6052X44SP**	LB	.052

ER70S-6 I 11# Spools (Skid Size is 2,200 Pounds)		UPC #	Part #	U/M	Size
ER70S-6 .023 × 11# Spool	One Spool	877511007015	**E70S6023X11SPLW**	LB	.023
ER70S-6 .030 × 11# Spool		877511007022	**E70S6030X11SPLW**	LB	.030
ER70S-6 .035 × 11# Spool		877511007039	**E70S6035X11SPLW**	LB	.035
ER70S-6 .045 × 11# Spool		877511001686	**E70S6045X11SP**	LB	.045

ER70S-6 I 2# Spools		UPC #	Part #	U/M	Size
ER70S-6 .023 × 2# Spool	2-20 lb. Spools per Carton	877511001754	**E70S6023X2SP**	LB	.023
ER70S-6 .030 × 2# Spool		877511001761	**E70S6030X2SP**	LB	.030
ER70S-6 .035 × 2# Spool		877511001778	**E70S6035X2SP**	LB	.035
ER70S-6 .045 × 2# Spool		877511001785	**E70S6045X2SP**	LB	.045

ER70S-6 I 550# Drums (Skid Size is 2,200 Pounds)		UPC #	Part #	U/M	Size
ER70S-6 .035 × 550# Drum px	550 lb. Drum	877511001631	**E70S6035X550D**	LB	.035
ER70S-6 .045 × 550# Drum px		877511001648	**E70S6045X550D**	LB	.045

ER70S-6 I 36" Cut Lengths (TIG)		UPC #	Part #	U/M	Size
ER70S-6 .035 × 36	4-10 lb. Tubes in 40 lb. Carton	877511001990	**E70S6035X36T**	LB	.035
ER70S-6 .045 × 36		877511002003	**E70S6045X36T**	LB	.045
ER70S-6 1/16 × 36		877511001952	**E70S6116X36T**	LB	1/16
ER70S-6 3/32 × 36		877511001969	**E70S6332X36T**	LB	3/32
ER70S-6 1/8 × 36		877511001976	**E70S618X36T**	LB	1/8
ER70S-6 5/32 × 36		877511001983	**E70S6532X36T**	LB	5/32

ER70S-3

Spec/Classification: Alloy ER70S-3, AWS 5.18, ASME SFA 5.18

- ER70S-3 is intended for welding single-pass and multi-pass welds. This chemistry provides sufficient deoxidation to allow welding over light mill scale with both 100% CO2 as well as mixed shielding gases.
- Copper coating protects the surface of the wire and the weld bead provides a slag free surface for easy post cleaning.

Applications:

- Typical base metal specifications are often the same as those for ER70S-2.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	P	S	Cu	Ni	Cr	Mo	V
ASW Spec.	0.06 - 0.15	0.09-1.40	0.45-0.75	0.025	0.035	0.50	0.15	0.15	0.15	0.03
Result (%)	0.066	1.15	0.66	0.015	0.012	0.15	0.01	0.02	<0.001	<0.001

AWS[1] Chemical Composition Requirements Range with single value maximum. Cu includes any copper coating.

Typical Mechanical Properties of Weld Metal:

Shielding Gas	CO^2	75%Ar / 25%CO^2	98%Ar / 2%CO^2	AWS Requirements[2]
Tensile Strength (psi)	75-79,000	78-82,000	81-85,000	70,000
Yield Strength (psi)	60-62,000	64-66,000	65-67,000	58,000
Elongation in 2" (%)	28.1%	25.4%	22.4%	22%
Reduction of Area	55-77%	55-70%	55-70%	Not Required
Charpy V-notch ft. lbs.	79-81	64-65	59-62	20

AWS Requirements[2] single value minimum. Charpy V-notch ft. lbs for Impact Test done at required -20°F.

Recommended Welding Parameters: ER70S-3

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Short Circuit Transfer

Diameter	Amps	Volts	75%Ar / 25%CO^2	Wire Feed (ipm)
.023	45-100	13-17	25	160-362
.030	65-155	14-17	25	160-365
.035	85-180	15-20	25-30	165-320
.045	120-235	17-20	30-35	115-210
1/16	275-400	24-32	30-40	200-330

Add 1-2 volts with 100% CO^2

GMAW (TIG) Parameters (DCSP) 2% Lanthanated Tungsten Electrode Negative[3]

Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	100-140	3/8	20
3/32"	1/16"	1/16"	100-160	3/8	20
1/8"	3/32"	1/16"	125-200	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	150-250	1/2	25
3/8"	1/8"	1/8"	150-275	1/2	25
1/2"	1/8"	1/8"	150-300	1/2	25

ER70S-3 | 33# Spools (1,980 lbs/skid)		UPC #	Part #	U/M	Size
ER70S-3 .035 × 33# Spool	One Spool	877511001617	**E70S3035X33SP**	LB	.035
ER70S-3 .045 × 33# Spool		877511001624	**E70S3045X33SP**	LB	.045

ER70S-3 | 36" Cut Lengths		UPC #	Part #	U/M	Size
ER70S-3 1/16 × 36	4-10 lb. Tubes in 40 lb. Carton	877511001600	**E70S3116X36T**	LB	1/16
ER70S-3 3/32 × 36		877511001617	**E70S3332X36T**	LB	3/32
ER70S-3 1/8 × 36		877511001624	**E70S318X36T**	LB	1/8

CARBON STEEL ER70S-3 | 550# Drums	Part #
ER70S-3 .035 × 550# Drum Pk **	**E70S3035X550D**

*** while supplies last*

ER70S-2

Spec/Classification: Alloy ER70S-2, AWS 5.18, ASME SFA 5.1

- ER70S-2 is a deoxidized wire which is recommended for TIG welding on all grades of steel producing x-ray quality welds.
- ER70S-2 is used primarily for single-pass welding of killed, semi-killed and rimmed steels, but may also be used for some multi-pass applications and ideal for pipe welding. ER70S-2 can be used for welding steels that have a rusty or dirty surface.

Applications:

- Typical specifications for these steels are ASTM A36, A285-C, A515-55 and A516-70.

Typical Filler Wire/Rod Chemistry in weight (%):

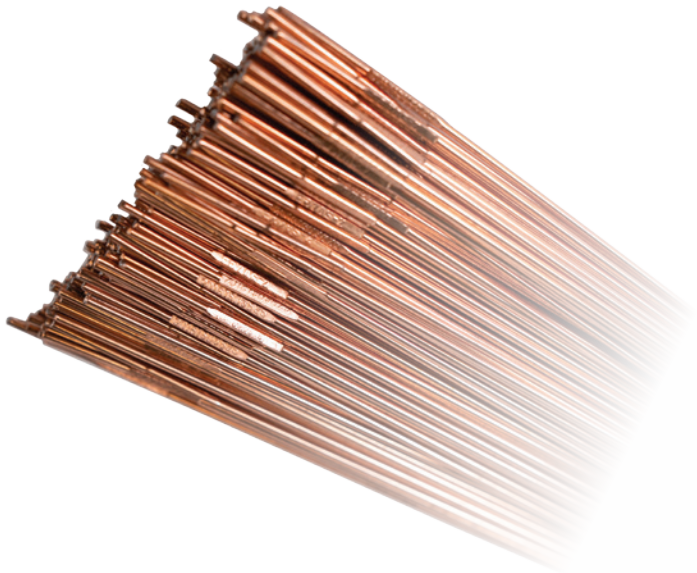
	C	Mn	Si	P	S	Cu	Ni	Cr	Mo	V	Ti	Zr	Al
ASW Spec.	0.07	0.90-1.40	0.40-0.70	0.025	0.035	0.50	0.15	0.15	0.15	0.03	0.05-0.15	0.02-0.12	0.05-0.15
Result (%)	0.05	1.25	0.5	0.012	0.012	<0.5	<0.15	<0.15	<0.15	<0.03	0.1	0.09	0.1

AWS[1] Chemical Composition Requirements Range with single value maximum. Cu includes any copper coating.

Typical Mechanical Properties of Weld Metal:

Shielding Gas	Ar
Tensile Strength (psi)	80-85,000
Yield Strength (psi)	65-70,000
Elongation in 2" (%)	22%
Reduction of Area	25-30%
Charpy V-notch ft. lbs.	79-81

AWS Requirements2 single value minimum.
Charpy V-notch ft. lbs for Impact Test done at required -20°F.

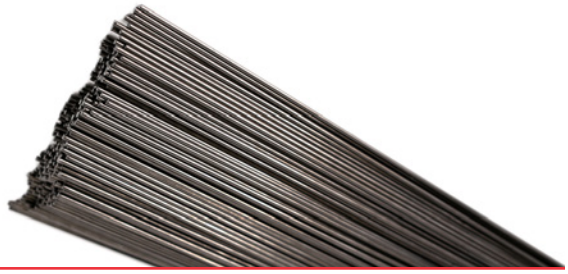


ER70S-2	36" Cut Lengths		UPC #	Part #	U/M	Size
ER70S-2 .035 × 36	4-10 lb. Tubes in 40 lb. Carton		877511001907	**E70S2035X36T**	LB	.035
ER70S-2 .045 × 36			877511001914	**E70S2045X36T**	LB	.045
ER70S-2 1/16 × 36			877511001860	**E70S2116X36T**	LB	1/16
ER70S-2 3/32 × 36			877511001877	**E70S2332X36T**	LB	3/32
ER70S-2 1/8 × 36			877511001884	**E70S218X36T**	LB	1/8
ER70S-2 5/32 × 36			877511001891	**E70S2532X36T**	LB	5/32

ER70S-2	11# Spools	UPC #	Part #	U/M	Size
ER70S-2 .023 × 11# Spool**		812922012425	**E70S2023X11SP**	LB	.023

*** while supplies last*

MILD STEEL GAS WELDING ROD FOR TORCH



R45

Spec/Classification: AWS A5.2 Class R45

- Weldcote R45 is a copper coated gas welding, not electricity, rod that is used for welding ordinary low carbon steel up to 1/4" thick.
- It is recommended where ductility and machinability are most important.

Applications:

- R45 produces high quality welds which are ductile and free of porosity.
- This rod is excellent for steel sheets, plates, pipes, castings and structural shapes.
- No flux is required.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	P	S	Cu	Ni	Cr	Mo	Al
Result (%)	0.08	0.5	0.1	0.035	0.04	0.3	0.3	0.2	0.2	0.02

Typical Mechanical Properties of Weld Metal:

	Typical
Tensile Strength (psi)	52,000
Elongation % in 2"	22%

GAS WELDING ROD FOR TORCH R45		UPC #	Part #		
R45 1/16 × 36	4-10 lb. Tubes 40 lb. Carton	877511002010	**R45116X36T**	LB	1/16
R45 3/32 × 36		877511002027	**R45332X36T**	LB	3/32
R45 1/8 × 36		877511002034	**R4518X36T**	LB	1/8
R45 5/32 × 36		877511002041	**R45532X36T**	LB	5/32
R45 3/16 × 36		877511008968	**R45316X36T**	LB	3/16

1 Lb. POP tubes are available

R60

- Weldcote R60 is a non-copper coated gas welding rod that is used to produce high tensile strength quality welds on low carbon and low alloy steels such as sheets, plates, pipes, of grade A and B analysis and structural shapes.
- It is recommended for critical welds that must respond to the same annealing and heat treatment as regular grades of cast steel.

Applications:

- The high silicon and manganese composition removes impurities from the molten metal thereby eliminating the need for flux.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	P	S	Cu	Ni	Cr	Mo	Al
Result (%)	0.15	0.90-1.40	0.1-0.35	0.035	0.035	0.3	0.3	0.2	0.2	0.02

Typical Mechanical Properties of Weld Metal:

	Typical
Tensile Strength (psi)	62,000-67,000
Elongation % in 2"	20%-25%

GAS WELDING ROD FOR TORCH R60		UPC #	Part #		
R60 1/16 × 36	4-10 lb. Tubes 40 lb. Carton	877511002072	**R60116X36T**	LB	1/16
R60 3/32 × 36		877511002089	**R60332X36T**	LB	3/32
R60 1/8 × 36		877511002096	**R6018X36T**	LB	1/8
R60 5/32 × 36		877511002102	**R60532X36T**	LB	5/32
R60 3/16 × 36		877511008975	**R60316X36T**	LB	3/16

1 Lb. POP tubes are available

MILD & LOW ALLOY STEEL MIG & TIG WIRE

ER100S-1 LOW ALLOY STEEL

Spec/Classification: Alloy ER100S-1, AWS A5.28, ASME SFA 5.28

- Weldcote ER100S-1 deposits are high strength where tough weld metal may be needed on a variety of steels in critical applications.
- ER100S-1 is developed for high yield steels such as: HY-80, HY-100, HSLA-80, ASTM A514, A543, A724 and A782 quenched and tempered steels often exceeding 100,000 psi tensile strengths.

Applications:

- Application included mining, pressure vessels, shipbuilding, military equipment and general high strength fabrication. Weld metal yields a high ductility with a great strength and impact resistance while offering high notch toughness to -60°F. ER100S-1 preheat and interpass temperature of 275-350°F may be required.
- Weld deposit mechanical properties will vary depending on heat input used.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	P	S	Cu	Ni	Cr	Mo	V	Ti	Zr
ASW Spec.	0.08	1.25-1.80	0.20-0.55	0.01	0.01	0.25	1.40-2.10	0.3	0.25-0.55	0.05	0.1	0.1
Result (%)	0.07	1.48	0.31	0.008	0.005	0.2	1.52	0.11	0.38	0.014	0.01	0.005

AWS[1] Chemical Composition Requirements Range with single value maximum. Cu includes any copper coating. Al = 0.10% max

Typical Mechanical Properties of Weld Metal:

	Typical Result	AWS Requirements[2]
Tensile Strength (psi)	108,750	100,000
Yield Strength (psi)	89,450	88,000
Elongation in 2" (%)	18%	16%
Charpy V-notch ft. lbs.	69	50

AWS Requirements[2] single value minimum. Charpy V-notch ft. lbs for Impact Test done at required -60°F

Recommended Welding Parameters: ER100S-1

GMAW (MIG) Parameters (DC Reverse Polarity)
Electrode Positive Short Circuit Transfer

Diameter	Amps	Volts	75%Ar / 25%CO[2]	Wire Feed (ipm)
.030	45-135	14-20	25	160-362
.035	85-180	15-21	25-30	160-365
.045	110-225	17-20	30-35	165-320
.035	180-245	24-27	(Spray) 35-30	(98%Ar/2%CO2) 365-545
.045	200-365	24-29	(Spray) 30-35	(98%Ar/2%CO2) 270-515
1/16"	275-425	25-35	(Spray) 30-40	(98%Ar/2%CO2) 195-295

GMAW (TIG) Parameters (DCSP) 2%
Lanthanated Tungsten Electrode Negative[3]

Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	100-140	3/8	20
3/32"	1/16"	1/16"	100-160	3/8	20
1/8"	3/32"	1/16"	125-200	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	150-250	1/2	25
3/8"	1/8"	1/8"	150-275	1/2	25
1/2"	1/8"	1/8"	150-300	1/2	25

100S-1	33# Spools		UPC #	Part #	U/M	Size
100S-1 .035 × 33 pound spool		One Spool	812922014597	**100S1035X33SP**	LB	.035
100S-1 .045 × 33 pound spool			812922014603	**100S1045X33SP**	LB	.045

100S-1	36" Cut Lengths		UPC #	Part #	U/M	Size
100S-1 1/16 × 36		One Spool		**100S1116X36T**	LB	1/16
100S-1 3/32 × 36			812922014641	**100S1332X36T**	LB	3/32
100S-1 1/8 × 36				**100S118X36T**	LB	1/8

ER110S-1 LOW ALLOY STEEL

Spec/Classification: Alloy ER110S-1 AWS A5.28, ASME SFA 5.28

- Weldcote ER110S-1 deposits are high strength where tough weld metal may be needed on a variety of steels in critical applications.
- ER110S-1 is developed for high yield steels such as: HY-80, HY-100, HSLA-80, T1, N-A-XRTA 70, WELDOX 700 and other quenched and tempered steels often exceeding 110,000 psi tensile strengths.

Applications:

- Application included mining, pressure vessels, shipbuilding, military equipment and general high strength fabrication.
- Weld metal yields a high ductility with a great strength and impact resistance while offering high notch toughness to -60°F.
- ER110S-1 preheat and interpass temperature of 275-350°F may be required.
- Weld deposit mechanical properties will vary depending on heat input used.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	S	P	Ti	Cr	Ni	Mo	V	Zr	Cu
ASW Spec.	0.09	1.40-1.80	0.20-0.55	0.01	0.01	0.1	0.5	1.90-2.60	0.25-0.55	0.04	0.1	0.25
Result (%)	0.05	1.70	0.51	0.009	0.005	0.01	0.31	2.05	0.38	0.028	0.006	0.2

AWS[1] Chemical Composition Requirements Range with single value maximum. Cu includes any copper coating. Al = 0.10% max

Typical Mechanical Properties of Weld Metal:

	Typical Result	AWS Requirements[(2)]
Tensile Strength (psi)	116,290	110,000
Yield Strength (psi)	101,210	89,500
Elongation in 2" (%)	16%	15%
Charpy V-notch ft. lbs.	61	50

110S

110S-1	33# Spool		UPC #	Part #	U/M	Size
110S-1 .035 × 33 pound spool		One Spool	812922014610	**110S1035X33SP**	LB	.035
110S-1 .045 × 33 pound spool			812922014627	**110S1045X33SP**	LB	.045

110S-1	36" Cut Lengths	UPC #	Part #	U/M	Size
110S-1 1/16 × 36 **			**110S1116X36T**	LB	1/16
110S-1 1/8 × 36 **		812922014672	**110S118X36T**	LB	1/8

AWS Requirements[2] single value minimum. Charpy V-notch ft. lbs for Impact Test done at required -60°F

*** while supplies last*

ER120S-1 LOW ALLOY STEEL

Spec/Classification: Alloy ER120S-1 AWS A5.28, ASME SFA 5.28

- Weldcote ER120S-1 deposits are high strength where tough weld metal may be needed on a variety of steels in critical applications.
- ER120S-1 is developed for high yield steels such as: T-1, HY-100 and other quenched and tempered steels often exceeding 120,000 psi tensile strengths.

Applications:

- Application includes pressure vessels, shipbuilding, military equipment and general high strength fabrication.
- Weld metal yields a high ductility with a great strength and impact resistance while offering high notch toughness to -60°F.
- ER120S-1 preheat and interpass temperature of 275-350°F may be required.
- Weld deposit mechanical properties will vary depending on heat input used.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	S	P	Ti	Cr	Ni	Mo	V	Zr	Cu
ASW Spec.	0.10	1.40-1.80	0.25-0.60	0.01	0.01	0.1	0.6	2.00-2.80	0.30-0.65	0.03	0.1	0.25
Result (%)	0.07	1.65	0.50	0.008	0.007	0.018	0.38	2.13	0.37	0.025	0.006	0.2

AWS[1] Chemical Composition Requirements Range with single value maximum. Cu includes any copper coating. Al = 0.10% max

Typical Mechanical Properties of Weld Metal:

	Typical Result	AWS Requirements[(2)]
Tensile Strength (psi)	126,150	120,000
Yield Strength (psi)	108,460	105,000
Elongation in 2" (%)	16%	14%
Charpy V-notch ft. lbs.	59	50

120S-1 33# Spool		UPC #	Part #	U/M	Size
120S-1 .035 × 33# spool	One Spool	812922014634	**120S1035X33SP**	LB	.035
120S-1 .045 × 33# spool			**120S1045X33SP**	LB	.045

120S-1 36" Cut Lengths	UPC #	Part #	U/M	Size
120S-1 1/16 × 36	812922014719	120S1116X36T	LB	1/16
120S-1 3/32 × 36	812922014726	120S1332X36T	LB	3/32
120S-1 1/8 × 36 **	812922014733	120S118X36T	LB	1/8

AWS Requirements[2] single value minimum. Charpy V-notch ft. lbs for Impact Test done at required -60°F

*** while supplies last*

E71T-1 C/1M FLUX-CORED CARBON BAKED STEEL WIRE

Spec/Classification: AWS A5.20 & ASME SFA 5.20 / E71T-1M & E71T-1C

- Weldcote E71T-1 features lower spatter and fume emissions than conventional products in this class.
- E71T-1 is intended for single and multiple pass welding of carbon and certain low alloy steels in all positions, particularly in the overhead and vertical up positions.
- Weldcote E71T-1 is used where a minimum tensile strength of 70,000 psi is required in the deposited weld metal.

Applications:

- Weldcote E71T-1 electrodes are classified with CO2 shielding gas by this specification however, gas mixtures of argon-CO2 are also used to improve usability, especially for out of position applications.
- Decreasing amounts of CO2 in the argon-CO2 mixture will increase manganese and silicon in the deposit and may improve the impact properties. The larger diameters (5/64" and larger) are used for welding in the flat position and for horizontal fillets. The smaller diameters (usually 1/16" and smaller) are used for welding in all positions.
- E71T-1 is characterized by a spray transfer, low spatter loss, flat to slightly convex bead configuration with a moderate volume of slag which completely covers the weld bead. E71T-1 electrodes have a rutile base slag.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	P	S	Cu	Ni	Cr	Mo	V
ASW Spec.	0.12	1.75	0.9	0.03	0.03	0.35	0.5	0.2	0.3	0.08
Result 100% CO2	0.04	1.15	0.66	0.015	0.012	0.02	0.01	0.02	<0.001	<0.001
Result 75Ar/25CO2	0.037	1.3	0.76	0.011	0.009	0.02	0.02	0.03	0.02	0.02

AWS[1] Chemical Composition Requirements Range with single value maximum.

Typical Mechanical Properties of Weld Metal:

Shielding Gas	100%CO2	75%Ar / 25%CO2	AWS Requirements[(2)]
Tensile Strength (psi)	84-87,000	89-93,000	79-95,000
Yield Strength (psi)	75-77,000	81-83,000	58,000
Elongation in 2" (%)	30%	29%	22%
Charpy V-notch ft. lbs.	79-81	64-65	20

AWS Requirements[2] single value minimum. Charpy V-notch ft. lbs for Impact Test done at required 0°F

Typical Diffusible Hydrogen

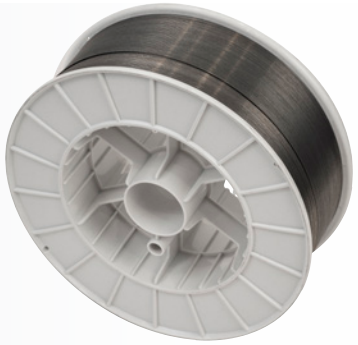
AWS H8 Requirements (maximum) = 8.0 ml/100g
Results = 100% CO2 = 3.8 ml/100g,
75%Argon/25%CO2 = 5.5 ml/100mg

Recommended Welding Parameters: E71T-1

FCAW Parameters (DC Reverse Polarity) Electrode Positive Optimum in Bold

Wire Diameter	Amps	Volts	75%Ar/25%CO2	Electrical Stickout	Wire Feed (ipm)
.035	125-200-250	23-26-28	35-40	3/8-3/4"	300-640-780
.045	170-250-300	23-27-28	35-40	1/2-3/4"	265-500-600
.052	165-295-350	24-28-30	38-50	3/4-1"	200-380-580
.062	215-340-375	25-29-30	40-50	7/8-1"	270-515

Add 1-2 volts with 100% CO[2] gas



E71T1045X33SP

Other Test Data:

.AWS Requirements of D1.8/D1.8M:2009 = Conforms, Annex D after exposure for 3 days @ 80% humidity = Conforms
.AWS Requirements A5.20: Radiographic Test = Conforms, Fillet Weld Test = Conforms, Bend Test @ Face = No Defects

E71T-1 C/1M	10# Spools NEW		Part #	U/M	Size
E71T-1 C/1M .045 × 10# Spool	One Spool		**E71T1045X10SP**	LB	.045
E71T-1 C/1M 1/16 × 10# Spool			**E71T1116X10SP**	LB	1/16

E71T-1 C/1M	33# Spools (Skid size for 33#s is 2,376 pounds)	UPC #	Part #	U/M	Size
E71T-1 C/1M .035 × 33# Spool	One Spool	812922014481	**E71T1035X33SP**	LB	.035
E71T-1 C/1M .045 × 33# Spool		877511004540	**E71T1045X33SP**	LB	.045
E71T-1 C/1M .052 × 33# Spool		877511005639	**E71T1052X33SP**	LB	.052
E71T-1 C/1M 1/16 × 33# Spool		877511004533	**E71T1116X33SP**	LB	1/16

E71T-1 C/1M 9C/9M FLUX-CORED CARBON STEEL WIRE

NEW

Spec/Classification: AWS A5.20 & ASME / E71T-1 C/1M 9C/9M

MIGHTY ARC

- This is a rutile type flux cored wire for all-position welding.
- It features excellent mechanical properties, easy slag removal, low spatter, smooth bead surface, high X-ray safety.
- It has very efficient welding due to higher deposition rate.
- Use 100% CO2 gas or Ar+20~25% CO2.
- The optimum flow for shielding is 20~25ℓ/min.

Applications:

- All position welding of 490Mpa high tensile steels of structure such as ships, bridges, Building, machinery and vehicles E71T-1 is characterized by a spray transfer, low spatter loss, flat to slightly convex bead configuration with a moderate volume of slag which completely covers the weld bead.
- E71T-1 electrodes have a rutile base slag.

Typical Chemistry in weight (%):

	C	Si	Mn	P	S	Cu
AWS	≤0.12	≤0.90	≤1.75	≤0.03	≤0.03	≤0.35
100% CO2	0.041	0.51	1.18	0.013	0.010	0.02
Ar+20%CO2	0.048	0.56	1.32	0.013	0.010	0.02

Typical Mechanical Properties of Weld Metal:

	Yield Strength psi (MPa)	Tensile Strength psi (MPa)	Elongation %	Impact value (ft-lbf) 0°F	Impact value (ft-lbf) -20°F
AWS	≥58,000 (≥390)	70,000~95,000 (490~670)	≥22	≥20	≥20
100% CO2	76,923 (530)	83,454 (575)	29	80	72
Ar+20%CO2	79,825 (550)	89,840 (619)	27	83	79

E71T-1 C/1M 9C/9M I 33# Spools NEW		Part #	U/M	Size
E71T-1 C/1M 9C/9M NB .045 × 33# Spool	One Spool	**E71T9045X33SP**	LB	.045
E71T-1 C/1M 9C/9M NB .052 × 33# Spool		**E71T9052X33SP**	LB	.052

E70C-6M FLUX-CORED CARBON STEEL WIRE

Spec/Classification:
AWS A5.18 & ASME SFA 5.18 / E70C-6M / H4

- Weldcote E70C-6M is a metal cored wire designed for single or multi pass welding.
- Weldcote E70C-6M has very low smoke, smooth, stable spatter free arc transfer yielding excellent bead contour with a high deposition rate and virtually free of slag on the weld bead.
- E70C is designed for welding of 50kgf/mm^2 high tensile steel with outstanding mechanical properties.

Applications:

- Weldcote Metals E70C-6M is excellent to weld for all positions which has deoxidizers that helps where mill scale may be present.
- This metal cored wire may be used to improve productivity on many fabrications and is also found often in robotic applications.
- Typical applications include Building, shipbuilding, bridges, machineries, vehicles, offshore structures and general fabrications.
- It is a metal cored wire for Flat & H-Fillet efficient welding with Ar+20~25%CO2 shielding gas.

Typical Chemistry in weight (%):

	C	Mn	Si	P	S	Cu	*Ni	*Cr	*Mo	*V
ASW Spec.	0.12	1.75	0.90	0.03	0.03	0.50	0.50	0.20	0.30	0.08
Result 75Ar/25CO2	0.04	1.48	0.69	0.018	0.09	0.05	0.02	0.03	<0.001	<0.001
Result 95Ar/5CO2	0.05	1.64	0.72	0.011	0.011	0.02	0.02	0.03	<0.001	<0.001

*AWS[1] Chemical Composition Requirements Range with single value maximum. *Sum of these four shall not exceed 0.50%.*

Typical Mechanical Properties of Weld Metal:

Shielding Gas	75%Ar/25%CO2	95%Ar/5%CO2	AWS Requirements[2]
Tensile Strength (psi)	81-86,000	85-89,000	70,000 psi
Yield Strength (psi)	69-77,000	70-78,500	58,000 psi
Elongation in 2" (%)	27-30.4%	25-27.8%	22%
Charpy V-notch ft. lbs.	49-67	51-56	20

AWS Requirements[2] single value minimum. Charpy V-notch ft. lbs for Impact Test done at required -20°F

Typical Diffusible Hydrogen

AWS H4 Requirements (maximum) = 4.0 ml/100g

Other Test Data:

AWS Requirements A5.18: Radiographic Test = Conforms, Fillet Weld Test = Conforms, Bend Test @ Face = No Defects

E70C-6M I 33 / 44# Spools		UPC #	Part #	U/M	Size
E70C-6M .045 × 33# Spool	One Spool	812922014009	**E70C6M045X33SP**	LB	.045
E70C-6M 1/16 × 44# Spool		812922014771	**E70C6M116X44SP**	LB	1/16

SELF-SHIELDING & MILD STEEL FLUX-CORE WELDING WIRE

E71T-GS

Spec/Classification: AWS A5.20 & ASME SFA 5.20

- Weldcote E71T-GS is a flux cored, all position, self-shielded wire designed for welding applications where the use of an external shielding gas is not practical.
- Weldcote E71T-GS is designed to weld a full-strength bead in single pass applications, making it an ideal maintenance and repair wire for general field use, such as galvanized fence repair, farm equipment, tanks, non-destructive frames, automotive sheet metal, welding ductwork and joining of galvanized roofing sheet metal.

Applications:

- Usage should be limited to single pass welding. A second pass may be suitable in some applications, but multiple passes should be avoided.
- E71T-GS has a smooth stable arc, low spatter and easy slag removal. An excellent choice for lap and fillet welds on thin gauge material in all welding positions.
- Due to its low penetration into the base material, this alloy is a great wire for on the spot repairs to hold broken parts together until they can be re-welded with the appropriate material.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Si	Mn	P	S	Al	Fe
Result (%)	0.13	0.15	0.42	0.010	0.008	1.86	Balance

Typical Mechanical Properties of Weld Metal:

	Typical	AWS Spec
Tensile Strength (psi)	82,000	90,000
Yield Strength (psi)	–	–
Elongation in 2" (%)	2.0	22%
Charpy V-notch ft. lbs.	–	–

E71TGS030X2SP

E71TGS035X10SP

Recommended Welding Parameters: E71T-GS

FCAW Parameters (DCEN) Electrode Negative Amperage settings:

Wire Diameter	Flat	Horizontal fillet	Vertical
.030	40-160	40-160	30-120
.035	60-180	60-180	50-140
.045	80-200	80-200	80-160
1/16	160-270	160-270	120-220

** Electrical stick out 3/8" up to 1" on heavier diameters*

E71T-GS I 2# Spools		UPC #	Part #	U/M	Size
E71TGS .030 × 2# Spool	2-20 lb. Spls per Master Carton	877511004847	**E71TGS030X2SP**	LB	.030
E71TGS .035 × 2# Spool		877511004861	**E71TGS035X2SP**	LB	.035

E71T-GS I 10# Spools		UPC #	Part #	U/M	Size
E7ITGS .030 × 10# Spool	4-10 lb. Spls per Master Carton	877511004854	**E71TGS030X10SP**	LB	.030
E7ITGS .035 × 10# Spool		877511004878	**E71TGS035X10SP**	LB	.035
E7ITGS .045 × 10# Spool		877511006805	**E71TGS045X10SP**	LB	.045

E71T-GS I 25# Spools		UPC #	Part #	U/M	Size
E7ITGS .030 × 25# Spool	One Spool	877511005936	**E71TGS030X25SP**	LB	.030
E7ITGS .035 × 25# Spool		877511005622	**E71TGS035X25SP**	LB	.035
E7ITGS .045 × 25# Spool		877511005844	**E71TGS045X25SP**	LB	.045

Spec/Classification: AWS A5.20 & ASME SFA 5.20

- Weldcote E71T-11 is a self-shielding flux cored wire designed for single or multi-pass welding having a smooth spray-type transfer commonly used on mild steels less than 3/4" thick.

Applications:

- Weldcote E71T-11 is an easy general all position wire to use in the field where shielding gas is not practical.
- Limit to three passes will ensure properties on the mechanical and weld deposit chemistry.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	Al	P	S	Fe
ASW[1] Spec.	0.3	1.75	0.6	1.8	0.03	0.03	Balance
Result (%)	0.2	0.6	0.3	1.42	0.01	0.013	Balance

AWS[1] Chemical Composition Requirements Range with single value maximum.

Typical Mechanical Properties of Weld Metal:

	AWS Spec	Typical
Tensile Strength (psi)	70-95,000	80,000
Yield Strength (psi)	58,000 (min)	65,000
Elongation in 2" (%)	20% (min)	22

Recommended Welding Parameters: E71T-11

FCAW Parameters (DCEN) Electrode Negative Optimum in Bold

Wire Diameter	Wire Speed (ipm)	Amps	Volts	Electrical Stickout
.030	60-175-200	30-115-200	14-15-18	3/8-1/2
.035	40-210-240	50-150-220	13-17-19	3/8-1/2
.045	50-170-200	80-180-220	13-17-20	3/8-5/8
1/16	60-100-180	120-185-300	15-16-20	1/2-1"

Procedures may vary with changes in position, base metals, equipment and other variables

E71T-11 | 10# Spools		UPC #	Part #	U/M	Size
E7IT-11 .030 × 10# Spool	One Spool	877511006704	**E71T11030X10SP**	LB	.030
E7IT-11 .035 × 10# Spool		877511006711	**E71T11035X10SP**	LB	.035
E7IT-11 .045 × 10# Spool		877511006728	**E71T11045X10SP**	LB	.045

E71T-11 | 25# Spools		UPC #	Part #	U/M	Size
E7IT-11 .045 × 25# Spool	One Spool	812922011107	**E71T11045X25SP**	LB	.045

FLUX-CORED LOW ALLOY / HIGH STRENGTH WIRES

NEW

MIGHTY ARC

E81T1 (E81T1-NiM H4 / E81T1-NiM-J / E81T1-B2C/B2M)

Spec/Classification: AWS A5.29 & ASME SFA 5.29

- E81T1 is a rutile type of flux cored wire for all-position welding.
- It provides smooth arc, low spatter levels, good weldability and good bead appearance.

E81T1-NiM H4

- **E81T1-NiM H4:** Proper preheating (50~150°) and interpass temperature must be used in order to release diffusible hydrogen which may cause cracking in weld metal when electrodes are used for medium and heavy plates.
- One-side welding defects such as hot cracking may occur with wrong welding parameter such as high welding speed.

HIGH TENSILE STEEL

E81T1-NiM-J

- **E81T1-NiM-J** is a rutile type of flux cored wire for all-position welding.
- It provides smooth arc, low spatter levels, good weldability and good bead appearance.
- Proper preheating (50~150 C) and interpass temperature must be used in order to release diffusible hydrogen. Product may cause cracking in weld metal when used for medium and heavy plates.
- One-side welding defects, such as hot cracking, may occur with wrong welding parameter such as a high welding speed.

HIGH TENSILE STEEL

E81T1-B2C/B2M

- **E81T1-B2C/B2M** provides smooth arc, low spatter levels, good weldability and good bead appearance.
- The weld metal contain about 1.25%Cr, 0.5%Mo, so it has good crack and heat resistance.
- Gas flow rate is proper 20~25ℓ/min.
- Shielding gas should be used 100% CO2 or Ar = 20% CO2.
- For heat resistant steel.

Applications:

- **E81T1-NiM H4:** is designed for welding of 590MPa high tensile steel with slow freezing slag system. Typical applications include machineries, shipbuilding, offshore structures, bridges and general fabrications.
- **E81T1-NiM-J** is designed for welding of 590MPa high tensile steel with slow freezing slag system. Typical applications include machineries, shipbuilding, offshore structures, bridges and general fabrications.
- **E81T1-B2C/B2M** is designed for welding of 1.25%Cr - 0.5%Mo steel used for high pressure vessels, oil refining industries, steam pipes of boilers etc.

Typical Chemistry in weight (%) - E81T1-NiM H4 & E81T1-NiM-J:

	C	Si	Mn	P	S	Cr	Mo	Ni
AWS	≤0.12	≤0.80	≤1.75	≤0.030	≤0.030	≤0.15	≤0.35	0.80~1.10
E81T1-NiM H4	0.03	0.45	1.39	0.006	0.001	0.03	0.003	0.94
E81T1-NiM-J	0.03	0.45	1.39	0.006	0.001	0.03	0.003	0.94

Typical Mechanical Properties of Weld Metal

	Yield strength (N/mm^2)	Tensile strength (N/mm^2)	Elongation (%)	Impact value (J) -40°F	Diffusible Hydrogen Test
AWS	≥470	550~690	≥19	27	max. 4 (mℓ/100g)
E81T1-NiM H4	587	633	30	162	3.1
E81T1-NiM-J	587	633	30	162	3.1

Typical Chemistry in weight (%) - E81T1-B2C/B2M:

	C	Si	Mn	P	S	Mo	Cr
AWS	0.05~0.12	0.8	1.25	0.03	0.03	0.40~0.65	1.00~1.5
100% CO2	0.07	0.5	0.52	0.016	0.006	0.51	1.18
Ar+20%CO2	0.07	0.61	0.63	0.015	0.006	0.52	1.22

Typical Mechanical Properties of Weld Metal - E81T1-B2C/B2M:

	Yield Strength	Tensile Strength	Elongation %	Heat Treatment
AWS	≥470	550~690	≥19	-
100% CO2	600	680	21	AW
	569	648	22	PWHT (690 x 1Hr)
Ar+20%CO_2	580	662	24	PWHT (690 x 1Hr)

E81T1 I 33# Spool NEW		Part #	U/M	Size
E81T1-NiM H4 .045 × 33# Spool	One Spool	**E81T1045X33SP**	LB	.045
E81T1-NiM-J .045 × 33# Spool		**E81T1J045X33SP**	LB	.045
E81T1-B2C/B2M .045 × 33# Spool		**E81T1B2045X33SP**	LB	.045

E91T1-B3C/B3M

Spec/Classification: AWS A5.29 & ASME SFA 5.29

- E91T1 is a rutile type flux cored wire for all-position welding. It provides smooth arc, low spatter levels, good weldabilit and good bead appearance.
- The weld metal contain about 2.25%Cr, 1.0%Mo for heat resistant steel.
- Gas flow rate is proper 20~25ℓ/min.
- Shielding gas should be used 100% CO2 or Ar+20% CO2.
- Preheat at 150~300° and PWHT 690°.
- For heat resistant steel.

Applications:

- E91T1 is designed for welding of 2.25%Cr - 1.0%Mo steel used for high pressure vessels, oil refining industries, steam pipes of boilers etc.

Typical Chemistry in weight (%):

	C	Si	Mn	P	S	Mo	Cr
AWS	0.05~0.12	0.8	1.25	0.03	0.03	0.90~1.2	0.90~2.50
100% CO2	0.06	0.48	0.62	0.013	0.005	1.05	2.3
Ar+20%CO2	0.06	0.6	0.69	0.013	0.005	1.06	2.33

Typical Mechanical Properties of Weld Metal:

	Yield Strength	Tensile Strength	Elongation	Heat Treatment
AWS	≥540	620~760	≥17	–
100% CO2	590	660	22	PWHT (690° x 1Hr)
Ar+20%CO2	655	720	22	PWHT (690° x 1Hr)

**E91T1	33# Spool** NEW		Part #	U/M	Size
E91T1-B3C/B3M .045 × 33# Spool	One Spool		**E91T1B3045X33SP**	LB	.045

FLUX-CORED HARDFACE

450HT / 600HT / 700HT

NEW

450HT

- Earthmoving idlers and rollers, mine car wheels.

600HT

- Use 100% CO2 shielding gas.
- The optimum flow of CO2 for shielding is 20~25ℓ/min.
- Steel mill edger rolls, work rolls, leveler rolls.

700HT

- Use 100% CO2 shielding gas.
- The optimum flow of CO2 for shielding is 20~25ℓ/min.
- Hot and cold dies, shear blades, tire shredders, cutting and shaving knives, sharp edge maintenance (not machinable, grinding only).

Applications:

- MIG welding wire produces a deposit which resists metal-to-metal wear and mild abrasion. It can be used for crane wheels, blower blades, bucket lips, dredge parts etc.

Typical Chemistry in weight (%):

	C	Si	Mn	P	S	Cr	Ni	Mo
450HT	0.24	0.71	1.9	0.01	0.008	3.7	0.03	0.55

	C	Si	Mn	P	S	Cr	Ni	Mo
600HT	0.36	3	0.47	0.03	0.02	7.2	0.04	0.41

	C	Si	Mn	P	S	Cr	Ni	Mo	W
700HT	0.59	1.51	0.55	0.1	0.02	6.0	0.05	0.06	1.1

Typical Mechanical Properties of Weld Metal:

	Typical Value			Welding Positions
	HV	HRC	HS	
450HT	470	47	63	 1G 2F
600HT	610	55	73	 1G 2F
700HT	750	60	81	 1G 2F

**450HT / 600HT / 700HT	33# Spool** NEW		Part #	U/M	Size
450HT .045 × 33# Spool	One Spool		**450H045X33SP**	LB	.045
600HT .045 × 33# Spool			**600H045X33SP**	LB	.045
700HT .045 × 33# Spool			**700H045X33SP**	LB	.045

LOW ALLOY / HIGH STRENGTH STEEL WIRES

ER4130 CHROME MOLYBDENUM STEEL

Spec/Classification: AISI/SAE 4130

- Weldcote 4130 is a high strength, low alloy welding wire used for joining high strength steel of similar composition (4130 and 8630) and other heat-treatable alloys or base metals needing flame hardening.

Applications:

- 4130 is also used for overlay applications where moderate hardness is required.
- This wire may be used for the GMAW, GTAW, and SMAW welding processes.
- A preheat and interpass temperature of 400°F is required.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	Cr	Ni	Cu	Mo	S	P	Al	Fe
Result (%)	0.300	0.520	0.280	0.950	0.100	0.200	0.200	0.010	0.010	0.005	Balance

Typical Mechanical Properties of Weld Metal:

Tempered at:	1150°F	950°F
Tensile Strength (psi)	190,000	200,000
Yield Strength (psi)	168,000	188,000
Elongation in 2" (%)	11%	11%

The mechanical properties stated above were obtained by heating the weld metal to 1600°F, oil quenching and tempering at above temperatures.

969G

Recommended Welding Parameters: ER4130 Chrome-Moly

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Short Circuit Transfer

Diameter	Amps	Volts	CO^2 (cfh)	Wire Feed (ipm)
.023	30-85	14-19	20-25	80-350
.030	40-130	15-20	20-25	110-340
.035	60-235	16-25	20-30	100-520
.045	90-290	18-23	25-35	70-270
.035	160-300	23-26	(Spray) 25-35	(98%Ar/2%CO2) 320-600
.045	170-375	23-29	(Spray) 25-35	(98%Ar/2%CO2) 170-550
1/16"	275-475	25-31	(Spray) 25-35	(98%Ar/2%CO2) 175-350

GMAW (TIG) Parameters (DCSP) 2% Lanthanated Tungsten Electrode Negative[3]

Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	100-140	3/8	20
3/32"	1/16"	1/16"	100-160	3/8	20
1/8"	3/32"	1/16"	125-200	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	150-250	1/2	25
3/8"	1/8"	1/8"	150-275	1/2	25
1/2"	1/8"	1/8"	150-300	1/2	25

4130 CHROME ALLOY I 36" Cut Lengths		UPC #	Part #	U/M	Size
4130 1/16 × 36	4-10 lb. Tubes 40 lb. Carton	877511006674	**4130116X36T**	LB	1/16
4130 3/32 × 36		877511006681	**4130332X36T**	LB	3/32
4130 1/8 × 36		877511006698	**413018X36T**	LB	1/8

969G HARDFACING MIG WIRE I 25# Spool	
969G 1/16 × *25# Spool **	**969G116X25SP**

*** while supplies last*

ER80S-B2 & ER90S-B3

Spec/Classification: AWS A5.28 ER80S-B2 / ER90S-B3, ASME SFA 5.28

- Weldcote ER80S-B2 is used to weld 1/2Cr-1/2Mo, 1Cr-1/2Mo, and 1-1/4Cr-1/2Mo steels for elevated temperatures and corrosive service.
- It is also used for joining dissimilar combinations of Cr-Mo and carbon steels.
- All transfer modes of the GMAW process may be used.

ER80S-B2 Applications:

- Careful control of preheat, interpass temperatures, and postheat is essential to avoid cracking.
- ER80S-B2 is classified after postweld heat treatment.
- Special care must be used with using it in the as-welded condition due to higher strength levels.
- ER80S-B2 contains 0.50% molybdenum for strength after stress values.
- Some typical applications are pressure vessel forgings, fittings, flanges and high temperature service pipes.

- Weldcote ER90S-B3 is used to weld such alloys as 2 ¼%Cr-1%Mo steels, which are found in high temperature and high-pressure piping and vessels.
- May also be used on carbon steels to Cr-Mo steels but should always have careful control of preheat, inter-pass and post-heat to avoid cracking.

ER90S-B3 Applications:

- Use with a pre-heat and inter-pass temperature of 375°f minimum.
- Some typical applications are high pressure piping, pressure vessels, and joining dissimilar combinations of Cr-Mo and carbon steels.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	P	S	Ni	Cr	Mo	Cu
Result (%)	0.07-0.12	0.40-0.70	0.40-0.70	0.025	0.025	0.200	1.20-1.50	0.40-0.65	0.350

AWS[1] Chemical Composition Requirements Range with single value maximum.

Typical Mechanical Properties of Weld Metal:

	ER80S-B2		ER90S-B3	
	Argon/1-5% O^2		Argon/1-5% O^2	
Elongation in 2" (%)	19%		17%	
Yield Strength (psi)	68,000 Psi	470 MPa	78,000 Psi	540 MPa
Tensile Strength (min)	80,000 Psi	550 MPa	90,000 Psi	620 MPa

AWS Requirements[2] single value minimum. Charpy V-notch ft. lbs. for Impact Test done at required -20°F.

GMAW (TIG) Parameters (DCSP) 2% Lanthanated Tungsten Electrode Negative[(3)]

Material	Tungsten Dia[(3)]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	100-140	3/8	20
3/32"	1/16"	1/16"	100-160	3/8	20
1/8"	3/32"	1/16"	125-200	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	150-250	1/2	25
3/8"	1/8"	1/8"	150-275	1/2	25
1/2"	1/8"	1/8"	150-300	1/2	25

ER80S-B2 CHROME ALLOY I 36" Lengths		UPC #	Part #	U/M	Size
ER80SB-2 1/16 × 36	4-10 lb. Tubes 40 lb. Carton	877511004823	**80SB2116X36T**	LB	1/16
ER80SB-2 3/32 × 36		877511001792	**80SB2332X36T**	LB	3/32
ER80SB-2 1/8 × 36		877511001808	**80SB218X36T**	LB	1/8
ER80SB-2 5/32 × 36		877511009910	**80SB2532X36T**	LB	5/32

ER90S-B3 CHROME ALLOY I 36" Lengths		UPC #	Part #	U/M	Size
ER90SB-3 1/16 × 36	4-10 lb. Tubes 40 lb. Carton		**90SB3116X36T**	LB	1/16
ER90SB-3 3/32 × 36		877511001846	**90SB3332X36T**	LB	3/32
ER90SB-3 1/8 × 36		877511001853	**90SB318X36T**	LB	1/8
ER90SB-3 5/32 × 36		877511008302	**90SB3532X36T**	LB	5/32

ER80S-D2

Spec/Classification: AWS A5.28 ER80S-D2, ASME SFA 5.28

- Weldcote ER80S-D2 is copper coated for GMAW and TIG welding in boiler pressure vessel, pipework, crane construction as well as in structural steel engineering.
- High quality, very tough deposit of high crack resistance and non-aging.
- Recommended for service in temperature range -45°C (TIG) or -40°C (GMAW) to 550°C.
- Good copper bonding with low total copper content.

Applications:

- ER80S-D2 is commonly used on low carbon and low alloy steels such as AISI 4130 where the tensile strengths provided by plain carbon steel wires are inadequate.
- Very good welding and flow characteristics.
- Preheating interpass and postweld heat treatment as required by base metal.
- This wire has superior arc stability, low spatter and a flat bead with excellent appearance, producing X-ray quality, porosity free welds even over dirt, rust or mill scale.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	P	S	Si	Mo	Ni
ASW[1] Spec.	0.07-0.12	1.6-2.1	0.025 max	0.025 max	0.5-0.8	0.4-0.6	0.15 max
Result (%)	0.1	1.8	0.012	0.012	0.65	0.5	0.02

AWS1 Chemical Composition Requirements Range with single value maximum.

Typical Mechanical Properties of Weld Metal:

	AWS Spec	Typical
Tensile Strength (psi)	80,000 (min)	99,000
Yield Strength (psi)	68,000 (min)	84,000
Elongation in 2" (%)	17% (min)	22%

Recommended Welding Parameters: ER80S-D2

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Spray Transfer

Diameter	Amps	Volts	CO^2/AR-CO^2	Wire Feed (ipm)
.035	50-180	16-22	20-25	150-340
.045	75-250	17-22	20-25	100-220

GMAW (TIG) Parameters (DCSP) 2% Lanthanated Tungsten Electrode Negative[3]

Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	100-140	3/8	20
3/32"	1/16"	1/16"	100-160	3/8	20
1/8"	3/32"	1/16"	125-200	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	150-250	1/2	25
3/8"	1/8"	1/8"	150-275	1/2	25
1/2"	1/8"	1/8"	150-300	1/2	25

ER80S-D2 CHROME ALLOY | 36" Lengths		UPC #	Part #	U/M	Size
ER80SD-2 .035 × 36	4-10 lb. Tubes 40 lb. Carton		**80SD2035X36T**	LB	.035
ER80SD-2 .045 × 36		812922015075	**80SD2045X36T**	LB	.045
ER80SD-2 1/16 × 36		877511001815	**80SD2116X36T**	LB	1/16
ER80SD-2 3/32 × 36		877511001822	**80SD2332X36T**	LB	3/32
ER80SD-2 1/8 × 36		877511001839	**80SD218X36T**	LB	1/8
ER80SD-2 5/32 × 36		877511006575	**80SD2532X36T**	LB	5/32

ER80S-D2 CHROME ALLOY | 33# Spools		UPC #	Part #	U/M	Size
ER80SD-2 .035 × 33# Spool	One Spool	877511006582	**80SD2035X33SP**	LB	.035
ER80SD-2 .045 × 33# Spool		877511007268	**80SD2045X33SP**	LB	.045

(Skid Size is 1,980 Pounds)

STAINLESS STEEL WELDING WIRE

WELDCOTE METALS STAINLESS STEEL WELDING WIRE

Stainless steel welding differs from mild or carbon steel welding in that the stainless steel has low thermal conductivity and high expansion characteristics.

Stainless steel expands approximately 50% more, but conducts heat 50% slower than mild or carbon steel, making it much more susceptible to warping caused by temperature changes. Stainless steel is broken down into three major groups listed below.

Austenitic Stainless Steel

Austenitic stainless steels include the chromium-nickel, AISI 200 and 300 series. This is the most common stainless steel group encountered and it is further divided into 7 smaller grades.

1. The 18/8 grades consist of 18% chromium and 8% nickel.
2. These grades are the most common and include AISI types 301, 302, 304, 305, and 308.
3. The manganese grades consist of the AISI 200 series (AISI 201, 202, etc.).
4. The extra low carbon (L) grades, which include AISI 304L and 308L, contain .03% maximum carbon to eliminate damaging carbide precipitation.
5. The stabilized grades such as AISI 321, 347, 348 contain small amounts of titanium, columbium or a tantalum-columbium combination to provide protection in severe corrosive conditions.
6. The molybdenum grades include AISI 316, 316L, 317 and 317L.
7. These grades have a higher molybdenum content to provide greater corrosion resistance against pitting caused by chemical corrosion.
8. The high temperature grades (AISI 302B, 309, 309S, 310, 310S) maintain their strength and scaling resistance at temperatures up to 2000°F.
9. The free-machining grades include AISI 303, 303SE.
10. These grades contain sulfur, selenium and phosphorus making them very susceptible to porosity and cracking during welding.

Carbide Precipitation:

Carbide precipitation is a common problem encountered when welding with austenitic stainless steel. It occurs when the stainless steel is heated to temperatures in the 800°-1500°F range. At these temperatures, the carbon in the steel precipitates to the grain boundaries and unites with the chromium to form chromium carbides. When this happens, the stainless steel loses its corrosion resistance and eventually succumbs to intergranular corrosion.

There are several ways to prevent or control this breakdown of corrosion resistance.

The first method would be to use an electrode or wire from the extra low carbon (L) grades such as USA 308L or USA 316L. The lower the carbon content of the electrode or wire, the less likely carbide precipitation will occur.

The second method of controlling carbide precipitation would be to select an electrode or wire from the stabilized grades such as USA 347.

The columbium in USA 347 combines with the carbon before the formation of chromium carbides and preserving the corrosion resistance of the stainless steel.

Martensitic Stainless Steel

Martensitic stainless steel is considered a straight chromium steel that remains stable over all temperature ranges, retaining its good strength and scaling resistance at temperatures up to 1100°F.

Martensitic stainless steels do not undergo carbide precipitation, however they are affected by rapid temperature changes and will produce brittle, hard and crack sensitive welds if the base metal is not preheated to at least 400°F.

Preheating will minimize the temperature gradient and preserve the quality of the weld.

USA 410 and 502 would be considered martensitic stainless steels.

Ferritic Stainless Steel

Ferritic stainless steel is another type of straight chromium steel. This group becomes extremely brittle and crack sensitive when subjected to the higher temperatures of welding.

Therefore it is extremely important to preheat the base metal at a low temperature, use the lowest possible welding currents and the smallest diameter of electrode or wire.

This should help to decrease the possibility of embrittlement of cracking caused by excessive grain growth.

USA 430 would be considered a ferritic stainless steel.

STAINLESS STEEL GUIDE FOR FILLER METAL

AISI TYPE NUMBER	442 446	430F 430 FSE	430 431	501 502	416 416SE	403 405 410 420 414	321 348 347	317	316L	316	314	310 310S	309 309S	304L	303 303SE	201 301 302B 305	202 302 304 308	MILD STEEL
201, 202, 301, 302,302B, 304,305,308	310 312 309	310 312 309	310 312 309	309 310 312	309 310 312	309 310 312	308	308	309 316	308	308	308	308	308	308	308		312 310 309
303, 303SE	310 309 312	310 309 312	310 309 312	310 309 312	309 310 312	309 310 312	308	308	308	308	308	308	308	308	312 308-15	308		312 310 309
304L	310 312 309	310 312 309	310 312 309	310 309 312	309 310 312	309 310 312	308	308L	308	308	308	308	308	308L	308	308		312 310 309
309, 309S	310 309 312	310 309 312	310 309 312	310 309 312	309 310 312	309 310 312	308	317 316 309	316	316	309	309	308	308	308	308		309 310 312
310, 310S	310 312 309	310 312 309	310 312 309	310 309 312	309 310 312	309 310 312	309	317 316 309	316	316	310	310	309 310	309	309	309		310 309 312
314	310 309 312	310 309 312	310 309 312	310 309 312	309 310 312	309 310 312	309 310 308	309 310	309 310	309 310	310-15	310	309 310	309 310	309 310	309	310	310 309 312
316	310 312 309	310 312 309	310 312 309	310 309 312	309 310 312	309 310 312	308	316	316	316	309 310 316	310 309 316	309 310 316	309 316	309 316	309	316	309 310 312
316L	310 309 312	310 309 312	310 309 312	310 309 312	309 310 312	309 310 312	308	316 317 308	316L	316	309 310 316	310 309 316	316 309	308 316	308 316	308	316	308 310 312
317	310 312 309	310 312 309	310 312 309	310 309 312	309 310 312	309 310 312	308	317	316 308	316 308	309 310 317	317 316 309	317 316 309	308 316 317	308 316 317	308 316 317		309 310 312
321, 348, 347	310 309 312	310 309 312	310 309 312	310 309 312	309 310 312	309 310 312	347 308	308 347	347 308	347 308	309 310 347	347 308	347 308	347 308	347 308	347	308	309 310 312
403, 405, 410, 420, 414	310 312 309	310 312 309	310 312 309	310 309 312	309 310	410* 309**	309 310	309 310	309 310	309 310	310 309	310 309	309 310	309 310	309 310	309	310	309 310 312
416, 416SE	310 309	310 309	310 309	310	410	410* 309** 310**	309 310	309 310 312	309 310 312	309 310 312	309 310 312	310 309 312	309 310 312	309 310 312	309 310 312	309 310 312		309 310 312
501, 502	310	310	310	502 310	310	310	310 309	310 309	310 309	310 309	310 309	310 309	310 309	310 309	310 309	310	309	310 309 312
430, 431	310 309	310 309	430 310 309	310	310	310 309	310 309	310 309	310 309	310 309	310 309	310 309	310 309	310 309	310 309	310	309	310 309 312
430F, 430FSE	310 309	410	310 309	310 309	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312		310 309 312
442, 446	310 309	309 310 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312	310 309 312		310 309 312

** Preheat ** No Preheat Necessary.*

The first numbers indicate first choice, sibsequent numbers indicated second and third choice.

This choice can vary with specific applications and individual job requirements.

STAINLESS STEEL WELDING

307 STAINLESS STEEL

- **R307** is Manganese-austenitic stainless steel with a high amount of manganese. Good for toughness and crack resistant is required.

Applications:

- **307** is used for joining and surfacing on work-harden steel and heat resistant steel under temperature up to 1560 degrees Fahrenheit. This alloy can be used to joining and surfacing dissimilar steels.

ER307	25# Spools		UPC #	Part #	U/M	Size
307 .035 × 25# Spool	One Spool		812922015020	**307035X25SP**	LB	.035
307 .045 × 25# Spool **			812922015037	**307045X25SP**	LB	.045

(Skid Size is 2,025 Pounds)

*** while supplies last*

ER307	36" Cut Lengths		UPC #	Part #	U/M	Size
308 1/6 × 36	4-10 lb. Tubes in 40 lb. Carton		812922014825	**307116X36T**	LB	1/16
307 3/32 × 36			812922015006	**307332X36T**	LB	3/32
307 1/8 × 36			812922015013	**30718X36T**	LB	1/8

308 STAINLESS STEEL

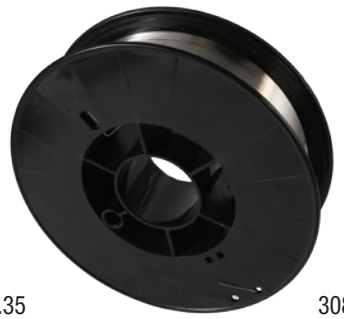
Spec/Classification: AWS A5.9, ASME SFA 5.9 ER308

- **Weldcote 308** stainless steel is used for TIG, MIG and submerged arc welding of un-stabilized stainless steels such as types 301,302, 304, 305, 308.
- This filler metal is the most popular grade among stainless steels and used for general purpose applications where corrosion conditions are moderate.

Applications:

- **Weldcote 308** can also be certified as ER308H.
- This filler metal is used where resistance to corrosion, impact and abrasion is required.
- Weld deposits will be equal or superior to the base metal.

308LSi 0.35



308L 0.25

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	Cr	Ni	Mo	S	P	Cu
Result (%)	0.08	1.00-2.50	0.30-0.65	19.5-21.0	9.0-11.0	0.3	0.02	0.03	0.3

Recommended Welding Parameters: ER308

Typical Mechanical Properties of Weld Metal:

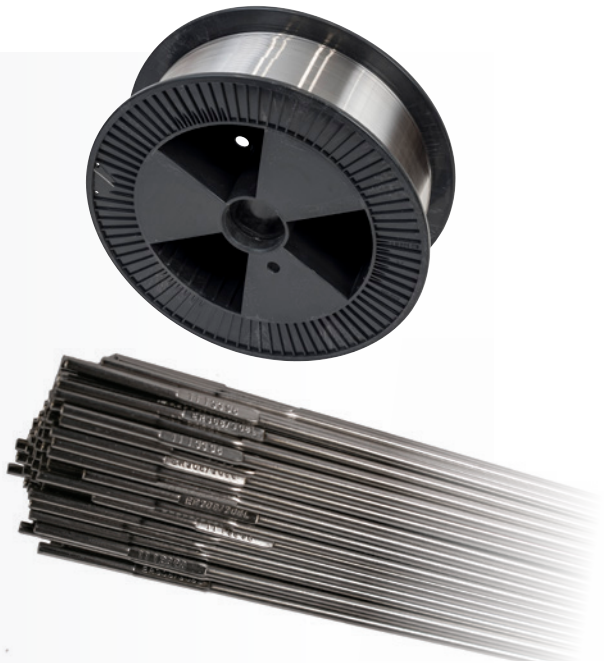
Shielding Gas:	98% Argon / Balance C02, 02, HE	
Elongation in 2" (%)	39%	
Yield Strength (psi)	59,500 Psi	410 MPa
Tensile Strength (min)	88,500 Psi	610 MPa

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Short Circuit Transfer

Diameter	Amps	Volts	90%He + 7.5%Ar + 2.5%CO^2 (cfh)	Wire Feed (ipm)
.030	60-125	17-22	20-25	150-340
.035	75-160	17-22	20-25	120-400
.045	100-200	17-22	20-25	100-240

308 STAINLESS STEEL

Spec/Classification: AWS A5.9, ASME SFA 5.9 ER308



GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Spray Transfer

Diameter	Amps	Volts	98% Argon / Balance C02, 02, HE	Wire Feed (ipm)
.030	160-225	24-28	25	440-650
.035	180-300	24-29	30	430-500
.045	200-450	24-30	30-35	220-400
1/16	225-500	24-32	40	110-210
3/32	250-600	24-32	50	50-80

GMAW (TIG) Parameters (DCSP) 2% Lanthanated Tungsten Electrode Negative[3]

Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	80-120	3/8	20
3/32"	1/16"	1/16"	100-130	3/8	20
1/8"	3/32"	1/16"	120-150	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	200-350	1/2	25
1/2"	1/8"	1/8"	235-375	1/2	25

ER308 I 25# Spools		UPC #	Part #	U/M	Size
308 .030 × 25# Spool **	One Spool		**308030X25SP**	LB	.030
308 .035 × 25# Spool		877511000047	**308035X25SP**	LB	.035
308 .045 × 25# Spool		812922015037	**307045X25SP**	LB	.045

ER308 I 10# Spools		UPC #	Part #	U/M	Size
308 .025 × 10# Spool	One Spool	877511000009	**308025X10SP**	LB	.025
308 .030 × 10# Spool		877511000016	**308030X10SP**	LB	.030
308 .035 × 10# Spool		877511000023	**308035X10SP**	LB	.035

ER308 I 2# Spools		UPC #	Part #	U/M	Size
308 .030 × 2# Spool	2-20 lb. Spools per Carton	877511000061	**308025X2SP**	LB	.025
308 .030 × 2# Spool		877511000078	**308030X2SP**	LB	.030
308 .035 × 2# Spool		877511000085	**308035X2SP**	LB	.035

ER308 I 36" Cut Lengths		UPC #	Part #	U/M	Size
308 .035 × 36	4-10 lb. Tubes in 40 lb. Carton	877511000771	**308035X36T**	LB	.035
308 .045× 36		877511000788	**308045X36T**	LB	.045
308 1/16 × 36		877511000719	**308116X36T**	LB	1/16
308 3/32 × 36		877511000726	**308332X36T**	LB	3/32
308 1/8 × 36		877511000733	**30818X36T**	LB	1/8

308 STAINLESS STEEL I 500# Drums	Part #	Size
308 .045 × 500# Drum **	**308045X500D**	.045

308L STAINLESS STEEL I 60# Spools	Part #
308L 3/32 × 60# Spool**	**308L332X60SP**

*** while supplies last*

Applications: E308LT0-3 is utilized for the cladding of carbon steels.
This electrode may also be used to weld 301, 302, 304L, 308 and 308L stainless steel.

308L STAINLESS STEEL

Spec/Classification: AWS A5.9, ASME SFA 5.9 ER308L

- Weldcote 308L has the same analysis as type 308 except the carbon content has been held to a maximum of .03% to reduce the possibility of intergranular carbide precipitation.
- 308L stainless steel is used for TIG, MIG and submerged arc welding of stainless steels such as types 201,202,301,302,304L,305, 308L, 321, and 347.

Applications:

This filler metal is suitable for applications at cryogenic temperatures.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	Cr	Ni	Mo	S	P	Cu
Result (%)	0.03	1.00-2.50	0.30-0.65	19.5-21.0	9.0-11.0	0.3	0.02	0.03	0.3

Typical Mechanical Properties of Weld Metal:

Shielding Gas:	98% Argon / Balance C02, 02, HE	
Elongation in 2" (%)	40%	
Yield Strength (psi)	57,000 Psi	390 MPa
Tensile Strength (min)	85,000 Psi	590 MPa

GMAW (MIG) Parameters (DC Reverse Polarity)
Electrode Positive Short Circuit Transfer

Diameter	Amps	Volts	90%He + 7.5%Ar + 2.5%CO² (cfh)	Wire Feed (ipm)
.030	60-125	17-22	20-25	150-340
.035	75-160	17-22	20-25	120-400
.045	100-200	17-22	20-25	100-240

Recommended Welding Parameters: ER308L

GMAW (MIG) Parameters (DC Reverse Polarity)
Electrode Positive Spray Transfer

Diameter	Amps	Volts	98% Argon / Balance C02, 02, HE	Wire Feed (ipm)
.030	160-225	24-28	25	440-650
.035	180-300	24-29	30	430-500
.045	200-450	24-30	30-35	220-400
1/16	225-500	24-32	40	110-210
3/32	250-600	24-32	50	50-80

GMAW (TIG) Parameters (DCSP)
2% Lanthanated Tungsten Electrode Negative[3]

Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	80-120	3/8	20
3/32"	1/16"	1/16"	100-130	3/8	20
1/8"	3/32"	1/16"	120-150	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	200-350	1/2	25
1/2"	1/8"	1/8"	235-375	1/2	25

ER308L	25# & #33 Spools		UPC #	Part #	U/M	Size
308L .025 × 25# Spool		One Spool	877511000429	**308L025X25SP**	LB	.025
308L .030 × 25# Spool			877511000436	**308L030X25SP**	LB	.030
308L .035 × 25# Spool			877511000443	**308L035X25SP**	LB	.035
308L .045 × 25# Spool			877511000450	**308L045X25SP**	LB	.045
308L 1/16 × 25# Spool			877511000467	**308L116X25SP**	LB	1/16
308L .035 × 33# Spool	NEW	One Spool	812922017598	**308L035X33SP**	LB	.035

ER308L	10# Spools		UPC #	Part #	U/M	Size
308L .025 × 10# Spool		One Spool	877511000399	**308L025X10SP**	LB	.025
308L .030 × 10# Spool			877511000405	**308L030X10SP**	LB	.030
308L .035 × 10# Spool			877511000412	**308L035X10SP**	LB	.035
308L .045 × 10# Spool			812922015099	**308L045X10SP**	LB	.045

ER308L	2# Spools		UPC #	Part #	U/M	Size
308L .025 × 2# Spool		2-20 lb. Spools per Carton	877511000474	**308L025X2SP**	LB	.025
308L .030 × 2# Spool			877511000481	**308L030X2SP**	LB	.030
308L .035 × 2# Spool			877511000498	**308L035X2SP**	LB	.035

ER308L	36" Cut Lengths		UPC #	Part #	U/M	Size
308L .030 × 36		4-10 lb. Tubes in 40 lb. Carton	877511001181	**308L030X36T**	LB	.030
308L .035 × 36			877511001198	**308L035X36T**	LB	.035
308L .045 × 36			877511001204	**308L045X36T**	LB	.045
308L 1/16 × 36			877511001136	**308L116X36T**	LB	1/16
308L 3/32 × 36			877511001143	**308L332X36T**	LB	3/32
308L 1/8 × 36			877511001150	**308L18X36T**	LB	1/8
308L 5/32 × 36			877511001167	**308L532X36T**	LB	5/32
308L 3/16 × 36			877511001174	**308L316X36T**	LB	3/16

308LSi STAINLESS STEEL

Spec/Classification: AWS A5.9, ASME SFA 5.9 ER308LSI

- Weldcote 308LSi has similar usages as 308L, but the 0.65-1.00% silicon content improves wash and wetting behavior in the gas shielded welding processes.
- Weldcote 308LSi is available for TIG, MIG and submerged arc welding.

Applications:

- This wire is used to weld equipment made with 304 and 308 stainless grades.
- Welding speed is higher than 308 or 308L due to improved wettability of weld metal.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	Cr	Ni	Mo	S	P	Cu
Result (%)	0.03	1.00-2.50	0.65-1.00	19.5-21.0	9.0-11.0	0.3	0.02	0.03	0.3

Typical Mechanical Properties of Weld Metal:

Shielding Gas:	98% Argon / Balance C02, 02, HE	
Elongation in 2" (%)	39%	
Yield Strength (psi)	59,000 Psi	410 MPa
Tensile Strength (min)	86,500 Psi	600 MPa

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Short Circuit Transfer

Diameter	Amps	Volts	90%He + 7.5%Ar + 2.5%CO^2 (cfh)	Wire Feed (ipm)
.030	60-125	17-22	20-25	150-340
.035	75-160	17-22	20-25	120-400
.045	100-200	17-22	20-25	100-240

Recommended Welding Parameters: ER308LSi

GMAW (MIG) Parameters
(DC Reverse Polarity) Electrode Positive Spray Transfer

Diameter	Amps	Volts	98% Argon / Balance C02, 02, HE	Wire Feed (ipm)
.030	160-225	24-28	25	440-650
.035	180-300	24-29	30	430-500
.045	200-450	24-30	30-35	220-400
1/16	225-500	24-32	40	110-210
3/32	250-600	24-32	50	50-80

GMAW (TIG) Parameters
(DCSP) 2% Lanthanated Tungsten Electrode Negative[3]

Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	80-120	3/8	20
3/32"	1/16"	1/16"	100-130	3/8	20
1/8"	3/32"	1/16"	120-150	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	200-350	1/2	25
1/2"	1/8"	1/8"	235-375	1/2	25

ER308LSi I 33# Spools NEW		UPC #	Part #	U/M	Size
308LSi .035 × 33# Spool	One Spool	812922017604	**308LSI035X33SP**	LB	.035

ER308LSi I 25# Spools		UPC #	Part #	U/M	Size
308LSi .030 × 25# Spool	One Spool	877511000542	**308LSI030X25SP**	LB	.030
308LSi .035 × 25# Spool		877511000559	**308LSI035X25SP**	LB	.035
308LSi .045 × 25# Spool		877511000566	**308LSI045X25SP**	LB	.045

ER308LSi I 10# Spools		UPC #	Part #	U/M	Size
308LSi .025 × 10# Spool	One Spool	877511000504	**308LSI025X10SP**	LB	.025
308LSi .030 × 10# Spool		877511000511	**308LSI030X10SP**	LB	.030
308LSi .035 × 10# Spool		877511000528	**308LSI035X10SP**	LB	.035

ER308LSi I 2# Spools		UPC #	Part #	U/M	Size
308LSi .025 × 2# Spool	2-20 lb. Spools per Carton	877511000573	**308LSI025X2SP**	LB	.025
308LSi .030 × 2# Spool		877511000580	**308LSI030X2SP**	LB	.030
308LSi .035 × 2# Spool		877511000597	**308LSI035X2SP**	LB	.035

ER308LSi I 36" Cut Lengths		UPC #	Part #	U/M	Size
308LSi .045 × 36	4-10 lb. Tubes in 40 lb. Carton	812922011688	**308LSI045X36T**	LB	.045
308LSi 1/16 × 36		877511001211	**308LSI116X36T**	LB	1/16
308LSi 3/32 × 36		877511001228	**308LSI332X36T**	LB	3/32
308LSi 1/8 × 36		877511001235	**308LSI18X36T**	LB	1/8

309 STAINLESS STEEL

Spec/Classification: AWS A5.9, ASME SFA 5.9 ER309

- Weldcote 309 is used for the welding of similar alloys in wrought or cast form.
- It is mostly used for welding dissimilar materials such as mild steel to stainless steel, as well as for a barrier layer in stainless overlays.

Applications:

- For some applications, welding of straight chromium steels can be accomplished with this alloy.
- Weldcote 309 wire produces sound ductile weld deposits.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	Cr	Ni	Mo	S	P	Cu
Result (%)	0.12	1.00-2.50	0.30-0.65	23.0-24.0	12.0-14.0	0.3	0.02	0.03	0.3

Typical Mechanical Properties of Weld Metal:

Shielding Gas:	98% Argon / Balance C02, 02, HE	
Elongation in 2" (%)	34%	
Yield Strength (psi)	59,500 Psi	420 MPa
Tensile Strength (min)	88,500 Psi	620 MPa

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Short Circuit Transfer

Diameter	Amps	Volts	90%He + 7.5%Ar + 2.5%CO^2 (cfh)	Wire Feed (ipm)
.030	60-125	14-21	20-25	150-340
.035	60-200	14-22	20-25	120-400
.045	100-250	16-23	20-25	100-240

Recommended Welding Parameters: ER309

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Spray Transfer

Diameter	Amps	Volts	98% Argon / Balance C02, 02, HE	Wire Feed (ipm)
.030	120-220	22-26	30	440-650
.035	150-225	23-26	35	430-500
.045	200-325	24-28	35	220-400
1/16	300-350	24-27	40	110-210
3/32	275-600	24-27	45	50-80

GMAW (TIG) Parameters (DCSP) 2% Lanthanated Tungsten Electrode Negative[3]

Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	80-120	3/8	20
3/32"	1/16"	1/16"	100-130	3/8	20
1/8"	3/32"	1/16"	120-150	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	200-350	1/2	25
1/2"	1/8"	1/8"	235-375	1/2	25

ER309 I 36" Cut Lengths		UPC #	Part #	U/M	Size
309 1/16 × 36	4-10 lb. Tubes in 40 lb. Carton	877511000795	**309116X36**	LB	1/16
309 3/32 × 36		877511000801	**309332X36T**	LB	3/32
309 1/8 × 36		877511000818	**30918X36T**	LB	1/8

309L STAINLESS STEEL

Spec/Classification: AWS A5.9, ASME SFA 5.9 ER309L

- Weldcote 309L is similar to 309 but contains an average of .02% carbon (max of .03%) to provide a weld deposit that will offer good resistance against intergranular corrosion caused by carbide precipitation.

Applications:

- Weldcote Metals 309L is preferred over 309 for cladding over carbon or low alloy steels, as well as for dissimilar points that undergo heat treatment.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	Cr	Ni	Mo	S	P	Cu
Result (%)	0.3	1.00-2.50	0.30-0.65	23.0-25.0	12.0-14.0	0.3	0.02	0.03	0.3

Typical Mechanical Properties of Weld Metal:

Shielding Gas:	98% Argon / Balance C02, 02, HE	
Elongation in 2" (%)	36%	
Yield Strength (psi)	58,000 Psi	400 MPa
Tensile Strength (min)	85,000 Psi	590 MPa

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Short Circuit Transfer

Diameter	Amps	Volts	90%He + 7.5%Ar + 2.5%C0² (cfh)	Wire Feed (ipm)
.030	60-125	14-21	20-25	150-340
.035	60-200	14-22	20-25	120-400
.045	100-250	16-23	20-25	100-240

Recommended Welding Parameters: ER309L

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Spray Transfer

Diameter	Amps	Volts	98% Argon / Balance C02, 02, HE	Wire Feed (ipm)
.030	120-220	22-26	30	440-650
.035	150-225	23-26	35	430-500
.045	200-325	24-28	35	220-400
1/16	300-350	24-27	40	110-210
3/32	275-600	24-27	45	50-80

GMAW (TIG) Parameters (DCSP) 2% Lanthanated Tungsten Electrode Negative[3]

Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	80-120	3/8	20
3/32"	1/16"	1/16"	100-130	3/8	20
1/8"	3/32"	1/16"	120-150	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	200-350	1/2	25
1/2"	1/8"	1/8"	235-375	1/2	25

ER309L	25# Spools		UPC #	Part #	U/M	Size
309L .030 × 25# Spool	One Spool		877511000634	**309L030X25SP**	LB	.030
309L .035 × 25# Spool			877511000641	**309L035X25SP**	LB	.035
309L .045 × 25# Spool			877511000658	**309L045X25SP**	LB	.045
309L 1/16 × 25# Spool			877511006391	**309L116X25SP**	LB	1/16

ER309L	10# Spools		UPC #	Part #	U/M	Size
309L .025 × 10# Spool	One Spool		877511000603	**309L025X10SP**	LB	.025
309L .030 × 10# Spool			877511000610	**309L030X10SP**	LB	.030
309L .035 × 10# Spool			877511000627	**309L035X10SP**	LB	.035
309L .045 × 10# Spool			812922015204	**309L045X10SP**	LB	.045

ER309L	2# Spools		UPC #	Part #	U/M	Size
309L .030 × 2# Spool	2-20 lb. Spools per Carton		877511000665	**309L030X2SP**	LB	.030
309L .035 × 2# Spool			877511000672	**309L035X2SP**	LB	.035

ER309L	36" Cut Lengths		UPC #	Part #	U/M	Size
309L .035 × 36	4-10 lb. Tubes in 40 lb. Carton		877511001280	**309L035X36T**	LB	.035
309L .045 × 36			877511001297	**309L045X36T**	LB	.045
309L 1/16 × 36			877511001242	**309L116X36T**	LB	1/16
309L 3/32 × 36			877511001259	**309L332X36T**	LB	3/32
309L 1/8 × 36			877511001266	**309L18X36T**	LB	1/8
309L 5/32 × 36			877511001273	**309L532X36T**	LB	5/32
309L 3/16 × 36			877511009743	**309L316X36T**	LB	3/16

309LSi STAINLESS STEEL

Spec/Classification: AWS A5.9, ASME SFA 5.9 ER309LSI

- Weldcote 309LSi is of the same chemical composition as 309L, with higher silicon content to improve the bead appearance and increase welding ease.
- The weld beads are exceptionally smooth due to good wetting.

Applications:

- Weldcote 309LSi requires little clean up time with low spatter and minimal residue.
- 309LSi is used for joining 300 series stainless steel to carbon or low alloy steels.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	Cr	Ni	Mo	S	P	Cu
Result (%)	0.3	1.00-2.50	0.65-1.00	23.0-25.0	12.0-14.0	0.3	0.02	0.03	0.3

Typical Mechanical Properties of Weld Metal:

Shielding Gas:	98% Argon / Balance C02, 02, HE	
Elongation in 2" (%)	35%	
Yield Strength (psi)	60,500 Psi	420 MPa
Tensile Strength (min)	89,500 Psi	620 MPa

GMAW (MIG) Parameters (DC Reverse Polarity)
Electrode Positive Short Circuit Transfer

Diameter	Amps	Volts	90%He + 7.5%Ar + 2.5%CO^2 (cfh)	Wire Feed (ipm)
.030	60-125	17-22	20-25	150-430
.035	75-160	17-22	20-25	120-400
.045	100-200	17-22	20-25	100-240

Recommended Welding Parameters: ER309LSi

GMAW (MIG) Parameters (DC Reverse Polarity)
Electrode Positive Spray Transfer

Diameter	Amps	Volts	98% Argon / Balance C02, 02, HE	Wire Feed (ipm)
.030	160-225	24-28	30	440-650
.035	180-300	24-29	35	430-500
.045	200-450	24-30	35	220-400
1/16	220-500	24-32	40	110-210
3/32	250-600	24-32	45	50-80

GMAW (TIG) Parameters (DCSP)
2% Lanthanated Tungsten Electrode Negative[3]

Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	80-120	3/8	20
3/32"	1/16"	1/16"	100-130	3/8	20
1/8"	3/32"	1/16"	120-150	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	200-350	1/2	25
1/2"	1/8"	1/8"	235-375	1/2	25

ER309LSi I 25# Spools		UPC #	Part #	U/M	Size
309LSi .030 × 25# Spool	One Spool	877511000689	**309LSI030X25SP**	LB	.030
309LSi .035 × 25# Spool		877511000696	**309LSI035X25SP**	LB	.035
309LSi .045 × 25# Spool		877511000702	**309LSI045X25SP**	LB	.045

ER309LSi I 10# Spools		UPC #	Part #	U/M	Size
309LSi .030 × 10# Spool	One Spool	812922013002	**309LSI030X10SP**	LB	.030
309LSi .035 × 10# Spool		812922013019	**309LSI035X10SP**	LB	.035

309LSi STAINLESS STEEL I 500# Drums	Part #	U/M	Size
309LSi .045 × 500# Drum **	**309LSI045X500D**	LB	.045

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310 STAINLESS STEEL

Spec/Classification: AWS A5.9, ASME SFA 5.9 ER310

- Weldcote 310 is used for the welding of stainless steels of similar composition in wrought or cast form, 310, 304 clad stainless steel, ferritic and martensitic chromium steels and for stainless steel overlay work on mild and carbons steels.

Applications:

- The weld deposit is fully austenitic, calls for low heat during welding, high strength and high resistance to scaling at elevated temperatures.
- This filler metal can also be used for dissimilar welding.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	Cr	Ni	Mo	S	P	Cu
Result (%)	0.08-0.15	1.00-2.50	0.30-0.65	25.0-27.0	20.0-22.0	0.3	0.02	0.03	0.3

Typical Mechanical Properties of Weld Metal:

Shielding Gas:	98% Argon / Balance C02, 02, HE	
Elongation in 2" (%)	34%	
Yield Strength (psi)	60,500 Psi	420 MPa
Tensile Strength (min)	89,500 Psi	620 MPa

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Short Circuit Transfer

Diameter	Amps	Volts	90%He + 7.5%Ar + 2.5%CO² (cfh)	Wire Feed (ipm)
.030	60-125	17-22	20-25	150-430
.035	70-160	17-22	20-25	120-400
.045	100-200	17-22	20-25	100-240

Recommended Welding Parameters: ER310

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Spray Transfer

Diameter	Amps	Volts	98% Argon / Balance C02, 02, HE	Wire Feed (ipm)
.030	160-225	24-28	30	440-650
.035	180-300	24-29	35	430-500
.045	200-450	24-30	35	220-400
1/16	220-500	24-32	40	110-210
3/32	250-600	24-32	45	50-80

GMAW (TIG) Parameters (DCSP) 2% Lanthanated Tungsten Electrode Negative[3]

Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	80-120	3/8	20
3/32"	1/16"	1/16"	100-130	3/8	20
1/8"	3/32"	1/16"	120-150	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	200-350	1/2	25
1/2"	1/8"	1/8"	235-375	1/2	25

ER310 | 36" Cut Lengths		UPC #	Part #	U/M	Size
310 1/16 × 36	4-10 lb. Tubes in 40 lb. Carton	877511000825	**310116X36T**	LB	1/16
310 3/32 × 36		877511000832	**310332X36T**	LB	3/32
310 1/8 × 36		877511000849	**31018X36T**	LB	1/8

310 STAINLESS STEEL | 33# Spools	Part #	U/M	Size
310LT1-1 .045 × 33# Spool **	**310LT11045X33SP**	LB	.045

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SUPER 120 STAINLESS TIG	UPC #	Part #	U/M	Size
AKA Stud removal rod – excellent strength and superior ductility and crack resistance on many grades of steels and stainless as well as dissimilar alloys.				
Super 120 1/16 × 36 Stainless TIG **	812922012388	**SUPER120116X36T**	LB	1/16
Super 120 1/8 × 36 Stainless TIG **	812922012920	**SUPER12018X36T**	LB	1/8

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312 STAINLESS STEEL

Spec/Classification: AWS A5.9, ASME SFA 5.9 ER312

- Weldcote 312 is used to weld cast alloys of similar composition and is used to weld dissimilar metals and weld overlays.
- 312 wire is used for high strength and high yield steels, stainless to mild steels and AISI 304 clad stainless steel.

Applications:

- This gives very high ferrite.
- When welding similar cast alloys, limit welding to two or three layers only.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	Cr	Ni	Mo	S	P	Cu
Result (%)	0.15	1.00-2.50	0.30-0.65	28.0-32.0	8.0-10.5	0.3	0.02	0.03	0.3

Typical Mechanical Properties of Weld Metal:

Shielding Gas:	98% Argon / Balance C02, 02, HE	
Elongation in 2" (%)	25%	
Yield Strength (psi)	78,500 Psi	540 MPa
Tensile Strength (min)	109,500 Psi	760 MPa

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Short Circuit Transfer

Diameter	Amps	Volts	90%He + 7.5%Ar + 2.5%CO² (cfh)	Wire Feed (ipm)
.030	60-125	17-22	20-25	150-430
.035	75-160	17-22	20-25	120-400
.045	100-200	17-22	20-25	100-240

Recommended Welding Parameters: ER312

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Spray Transfer

Diameter	Amps	Volts	98% Argon / Balance C02, 02, HE	Wire Feed (ipm)
.030	160-225	24-28	30	440-650
.035	180-300	24-29	35	430-500
.045	200-450	24-30	35	220-400
1/16	220-500	24-32	40	110-210
3/32	250-600	24-32	45	50-80

GMAW (TIG) Parameters (DCSP) 2% Lanthanated Tungsten Electrode Negative[3]

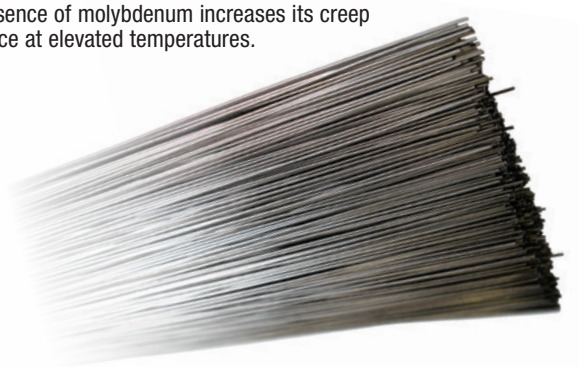
Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	80-120	3/8	20
3/32"	1/16"	1/16"	100-130	3/8	20
1/8"	3/32"	1/16"	120-150	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	200-350	1/2	25
1/2"	1/8"	1/8"	235-375	1/2	25

ER312 I 36" Cut Lengths		UPC #	Part #	U/M	Size
312 .035 × 36	4-10 lb. Tubes in 40 lb. Carton	812922011961	**312035X36T**	LB	.035
312 .045 × 36		877511009354	**312045X36T**	LB	.045
312 1/16 × 36		877511000856	**312116X36T**	LB	1/16
312 3/32 × 36		877511000863	**312332X36T**	LB	3/32
312 1/8 × 36		877511000870	**31218X36T**	LB	1/8
312 5/32 × 36		877511009392	**312532X36T**	LB	5/32

316 STAINLESS STEEL

Spec/Classification: AWS A5.9, ASME SFA 5.9 ER316

- Weldcote 316 is used to weld wrought and cast forms of similar composition.
- The presence of molybdenum increases its creep resistance at elevated temperatures.



Applications:

- The lower ferrite level of this nominal composition reduces the rate of corrosion in certain media and is suitable for use at cryogenic and elevated temperatures.

Typical Mechanical Properties of Weld Metal:

Shielding Gas:	98% Argon / Balance C02, 02, HE	
Elongation in 2" (%)	35%	
Yield Strength (psi)	59,000 Psi	410 MPa
Tensile Strength (min)	88,500 Psi	610 MPa

GMAW (MIG) Parameters (DC Reverse Polarity)
Electrode Positive Short Circuit Transfer

Diameter	Amps	Volts	90%He + 7.5%Ar + 2.5%CO² (cfh)	Wire Feed (ipm)
.030	60-125	17-22	20-25	150-430
.035	70-160	17-22	20-25	120-400
.045	100-200	17-22	20-25	100-240

Recommended Welding Parameters: ER316

GMAW (MIG) Parameters (DC Reverse Polarity)
Electrode Positive Spray Transfer

Diameter	Amps	Volts	98% Argon / Balance C02, 02, HE	Wire Feed (ipm)
.030	160-225	24-28	30	440-650
.035	180-300	24-29	35	430-500
.045	200-450	24-30	35	220-400
1/16	220-500	24-32	40	110-210
3/32	250-600	24-32	45	50-80

GMAW (TIG) Parameters (DCSP)
2% Lanthanated Tungsten Electrode Negative[3]

Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	80-120	3/8	20
3/32"	1/16"	1/16"	100-130	3/8	20
1/8"	3/32"	1/16"	120-150	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	200-350	1/2	25
1/2"	1/8"	1/8"	235-375	1/2	25

316 I 36" Cut Lengths		UPC #	Part #	U/M	Size
316 .035 × 36	4-10 lb. Tubes in 40 lb. Carton		**316035X36T**	LB	.035
316 .045 × 36		877511000924	**316045X36T**	LB	.045
316 1/16 × 36		877511000887	**316116X36T**	LB	1/16
316 3/32 × 36		877511000894	**316332X36T**	LB	3/32
316 1/8 × 36		877511000900	**31618X36T**	LB	1/8

310 STAINLESS STEEL I 25# Spools	Part #	U/M	Size
316HT0-1 .045 × 25# Spool **	**316HT01045X25SP**	LB	.045

316 STAINLESS STEEL I 25# Spools		UPC #	Part #	U/M	Size
316 .035 × 25# Spool **	One spool	877511000153	**316035X25SP**	LB	.035

316 STAINLESS STEEL I 500# Drums	Part #	U/M	Size
316 .035 × 500# Drum **	**316035X500D**	LB	.035
316 .045 × 500# Drum **	**316045X500D**	LB	.045

*** while supplies last*

316L STAINLESS STEEL

Spec/Classification: AWS A5.9, ASME SFA 5.9 ER316L

- Weldcote 316L has the same analysis as ER316, except that the carbon content is limited to a maximum of 0.03% in order to reduce the possibility of formation of intergranular carbide precipitation.
- This filler metal is primarily used for welding low carbon molybdenum bearing austenitic alloys.

Applications:

- This low carbon alloy is not as strong at elevated temperatures as ER316H.
- 316L is used for welding AISI types 316L and 318 that may be exposed to organic and inorganic acids.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	Cr	Ni	Mo	S	P	Cu
Result (%)	0.03	1.00-2.50	0.30-0.65	18.0-20.0	11.0-14.0	2.5-3.0	0.02	0.03	0.30

Typical Mechanical Properties of Weld Metal:

Shielding Gas:	98% Argon / Balance C02, 02, HE	
Elongation in 2" (%)	36%	
Yield Strength (psi)	58,000 Psi	400 MPa
Tensile Strength (min)	86,000 Psi	590 MPa

GMAW (MIG) Parameters (DC Reverse Polarity)
Electrode Positive Short Circuit Transfer

Diameter	Amps	Volts	90%He + 7.5%Ar + 2.5%CO^2 (cfh)	Wire Feed (ipm)
.030	60-125	17-22	20-25	150-430
.035	75-160	17-22	20-25	120-400
.045	100-200	17-22	20-25	100-240

Recommended Welding Parameters: ER316L

GMAW (MIG) Parameters (DC Reverse Polarity)
Electrode Positive Spray Transfer

Diameter	Amps	Volts	98% Argon / Balance C02, 02, HE	Wire Feed (ipm)
.030	160-225	24-28	30	440-650
.035	180-300	24-29	35	430-500
.045	200-450	24-30	35	220-400
1/16	220-500	24-32	40	110-210
3/32	250-600	24-32	45	50-80

GMAW (TIG) Parameters (DCSP)
2% Lanthanated Tungsten Electrode Negative[3]

Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	80-120	3/8	20
3/32"	1/16"	1/16"	100-130	3/8	20
1/8"	3/32"	1/16"	120-150	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	200-350	1/2	25
1/2"	1/8"	1/8"	235-375	1/2	25

ER316L		UPC #	Part #	U/M	Size
316L .030 × 25# Spool	One Spool	877511000221	**316L030X25SP**	LB	.030
316L .035 × 25# Spool		877511000238	**316L035X25SP**	LB	.035
316L .045 × 25# Spool		877511000245	**316L045X25SP**	LB	.045
316L 1/16 × 25# Spool		877511000252	**316L116X25SP**	LB	1/16
316L .025 × 10# Spool	One Spool	877511000191	**316L025X10SP**	LB	.025
316L .030 × 10# Spool		877511000207	**316L030X10SP**	LB	.030
316L .035 × 10# Spool		877511000214	**316L035X10SP**	LB	.035
316L .025 × 2# Spool	2-20 lb. Spools per Carton	877511000269	**316L025X2SP**	LB	.025
316L .030 × 2# Spool		877511000276	**316L030X2SP**	LB	.030
316L .035 × 2# Spool		877511000283	**316L035X2SP**	LB	.035

ER316L	36" Cut Lengths	UPC #	Part #	U/M	Size
316L .030 × 36	4-10 lb. Tubes in 40 lb. Carton	877511001037	**316L030X36T**	LB	.030
316L .035 × 36		877511001044	**316L035X36T**	LB	.035
316L .045 × 36		877511001051	**316L045X36T**	LB	.045
316L 1/16 × 36		877511000986	**316L116X36T**	LB	1/16
316L 3/32 × 36		877511000993	**316L332X36T**	LB	3/32
316L 1/8 × 36		877511001006	**316L18X36T**	LB	1/8
316L 5/32 × 36		877511001013	**316L532X36T**	LB	5/32
316L 3/16 × 36		877511001020	**316L316X36T**	LB	3/16

316LSi STAINLESS STEEL

Spec/Classification: AWS A5.9, ASME SFA 5.9 ER316LSI

- Weldcote 316LSi is similar to 316L, with a higher silicon content for optimum ease in welding and smooth bead appearance.
- Higher productivity could be realized in MIG welding.

Applications:

- Weldcote 316LSi is used for welding austenitic acid-resistant steels such as those containing 18% Cr, 8% Ni, and 2-3%Mo.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	Cr	Ni	Mo	S	P	Cu
Result (%)	0.03	1.00-2.50	0.65-1.00	18.0-20.0	11.0-14.0	2.5-3.0	0.02	0.03	0.30

Typical Mechanical Properties of Weld Metal:

Shielding Gas:	98% Argon / Balance C02, 02, HE	
Elongation in 2" (%)	36%	
Yield Strength (psi)	58,500 Psi	410 MPa
Tensile Strength (min)	86,500 Psi	600 MPa

GMAW (MIG) Parameters (DC Reverse Polarity)
Electrode Positive Short Circuit Transfer

Diameter	Amps	Volts	90%He + 7.5%Ar + 2.5%CO^2 (cfh)	Wire Feed (ipm)
.030	60-125	17-22	20-25	150-430
.035	75-160	17-22	20-25	120-400
.045	100-200	17-22	20-25	100-240

Recommended Welding Parameters: ER316LSi

GMAW (MIG) Parameters (DC Reverse Polarity)
Electrode Positive Spray Transfer

Diameter	Amps	Volts	98% Argon / Balance C02, 02, HE	Wire Feed (ipm)
.030	160-225	24-28	30	440-650
.035	180-300	24-29	35	430-500
.045	200-450	24-30	35	220-400
1/16	220-500	24-32	40	110-210
3/32	250-600	24-32	45	50-80

GMAW (TIG) Parameters (DCSP)
2% Lanthanated Tungsten Electrode Negative[3]

Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	80-120	3/8	20
3/32"	1/16"	1/16"	100-130	3/8	20
1/8"	3/32"	1/16"	120-150	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	200-350	1/2	25
1/2"	1/8"	1/8"	235-375	1/2	25

ER316LSI I 25# Spools		UPC #	Part #	U/M	Size
316LSI .030 × 25# Spool	One Spool	877511000320	**316LSI030X25SP**	LB	.030
316LSI .035 × 25# Spool		877511000337	**316LSI035X25SP**	LB	.035
316LSI .045 × 25# Spool		877511000344	**316LSI045X25SP**	LB	.045

ER316LSI I 10# Spools		UPC #	Part #	U/M	Size
316LSI .025 × 10# Spool	One Spool	877511000290	**316LSI025X10SP**	LB	.025
316LSI .030 × 10# Spool		877511000306	**316LSI030X10SP**	LB	.030
316LSI .035 × 10# Spool		877511000313	**316LSI035X10SP**	LB	.035

ER316LSI I 2# Spools		UPC #	Part #	U/M	Size
316LSI .030 × 2# Spool	2-20 lb. Spools per Carton	877511000368	**316LSI030X2SP**	LB	.030
316LSI .035 × 2# Spool		877511000375	**316LSI035X2SP**	LB	.035

ER316LSI I 36" Cut Lengths		UPC #	Part #	U/M	Size
316LSI .045 × 36	4-10 lb. Tubes in 40 lb. Carton	812922013033	**316LSI045X36T**	LB	.045
316LSI 1/16 × 36		877511001068	**316LSI116X36T**	LB	1/16
316LSI 3/32 × 36		877511001075	**316LSI332X36T**	LB	3/32
316LSI 1/8 × 36		877511001082	**316LSI18X36T**	LB	1/8

317L / 320LR STAINLESS STEEL

Spec/Classification: AWS A5.9, ASME SFA 5.9 ER317L

- Weldcote 317L is used for welding stainless steels with similar composition. Due to its higher molybdenum content this alloy offers high resistance to pitting and crevice corrosion.
- Low carbon makes the weld metal less susceptible to inter granular corrosion.

Applications:

- Weldcote 317L is used to weld austenitic acid resistant steels such as those containing 18% Cr, 8% Ni, 2-3%Mo.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	Cr	Ni	Mo	S	P	Cu
Result (%)	0.03	1.00-2.50	0.30-0.650	18.0-20.0	13.0-15.0	3.0-4.0	0.02	0.03	0.30

Typical Mechanical Properties of Weld Metal:

Shielding Gas:	98% Argon / Balance C02, 02, HE	
Elongation in 2" (%)	35%	
Yield Strength (psi)	58,000 Psi	400 MPa
Tensile Strength (min)	84,500 Psi	580 MPa

GMAW (MIG) Parameters (DC Reverse Polarity)
Electrode Positive Short Circuit Transfer

Diameter	Amps	Volts	90%He + 7.5%Ar + 2.5%CO^2 (cfh)	Wire Feed (ipm)
.030	60-125	17-22	20-25	150-430
.035	75-160	17-22	20-25	120-400
.045	100-200	17-22	20-25	100-240

Recommended Welding Parameters: ER317L

GMAW (MIG) Parameters (DC Reverse Polarity)
Electrode Positive Spray Transfer

Diameter	Amps	Volts	98% Argon / Balance C02, 02, HE	Wire Feed (ipm)
.030	160-225	24-28	30	440-650
.035	180-300	24-29	35	430-500
.045	200-450	24-30	35	220-400
1/16	220-500	24-32	40	110-210
3/32	250-600	24-32	45	50-80

GMAW (TIG) Parameters (DCSP)
2% Lanthanated Tungsten Electrode Negative[3]

Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	80-120	3/8	20
3/32"	1/16"	1/16"	100-130	3/8	20
1/8"	3/32"	1/16"	120-150	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	200-350	1/2	25
1/2"	1/8"	1/8"	235-375	1/2	25

ER317L I 36" Cut Lengths		UPC #	Part #	U/M	Size
317L 1/16 × 36	4-10 lb. Tubes in 40 lb. Carton	877511001099	**317L116X36T**	LB	1/16
317L 3/32 × 36		877511001105	**317L332X36T**	LB	3/32
317L 1/8 × 36		877511001112	**317L18X36T**	LB	1/8
317L 5/32 × 36		877511001129	**317L532X36T**	LB	5/32

- 320LR is a high corrosion resistance alloy used on 320 and base metals of similar composition.

Applications:

- 320LR is used for applications where resistance to severe corrosion is required. Typical application includes heat exchangers, tanks and process piping.

320LR I 36" Cut Lengths					
320LR 3/32 × 36	4-10 lb. Tubes in 40 lb. Carton	877511008418	**320LR332X36T**	LB	3/32
320LR 1/8 × 36		877511009729	**320LR18X36T**	LB	1/8

347 STAINLESS STEEL

Spec/Classification: AWS A5.9, ASME SFA 5.9 ER347

- Weldcote 347 is columbium stabilized stainless steel welding wire used to weld types 304, 304L 321 and 347.
- Addition of columbium reduces the possibility of chromium carbide precipitation and consequent intergranular corrosion.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	Cr	Ni	Mo	S	P	Cu	Nb
Result (%)	0.08	1.00-2.50	0.30-0.65	19.0-21.0	9.0-11.0	0.3	0.02	0.03	0.3	12×C-1.00

Typical Mechanical Properties of Weld Metal:

Shielding Gas:	98% Argon / Balance C02, 02, HE	
Elongation in 2" (%)	35%	
Yield Strength (psi)	57,000 Psi	390 MPa
Tensile Strength (min)	86,500 Psi	600 MPa

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Short Circuit Transfer

Diameter	Amps	Volts	90%He + 7.5%Ar + 2.5%CO^2 (cfh)	Wire Feed (ipm)
.030	60-125	17-22	20-25	150-430
.035	75-160	17-22	20-25	120-400
.045	100-200	17-22	20-25	100-240

Recommended Welding Parameters: ER347

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Spray Transfer

Diameter	Amps	Volts	98% Argon / Balance C02, 02, HE	Wire Feed (ipm)
.030	160-225	24-28	30	440-650
.035	180-300	24-29	35	430-500
.045	200-450	24-30	35	220-400
1/16	220-500	24-32	40	110-210
3/32	250-600	24-32	45	50-80

GMAW (TIG) Parameters (DCSP) 2% Lanthanated Tungsten Electrode Negative[3]

Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	80-120	3/8	20
3/32"	1/16"	1/16"	100-130	3/8	20
1/8"	3/32"	1/16"	120-150	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	200-350	1/2	25
1/2"	1/8"	1/8"	235-375	1/2	25

347 I 36" Cut Lengths		UPC #	Part #	U/M	Size
347 .035 × 36	4-10 lb. Tubes in 40 lb. Carton	877511000962	**347035X36T**	LB	.035
347 .045 × 36		877511000979	**347045X36T**	LB	.045
347 1/16 × 36		877511000931	**347116X36T**	LB	1/16
347 3/32 × 36		877511000948	**347332X36T**	LB	3/32
347 1/8 × 36		877511000955	**34718X36T**	LB	1/8
347 5/32 × 36		812922017260	**347532X36T**	LB	5/32

347 Stainless Steel I 25# Spools		UPC #	Part #	U/M	Size
347 .035 × 25# Spool **	One spool		347035X25SP	LB	.035
347 .045 × 25# Spool **		877511000184	347045X25SP	LB	.045

*** while supplies last***

410 / 420 STAINLESS STEEL

Spec/Classification: AWS A5.9, ASME SFA 5.9 ER410

- **Weldcote 410** is used to weld types 403, 405, 410, and 416. It is also used for welding overlay on carbon steels to resist erosion or abrasion.
- 410 is a martensitic stainless steel but with a higher level of carbon.
- The increased carbon content gives the weld deposit greater resistance as well as moderate corrosion resistance.
- **Weldcote 420** is a martensitic stainless-steel alloy that provides good corrosion resistance plus increased strength and hardness.

Applications:

- **410:** Weld deposits will work-harden when put into service and so this filler metal is commonly used for surfacing applications.
- Preheat at 350°F and post weld heat treat between 1350°F and 1400°F for one hour is recommended.
- **420** is used in shear blades, needle valves, surgical equipment, cutlery, bearings, bushings, etc.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	Cr	Ni	Mo	S	P	Cu
Result (%)	0.12	0.6	0.5	12.0-13.5	0.6	0.3	0.02	0.03	0.3

Typical Mechanical Properties of Weld Metal:

Shielding Gas:	98% Argon / Balance C02, 02, HE	
Elongation in 2" (%)	24%	
Yield Strength (psi)	78,500 Psi	540 MPa
Tensile Strength (min)	89,000 Psi	620 MPa

GMAW (MIG) Parameters (DC Reverse Polarity)
Electrode Positive Short Circuit Transfer

Diameter	Amps	Volts	90%He + 7.5%Ar + 2.5%CO^2 (cfh)	Wire Feed (ipm)
.030	60-125	17-22	20-25	150-430
.035	75-160	17-22	20-25	120-400
.045	100-200	17-22	20-25	100-240

Recommended Welding Parameters: ER410

GMAW (MIG) Parameters (DC Reverse Polarity)
Electrode Positive Spray Transfer

Diameter	Amps	Volts	98% Argon / Balance C02, 02, HE	Wire Feed (ipm)
.030	160-225	24-28	30	440-650
.035	180-300	24-29	35	430-500
.045	200-450	24-30	35	220-400
1/16	220-500	24-32	40	110-210
3/32	250-600	24-32	45	50-80

GMAW (TIG) Parameters (DCSP)
2% Lanthanated Tungsten Electrode Negative[3]

Material	Tungsten Dia[3]	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	80-120	3/8	20
3/32"	1/16"	1/16"	100-130	3/8	20
1/8"	3/32"	1/16"	120-150	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	200-350	1/2	25
1/2"	1/8"	1/8"	235-375	1/2	25

410 I 36" Cut Lengths		UPC #	Part #	U/M	Size
410 1/16 × 36	4-10 lb. Tubes in 40 lb. Carton	877511001303	**410116X36T**	LB	1/16
410 3/32 × 36		877511001310	**410332X36T**	LB	3/32
410 1/8 × 36		877511001327	**41018X36T**	LB	1/8

410 I 25# Spools		UPC #	Part #	U/M	Size
410 .035 × 25# Spool **	One spool	812922014382	**410035X25SP**	LB	.035
410 .045 × 25# Spool **		812922011787	**410045X25SP**	LB	.045

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420 I 25# Spools		UPC #	Part #	U/M	Size
420 .035 × 25# spool	One spool	877511009606	**420035X25SP**	LB	.035

420 I 36" Cut Lengths		UPC #	Part #	U/M	Size
420 1/16 × 36	4-10 lb. Tubes in 40 lb. Carton	812922011800	**420116X36T**	LB	1/16
420 3/32 × 36		812922011893	**420332X36T**	LB	3/32

2209 STAINLESS STEEL

Spec/Classification: AWS A5.9, ASME SFA 5.9 ER2209

- Weldcote 2209 is a stainless steel alloy wire designed for welding AISI 316 stabilized and 316Ti or 318 austenitic stainless steels.
- 2209 produces duplex stainless steel weld deposits with a nearly balanced austenite-ferrite microstructure.
- Weldcote 2209 weld deposits exhibit high tensile strength, improved resistance to stress corrosion cracking and greater resistance to pitting than conventional austenitic grades of stainless steel.

Applications:

- 2209 is designed for welding 22% chromium duplex stainless steels such as ASME-ASTM A-182, A-276, A-479, A-789, A790, and A-890.
- Non-proprietary grades 2205 and 2304 duplex stainless steels can also be joined with 2209.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	Cr	Ni	Mo	S	P	Cu	N
Result (%)	0.03	0.50-2.0	0.9	21.5-23.5	7.5-9.5	2.5-3.5	0.03	0.03	0.75	0.08-0.2

Typical Mechanical Properties of Weld Metal:

Shielding Gas:	98% Argon / Balance C02, 02, HE	
Elongation in 2" (%)	26%	
Yield Strength (psi)	80,500 Psi	550 MPa
Tensile Strength (min)	105,000 Psi	720 MPa

GMAW (TIG) Parameters (DCSP)

2% Lanthanated Tungsten Electrode Negative(3)

Material	Tungsten Dia(3)	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	80-120	3/8	20
3/32"	1/16"	1/16"	100-130	3/8	20
1/8"	3/32"	1/16"	120-150	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	200-350	1/2	25
1/2"	1/8"	1/8"	235-375	1/2	25

2209 I 36" Cut Lengths		UPC #	Part #	U/M	Size
2209 1/16 × 36	4-10 lb. Tubes in 40 lb. Carton	877511008722	**2209116X36T**	LB	1/16
2209 3/32 × 36		877511008524	**2209332X36T**	LB	3/32
2209 1/8 × 36		877511008739	**220918X36T**	LB	1/8

630 (17-4PH) STAINLESS STEEL

Spec/Classification: AWS A5.9, ASME SFA 5.9 ER630

- Weldcote 17-4 PH (630) is a martensitic precipitation, age-hardening 17% chromium - 4% nickel stainless steel designed for welding ASTM A564 Type 630 and other martensitic PH stainless steels such as 15-5.
- Weld deposits have excellent mechanical properties with high strength and hardness.

Applications:

- Weldcote 17-4 PH (630) can be used with all welding processes without preheating, however postweld heat treatment is recommended to produce weld properties comparable to the base metal.
- Commonly used in high temperature and abrasion resistant environments such as found in the petrochemical and aerospace industries.

Typical Filler Wire/Rod Chemistry in weight (%):

	C	Mn	Si	Cr	Ni	Mo	Cb & Ta	Cu
Result (%)	0.04	0.6	0.5	16.5	4.5	0.3	0.03	3.5

Typical Mechanical Properties of Weld Metal:

Shielding Gas:	98% Argon / Balance C02, 02, HE	
Elongation in 2" (%)	10%	
Yield Strength (psi)	150,000 Psi	1,030 MPa
Tensile Strength (min)	135,000 Psi	930 MPa

GMAW (TIG) Parameters (DCSP)

2% Lanthanated Tungsten Electrode Negative(3)

Material	Tungsten Dia(3)	Filler Wire Size	Amps	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	80-120	3/8	20
3/32"	1/16"	1/16"	100-130	3/8	20
1/8"	3/32"	1/16"	120-150	7/16	20
3/16"	3/32"	3/32"	150-250	7/16	25
1/4"	1/8"	1/8"	200-350	1/2	25
1/2"	1/8"	1/8"	235-375	1/2	25

630 (17-4PH) I 36" Cut Lengths		UPC #	Part #	U/M	Size
630 .045 × 36	4-10 lb. Tubes in 40 lb. Carton	812922012432	**630045X36T**	LB	.045
630 1/16 × 36		877511009026	**630116X36T**	LB	1/16
630 3/32 × 36		877511008371	**630332X36T**	LB	3/32
630 1/8 × 36		877511009033	**63018X36T**	LB	1/8
630 1/16 × 25# Spool **	*** while supplies last*		**630116X25SP**	LB	1/16

All cut lengths are stamped on sizes 1/16 and above. Other types and sizes available upon request.

E308LT1-1/4 / 308LFC-0 / E309LT1-1/4 / E316LT1-1/4 FLUX CORED STAINLESS STEEL OVERVIEW

Spec/Classification: AWS A5.22, ASME SFA 5.22 E308LT1-1/4, E309LT1-1/4, E316LT1-1/4

Recommended Welding Parameters: E308LT1-1/4 / E309LT1-1/4 / E316LT1-1/4

FCAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive

Wire Diameter	Welding Position	Joint Type	Plate Thickness	Amps	Volts	Deposition imp
.035	Flat	Butt	1/8"	70-90	25-27	12-16
.035	Flat	Butt	1/4"	120-130	26-29	10-14
.035	Flat	Fillet	1/4"	110-130	26-29	12-16
.035	Vertical up	Butt & Fillet	3/8"	70-90	22-25	6-10
.035	Horizontal	Butt	3/32"	100-120	24-27	12-16
.035	Overhead	Fillet	3/8"	150-200	26-28	8-12
.045	Flat	Butt	1/4"	180-200	29-32	12-16
.045	Flat	Fillet	3/8"	170-200	28-32	10-16
.045	Vertical up	Butt & Fillet	3/8"	110-140	21-24	4-8
.045	Horizontal	Butt	1/4"	150-180	26-30	10-16
.045	Overhead	Fillet	3/8"	150-200	26-28	10-14
1/16	Flat	Butt	1/4"	210-220	27-30	14-16
1/16	Flat	Fillet	3/8"	220-250	27-31	12-18
1/16	Vertical up	Butt & Fillet	3/8"	130-160	21-24	6-8
1/16	Horizontal	Butt	1/4"	150-200	26-30	10-16
1/16	Overhead	Fillet	3/8"	150-200	27-30	12-14

Typical Chemistry in weight (%):

	C	Mn	Si	Cr	Ni	P	S
Result (%)	0.028	1.61	0.6	19.42	10.1	0.012	0.01

Typical Mechanical Properties of Weld Metal:

Shielding Gas:	75% Ar / 25% C02	
Elongation in 2" (%)	42%	
Yield Strength (psi)	61,500 Psi	427 MPa
Tensile Strength (min)	85,000 Psi	590 MPa

E308LT1-1/4 / 308LFC-0 FLUX CORED STAINLESS STEEL

Spec/Classification: AWS A5.22, ASME SFA 5.22 E308LT1-1/4

- Weldcote **E308LT1-1** is a flux cored wire for flat, H-Fillet, V-up and down position welding for use with welding grade 100% CO2 or (75%Ar-25%CO2) shielding gas.
- It provides excellent usability with a stable arc, less spattering and good bead appearance.

Applications:

- For mechanized welding of H-Fillet, this wire is an excellent choice as it meets the requirement of superior wire feeding properties combined with high deposition efficiency.
- **E308LT1-1/4** is suitable for welding of low carbon 18%Cr-8%Ni austenitic stainless steel (AISI 301, 304, 304L, 305, 308, 308L and 347).

308LT1-1 | 25# Spools		UPC #	Part #	U/M	Size
308LT1-1 .035 × 25# Spool	One Spool	877511004458	**308LT11035X25SP**	LB	.035
308LT1-1 .045 × 25# Spool		877511004465	**308LT11045X25SP**	LB	.045

308LTI-1 | 10# Spools		UPC #	Part #	U/M	Size
308LT1-1 .035 × 10# Spool	One spool	877511009088	**308LT11035X10SP**	LB	.035

- **308LFC-0:** Utilized cladding of carbon steels. Used for weld 301, 302, 304L, 308, and 308L stainless steel.
- Self-shielded, flux-cored, stainless steel designed with a nominal weld metal composition of 21% chromium and 10% nickel with a maximum carbon content of 0.03%.

308LFC-0 Stainless Steel 1# Spools		UPC #	Part #	U/M	Size
308LFC-0 .035 × 1# Spool **	One spool	812922011213	**308LFC0035X1SP**	LB	.035

309LT1-1/4 FLUX CORED STAINLESS STEEL

Spec/Classification: AWS A5.22, ASME SFA 5.22 E309LT1-1/4

MIGHTY ARC

- Weldcote E309LT1-1 is a flux cored wire suitable for welding of 22%Cr - 12%Ni steel (AISI 309S), 18%Cr - 8%Ni clad steel and dissimilar materials such as Cr-Mo steel or mild steel to stainless and build-up welding of carbon steel.
- E309LT1-1/4 welding positions are Flat, HFillet, V-up and down for CO2 or Ar-CO2 (75%Ar - 25%CO2) shielding gas.

Applications:

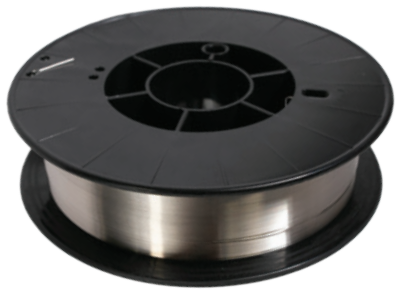
- It provides excellent usability with stable arc, less spattering and good bead appearance.
- For mechanized welding of H-Fillet, this wire is an excellent choice as it meets the requirement of superior wire feeding properties combined with high deposition efficiency.

309LT1-1 I 25# Spools		UPC #	Part #	U/M	Size
309LT1-1 .035 × 25# Spool	One Spool	877511008159	**309LT11035X25SP**	LB	.035
309LT1-1 .045 × 25# Spool		877511004496	**309LT11045X25SP**	LB	.045
309LT1-1 1/16 × 25# Spool		877511004472	**309LT11116X25SP**	LB	1/16

316LT1-1/4 FLUX CORED STAINLESS STEEL

Spec/Classification: AWS A5.22, ASME SFA 5.22 E316LT1-1/4

- Weldcote E316LT1-1 is a flux cored wire suitable for welding of 18% Cr - 12% Ni - 2% No steel (AISI 316) and extra-low carbon steel (AISI 316L).
- E316LT1-1/4 welding positions are Flat, H-Fillet, and V-up for CO2 and 75%Ar - 25%CO2 shielding gas.



Applications:

- It provides excellent usability with stable arc, less spattering and good bead appearance.
- For mechanized welding of H-Fillet, this wire is an excellent choice as it meets the requirement of superior wire feeding properties combined with high deposition efficiency.

316LT1-1 I 25# Spools		UPC #	Part #	U/M	Size
316LT1-1 .035 × 25# Spool	One Spool	877511008791	**316LT11035X25SP**	LB	.035
316LT1-1 .045 × 25# Spool		877511004526	**316LT11045X25SP**	LB	.045

316LTI-1 I 10# Spool		UPC #	Part #	U/M	Size
316LT1-1 .035 × 10# Spool	One spool	812922016973	**316LT11035X10SP**	LB	.035

316LTI-1 I 33# Spool		UPC #	Part #	U/M	Size
316LT1-1 1/16 × 33# Spool **	One spool	812922013606	**316LT11116X33SP**	LB	1/16

Base Metal	201.0 206.0 224.0	319.0 333.0 354. 355.0 C355.0	356.0 A356.0 357.0 A357.0 413.0 443.0 A444.0	511.0 512.0 513.0 514.0 535.0	7004 7005 7039 710.0 712.0	6009 6010 6070	6005 6061 6063 6101 6151 6201 6351 6951	5456	5454	5154 5254	5086	5083	5052 5652	5005 5050	3004 Alc3004	2219	2014 2036	1100 3003 Alc3003	1060 1070 1080 1350
1060, 1070, 1080, 1350	ER4145	ER4145	ER4043[ce]	ER5356[fg]	ER5356[fg]	ER4043[ce]	ER4043[e]	ER5356[g]	ER4043[eg]	ER5356[fg]	ER5356[g]	ER5356[g]	ER4043[eg]	ER1100[ef]	ER4043[eg]	ER4145[bc]	ER4145	ER1100[ef]	ER1188[efdj]
1100, 3003, Alc3003	ER4145	ER4145	ER4043[ce]	ER5356[fg]	ER5356[fg]	ER4043[ce]	ER4043[e]	ER5356[g]	ER4043[eg]	ER5356[fg]	ER5356[g]	ER5356[g]	ER4043[eg]	ER1100[ef]	ER4043[eg]	ER4145[bc]	ER4145	ER1100[ef]	
2014,2036	ER4145[c]	ER4145[b]	ER4145			ER4145	ER4145							ER4145	ER4145	ER4145[b]	ER4145[b]		
2219	ER2319[c]	ER4145[b]	ER4145[bc]	ER4043	ER4043		ER4043[ce]		ER4043[e]	ER4043			ER4043[e]	ER4043[ce]	ER4043[ce]	ER2319[c]			
3004, Alc3004		ER4043[e]	ER4043[e]	ER5356[h]	ER5356[h]	ER4043[e]	ER4043[eh]	ER5356[g]	ER5356[h]	ER5356[h]	ER5356[g]	ER5356[g]	ER5356[fh]	ER5356[fh]	ER5356[fh]				
5005, 5050		ER4043[e]	ER4043[e]	ER5356[h]	ER5356[h]	ER4043[e]	ER4043[eh]	ER5356[g]	ER5356[h]	ER5356[h]	ER5356[g]	ER5356[g]	ER5356[fg]	ER5356[fh]					
5052, 5652[a]		ER4043[e]	ER4043[h]	ER5356[h]	ER5356[h]	ER4043[e]	ER5356[fh]	ER5356[h]	ER55356[h]	ER5356[h]	ER5356[g]	ER5356[g]	ER5654[fhj]						
5083			ER5356[fg]	ER5356[g]	ER5183[g]		ER5356[g]	ER5183[g]	ER5356[g]	ER5356[g]	ER5356[g]	ER5183[g]							
5086			ER5356[fg]	ER5356[g]	ER5356[g]		ER5356[g]	ER5356[g]	ER5356[g]	ER5356[g]	ER5356[g]								
5154, 5254[a]			ER4043[ce]	ER5356[h]	ER5356[h]		ER5356[h]	ER5356[h]	ER5356[h]	ER5654[ha]									
5454		ER4043[e]	ER4043[h]	ER5356[h]	ER5356[h]	ER4043[e]	ER5356[fh]	ER5356[h]	ER5554[fh]										
5456			ER5356[fg]	ER5356[g]	ER5556[g]		ER5356[g]	ER5556[g]											
6005, 6061, 6063, 6101, 6151, 6201, 6351, 6951	ER4145	ER4145[bc]	ER4043[ehi]	ER5356[h]	ER5356[fh]	ER4043[cei]	ER4043[ehi]												
6009, 6010, 6070	ER4145	ER4145[bc]	ER4043[cei]		ER4043	ER4043[cei]													
7004, 7005, 7039		ER4043[e]	ER4043[ej]	ER5356[h]	ER5356[g]														
710.0, 712.0																			
511.0, 512.0, 513.0			ER4043[h]	ER5356[h]															
514.0, 535.0																			
356.0, A356.0, 357.0, A357.0, 413.0, 443.0, A444.0	ER4145	ER4145[bc]	ER4043[ed]																
319.0, 333.0, 354.0, 355.0, C355.0	ER4145	ER4145[bcd]																	
201.0, 206.0, 224.0	ER2319[cd]																		

NOTES:

a. Base metal alloys 5254 and 5652 are used for hydrogen peroxide service. ER5654 filler metal is used for welding both alloys for service temperatures below 150°F (66°C).
b. ER2319 may be used for some applications. It can supply high strength when the weldment is postweld solution heat treated and aged.
c. ER4145 may be used for some applications.
d. Filler metal with the same analysis as the base metal is sometimes used.
The following wrought filler metals possess the same chemical composition limits as cast filler alloys: ER4009 and R4009 as R-C355.0, ER4010 and R4010 as R-A356.0 and R4011 as R-A35
e. ER4047 may be used for some applications.
f. ER4043 may be used for some applications.
g. ER5183, ER5356, or ER5556 may be used.
h. ER5183, ER5356, ER5554, ER5556, and ER5654 may be used. In some cases, they provide: improved color match after anodizing treatment, highest weld ductility, and higher weld strength.
ER5554 is suitable for sustained elevated temperature service.
i. ER4643 will provide high strength in 1/2 in. (12mm) and thicker groove welds in 6XXX base alloys when postweld solution heat treated and aged.
j. ER1100 may be used for some applications.

Courtesy: American Welding Society, Inc. ANSI/AWS A5.10-92

ALUMINUM WELDING AND BRAZING ALLOYS

1100 ALUMINUM

Spec/Classification: AWS A5.10, ASME SFA 5.10 ER1100

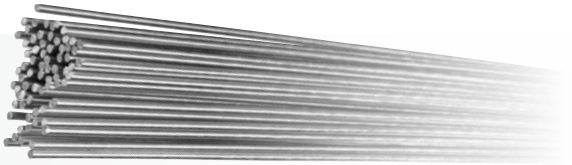
- Weldcote 1100 (commonly referred to as AL 99.5) is a 99% aluminum filler metal that is available in Spools or cut lengths forMIG or TIG welding processes.
- 1100 aluminum filler metal is designed for applications with electrical conductivity requirements and chemical storage facilities.
- The features and benefits consist of highest ductility/formability, highest electrical and thermal conductivity, excellent corrosion resistance, moderate shrinkage rate, good hot cracking sensitivity, low welding smut and discoloration.

Applications:

Applications are electrical conductors, chemical storage tanks, decorative applications (due to slight golden color after anodizing), refrigeration, food handling equipment and heat exchangers.

Typical Filler Wire/Rod Chemistry in weight (%):

	Al	Fe & Si	Cu	Mn	Zn	Others
Result (%)	99.0 min	0.95 max	0.05-0.20	0.05 max	0.10 max	0.15 max



Recommended Welding Parameters: ER1100 Aluminum

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive
Shielding Gas: 100% Argon (Ar) or Argon/Helium mixtures, 35-50 cfh

Diameter	Base Material Thickness	Amps		Volts		Wire Speed (ipm)	
		4xxx	5xxx	4xxx	5xxx	4xxx	5xxx
.035	1/16	90	100	23	21	300	350
.035	1/8	130	140	24	22	400	450
3/64	3/32	110	120	25	24	170	220
3/64	1/8	150	160	26	25	270	330
3/64	1/4	190	220	26	25	320	370
3/64	3/8	220	230	27	25	390	450
1/16	1/4	200	210	26	24	170	200
1/16	3/8	230	240	27	25	200	230
1/16	1/2	260	270	28	26	240	270
1/16	3/4	280	290	29	27	260	300
1/16	1	300	310	30	28	280	320

Note: Above information was determined by using 100% Argon shielding gas with a flow rate of 35-50 cfh

GMAW (TIG) Procedures: ACHF Tungsten Depends on Power Supply Type

Base Material	Tungsten Dia	Filler Wire Size	Amps	Volts	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	60-80	15	3/8"	20
1/8"	3/32"	3/32"	125-160	15	3/8"	20
3/16"	1/8"	1/8"	190-220	15	7/16"	20
1/4"	5/32"	5/32"	200-300	15	1/2"	25
3/8"	3/16"	3/16"	330-380	15-20	5/8"	25
1/2"	1/4"	1/4"	400-450	25	5/8"	25

Note: Procedures are based on flat position and may vary with change in position, base metal, equipment and other changes.

1100 ALUMINUM I 16# Spools		UPC #	Part #	U/M	Size
1100 3/64 × 16# Spool	One Spool	877511009286	**1100364X16SP**	LB	3/64

1100 Aluminum 1# Spools		UPC #	Part #	U/M	Size
1100 .035 × 1# Spool			**1100035X1SP**	LB	.035

1100 ALUMINUM I 36" Cut Lengths 10# Boxes		UPC #	Part #	U/M	Size
1100 1/16 × 36 × 10# Box	4-10 lb. Tubes in 40 lb. Carton	877511009293	**1100116X36T**	LB	1/16
1100 3/32 × 36 × 10# Box		877511009309	**1100332X36T**	LB	3/32
1100 1/8 × 36 × 10# Box		877511009316	**110018X36T**	LB	1/8

4043 ALUMINUM

Spec/Classification: AWS A5.10, ASME SFA 5.10 ER4043

- Weldcote 4043 (commonly referred to as AlSi5) is a 5% silicon aluminum filler metal that is available in Spools or cut lengths for MIG or TIG welding processes.
- 4043 aluminum filler metal is recommended for welding 3003, 3004, 5052, 6061, 6063 and casting alloys 43, 355, 356, and 214.
- The melting range is 1065-1170°F with a density of .097 lbs./cu.in.
- The average tensile strength is 27,000 psi, average yield strength of 18,000 psi and the post anodizing color is gray.

Applications:

- 4043 aluminum filler metal is one of the oldest and most widely used welding and brazing alloys.
- The silicon additions result in improved fluidity (wetting action) to make the alloy a preferred choice by welders.
- The alloy is less sensitive to weld cracking and produces brighter, almost smut free welds.

Typical Filler Wire/Rod Chemistry in weight (%):

	Si	Fe	Cu	Mn	Mg	Zn	Ti	Others	Al
Result (%)	4.5-6.0	0.8	0.3	0.05	0.05	0.1	0.2	0.15	Balance

Recommended Welding Parameters: ER4043

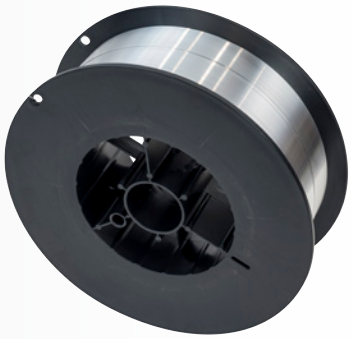
GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Spray Transfer

Base Metal Thickness	Wire Diameter	Amps	Volts	Argon (cfh)
1/16"	.030"	70-100	15-20	25
1/8"	.030"-3/64"	120-150	20-24	30
3/16"	.030"-3/64"	130-210	22-26	30-35
1/4"	3/64"-1/16"	170-225	24-28	40
3/8"	1/16"	225-300	26-29	50

GMAW (TIG) Procedures: ACHF Tungsten Depends on Power Supply Type

Base Material	Tungsten Dia	Filler Wire Size	Amps	Volts	Gas Cup	Argon (cfh)
1/16"	1/16"-3/32"	1/16"-3/32"	70-100	15	3/8"	20
1/8"	1/8"-5/32"	1/8"-5/32"	125-175	15	7/16"	20
3/16"	5/32"-3/16"	5/32"-3/16"	170-225	15	7/16"-1/2"	25
1/4"	3/16"-1/4"	3/16"	220-275	15	1/2"	30
3/8"	1/4"	3/16"-1/4"	330-380	15	5/8"	35
1/2"	1/4"	1/4"	400-500	25	5/8"	35

Note: Procedures are based on flat position and may vary with change in position, base metal, equipment and other changes.



4043030X16SP

4043030X16SP

4043 ALUMINUM		UPC #	Part #	U/M	Size
4043 3/64 × 13# Spool **	One Spool		**4043364X13SP**	LB	3/64
4043 3/64 × 20# Spool	One Spool		**4043364X20SP**	LB	3/64
4043 .030 × 16# Spool		877511007244	**4043030X16SP**	LB	.030
4043 .035 × 16# Spool		877511001358	**4043035X16SP**	LB	.035
4043 3/64 × 16# Spool		877511001365	**4043364X16SP**	LB	3/64
4043 1/16 × 16# Spool		877511001372	**4043116X16SP**	LB	1/16
4043 .030 × 10# Spool		877511001334	4043030X10SP	LB	.030
4043 .035 × 10# Spool		877511001341	4043035X10SP	LB	.035
4043 .030 × 1# Spool	2-20 lb. Spools per Carton	877511001396	**4043030X1SP**	LB	.030
4043 .035 × 1# Spool		877511001402	**4043035X1SP**	LB	.035
4043 3/64 × 1# Spool		877511001419	**4043364X1SP**	LB	3/64
4043 3/64 × 36 × 5# Box **	4-10 lb. Tubes in 40 lb. Carton *(5 lb. Tubes also available)*		**4043364X36T5**	LB	3/64
4043 3/64 × 36 × 10# Box		877511007282	**4043364X36T**	LB	3/64
4043 1/16 × 36 × 10# Box		877511001518	**4043116X36T**	LB	1/16
4043 3/32 × 36 × 10# Box		877511001525	**4043332X36T**	LB	3/32
4043 1/8 × 36 × 10# Box		877511001532	**404318X36T**	LB	1/8
4043 5/32 × 36 × 10# Box		877511001549	**4043532X36T**	LB	5/32
4043 3/16 × 36 × 10# Box		877511001556	**4043316X36T**	LB	3/16
4043 1/4 × 36 × 10# Box **		812922011053	**404314X36T**	LB	1/4

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4047 ALUMINUM

Spec/Classification: AWS A5.10, AWS A5.8 BAlSi-4 ER4047

- Weldcote 4047 (commonly referred to as AlSi12 or 718 aluminum) is a 12% silicon aluminum filler metal that is available in Spools or cut lengths for MIG, TIG and brazing welding processes.
- 4047 was originally developed as a brazing alloy to take advantage of its low melting point and narrow freezing range. Additionally, it has a higher silicon content than 4043, which provides for increased fluidity and reduced shrinkage.
- Weldcote 4047 produces bright smut free welds. Hot cracking is significantly reduced when 4047 is used as a filler alloy.

Applications:

- 4047 may be used in applications of sustained elevated temperatures. 4047 is a non-heat treatable alloy.
- Weldcote 4047 is recommended for welding the following alloys: 1060, 1350, 3003, 5005, 5050, 6053, 6951, 7005 and cast alloys such as 710.0 and 711.0.
- Weldcote 4047 has an approximate melting range of 1065°-1170°F and the post anodizing color tint is grayish black. Density is .097 lbs./cu. In.

Typical Filler Wire/Rod Chemistry in weight (%):

	Si	Fe	Cu	Mn	Mg	Zn	Be	Others	Al
Result (%)	11.0-13.0	0.8	0.3	0.15	0.1	0.2	0.0008	0.15	Balance

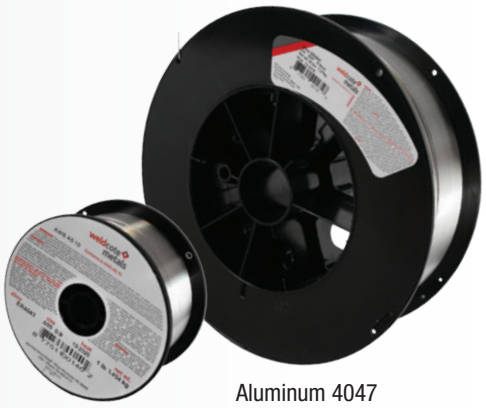
Recommended Welding Parameters: ER4047

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Spray Transfer

Base Metal Thickness	Wire Diameter	Amps	Volts	Argon (cfh)
1/16"	.030"	60-170	13-24	25-30
1/8"	.030"-.035"	70-185	15-27	30-35
3/16"	.035"-3/64"	125-260	20-29	35-45
1/4"	3/64"-1/16"	170-300	24-30	45-55
3/8"	1/16"	275-400	26-31	60-70

GMAW (TIG) Procedures: ACHF Tungsten Depends on Power Supply Type

Base Material	Tungsten Dia	Filler Wire Size	Amps	Volts	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	60-80	15	3/8"	20
1/8"	3/32"	3/32"	125-160	15	3/8"	20



Aluminum 4047

4047 ALUMINUM I 16# Spools		UPC #	Part #	U/M	Size
4047 3/64 × 16# Spool **	One Spool	812922011879	**4047364X16SP**	LB	3/64

4047 ALUMINUM I 36" Cut Lengths 10# Boxes		UPC #	Part #	U/M	Size
4047 1/16 × 36 × 10# Box	4-10 lb. Tubes in 40 lb. Carton	812922012524	**4047116X36T**	LB	1/16
4047 3/32 × 36 × 10# Box		812922015235	**4047332X36T**	LB	3/32
4047 1/8 × 36 × 10# Box		812922015051	**404718X36T**	LB	1/8

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4043A / 4943 ALUMINUM

NEW

Spec/Classification: AWS A5.10, ASME SFA 5.10 ER4043

- **4043A** has 5% Silicon gives excellent flow and penetration.
- It suitable of joining duralumin aluminum
- Suitable for 6061, 6063 and 6082 base metals.
- **4943** Is similar to 4043 with 25% higher tensile strength and 50% higher yield strength in the as welded condition. Excellent corrosion resistance.

Applications:

- **4043A :** Automotive frames , aerospace hardware, ship building, repair, maintenance
- **4943:** Automotive frames, bicycles, concrete forms and furniture. Radiators and air conditioning components.

Typical Filler Wire/Rod Chemistry in weight (%). Heat / Lot Number 34-3091:

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Be	Zr	Ga	V	AL	Other Total
Result (%)	5.33	0.12	<.0.01	0.00	0.11	0.001	0.00	0.016	0.0000	0.0006	0.01	<0.01	Rem	<0.15

4043A / 4943 ALUMINUM I 16# Spools	Part #	U/M	Size
4043A / 4943 .035 × 16# Spool	**4943035X16SP**	LB	.035
4043A / 4943 3/64 × 16# Spool	**4943364X16SP**	LB	3/64

4043A / 4943 ALUMINUM I 1# Spools	Part #	U/M	Size
4043A / 4943 .035 × 1# Spool	**4943035X1SP**	LB	.035

4043A / 4943 ALUMINUM I 36" Cut Lengths 10# Boxes	Part #	U/M	Size
4043A / 4943 3/64 × 36 × 10# Box	**4943364X36T**	LB	3/64
4043A / 4943 3/32 × 36 × 10# Box	**4943332X36T**	LB	3/32
4043A / 4943 1/16 × 36 × 10# Box	**4943116X36T**	LB	1/16
4043A / 4943 1/8 × 36 × 10# Box	**494318X36T**	LB	1/8

5183 ALUMINUM

Spec/Classification: AWS A5.10, AWS A5.8 BAlSi-4 ER4047

- Aluminum-Magnesium alloy for welding on 5083 base metals.
- High strength, extremely good corrosion resistance in salt water when welded to 5083.

Applications:

- Welding on Aluminum-Mangansese alloy where high strength/high corrosion resistance in salt water is required.
- Pressure vessels, ship building and cryogenic tanks

5183 ALUMINUM 16# Spools		Part #	U/M	Size
5183 .035 × 16# Spool	One Spool	**5183035X16SP**	LB	
5183 3/64 × 16# Spool		**5183364X16SP**	LB	

5183 ALUMINUM 36" Cut Lengths 10# Boxes		Part #	U/M	Size
5183 1/16 × 36 × 10# Box	4-10 lb. Tubes in 40 lb. Carton	**5183116X36T**	LB	1/16
5183 3/32 × 36 × 10# Box		**5183332X36T**	LB	3/32
5183 1/8 × 36 × 10# Box		**518318X36T**	LB	1/8

5554 ALUMINUM

Spec/Classification: AWS A5.10, AWS A5.8 BAlSi-4 ER4047

- Aluminum-Magnesium alloy for welding on 5454 base metals.

Applications:

- Automotive wheels, heat exchangers, Moderate strength application
- Manufacture of chemical storage tanks.

5554 ALUMINUM 1# / 5# Spools		UPC #	Part #	U/M	Size
5554 .035 × 1# Spool	One Spool	812922015730	**5554035X1SP**	LB	.035
5554 .035 × 5# Spool		812922015815	**5554035X5SP**	LB	.035

5356 ALUMINUM

Spec/Classification: AWS A5.10, ASME SFA 5.10 ER5356

- Weldcote 5356 (commonly referred to as AlMg5) is a 5% magnesium aluminum filler metal that is available in Spools or cut lengths for MIG or TIG welding processes.
- 5356 aluminum filler metal is recommended for welding 5050, 5052, 5083, 5356, 5454, and 5456.
- The melting range is 1060-1175°F with a density of .096 lbs./cu.in.
- The average tensile strength is 39,000 psi, average yield strength of 19,000 psi and the post anodizing color is white.

Applications:

- 5356 aluminum filler metal offers a much better corrosion resistance when exposed to salt water.
- 5356 filler metal is ideal for general purpose welding and is typically used in the construction industry in fabricating truck trailers, small fishing boats and in cryogenic applications.

Typical Filler Wire/Rod Chemistry in weight (%):

	Si	Fe	Cu	Mn	Mg	Zn	Ti	Others	Al
Result (%)	0.25	0.4	0.05	0.10-0.20	4.50-5.50	0.1	0.06-0.15	0.15	Balance

Recommended Welding Parameters: ER5356

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Spray Transfer

Base Metal Thickness	Wire Diameter	Amps	Volts	Argon (cfh)
1/16"	.030"	70-100	15-20	25
1/8"	.030"-3/64"	120-150	20-24	30
3/16"	.030"-3/64"	130-210	22-26	30-35
1/4"	3/64"-1/16"	170-225	24-28	40
3/8"	1/16"	225-300	26-29	50

Aluminum 5356

GMAW (TIG) Procedures: ACHF Tungsten Depends on Power Supply Type

Base Material	Tungsten Dia	Filler Wire Size	Amps	Volts	Gas Cup	Argon (cfh)
1/16"	1/16"-3/32"	1/16"-3/32"	70-100	15	3/8"	20
1/8"	1/8"-5/32"	1/8"-5/32"	125-175	15	7/16"	20
3/16"	5/32"-3/16"	5/32"-3/16"	170-225	15	7/16"-1/2"	25
1/4"	3/16"-1/4"	3/16"	220-275	15	1/2"	30
3/8"	1/4"	3/16"-1/4"	330-380	15	5/8"	35
1/2"	1/4"	1/4"	400-500	25	5/8"	35

Note: Procedures are based on flat position and may vary with change in position, base metal, equipment and other changes.

All cut lengths are stamped. Other types and sizes available upon request.

5356-ABS Approved for .035 and 3/64 Diameters		UPC #	Part #	U/M	Size
5356 .035 × 16# Spool	One Spool	877511001433	**5356035X16SP**	LB	.035
5356 3/64 × 16# Spool		877511001440	**5356364X16SP**	LB	3/64
5356 1/16 × 16# Spool		877511001457	**5356116X16SP**	LB	1/16
5356 .030 × 10# Spool	One Spool	812922014832	**5356030X10SP**	LB	.030
5356 .035 × 10# Spool		877511001426	**5356035X10SP**	LB	.035
5356 3/64 × 10# Spool		812922012883	**5356364X10SP**	LB	3/64
5356 .030 × 1# Spool	1-20 lb. Spools per Carton	877511001488	**5356030X1SP**	LB	.030
5356 .035 × 1# Spool		877511001495	**5356035X1SP**	LB	.035
5356 3/64 × 1# Spool		877511001501	**5356364X1SP**	LB	3/64
5356 3/64 × 36 × 10# Box	4-10 lb. Tubes in 40 lb. Carton *(5 lb. Tubes also available)*	877511008180	**5356364X36T**	LB	3/64
5356 1/16 × 36 × 10# Box		877511001563	**5356116X36T**	LB	1/16
5356 3/32 × 36 × 10# Box		877511001570	**5356332X36T**	LB	3/32
5356 1/8 × 36 × 10# Box		877511001587	**535618X36T**	LB	1/8
5356 5/32 × 36 × 10# Box		877511001594	**5356532X36T**	LB	5/32

5356 ALUMINUM 36" Cut Lengths 5# Boxes					
5356 3/64 × 36 × 5# Box	4-10 lb. Tubes in 40 lb. Carton		**5356364X36T5**	LB	3/64
5356 1/16× 36 × 5# Box		877511008135	**5356116X36T5**	LB	1/16
5356 3/32 × 36× 5# Box		877511008142	**5356332X36T5**	LB	3/32
5356 1/8 × 36 × 5# Box **		877511008173	**535618X36T5**	LB	1/8

NICKEL PRODUCTS

WELDCOTE NICKEL 44 / 55 TIG

- **Ni-44** is a Nickel-Iron-Manganese mig wire used for repairs on all ductile a malleable iron. It can be used on other high strength nodular and gray cast irons where maximum strength and ductility are required.
- **Nickel 55** TIG is a Nickel-Iron alloy bare wire for TIG welding on cast iron. It has about 53% Nickel and the balance is iron. The high iron percentage makes this alloy harder than Nickel 99. The high iron percentage makes this alloy non-machinable.

Applications:

- **Ni-44** is used for overlay to improve wear resistance and for build. It can also be used to weld steel and stainless steel to cast iron.
- **Nickel 55** TIG is used to repair castings.

Spec/Classification: AWS # A5.15, ASME SFA-5.15 ERNiFeMn-Cl

NICKEL 44 (ERNiFeMn-Cl) I 30# Spools (MIG)			Part #	U/M	Size
Nickel 44 .045 × 30# Spool **	Spool		**NI44045X30SP**	LB	.045
Nickel 55 .045 x 30# Spool			**NI4405X30SP**	LB	.045

*** while supplies last***

NICKEL 55 (ENiFe-Cl) I 36" Cut Lengths (TIG)		UPC #	Part #	U/M	Size
Nickel 55 3/32 × 36"	4-10 lb tubes in 40 lb ctn	812922014016	**NI55332X36T**	LB	3/32
Nickel 55 1/8 × 36"			**NI5518X36T**	LB	1/8

WELDCOTE NICKEL 60 TIG & MIG

- Weldcote 60 alloy is designed for MIG, TIG and submerged arc welding of nickel-copper (Monel®) alloys 400 and 404 to themselves or to each other.

Applications:

- Weldcote 60 alloy is also used for dissimilar applications such as joining nickel-copper (Monel®) alloys to nickel base alloy 200 and for joining nickel-copper (Monel®) alloys 400 and 404 or nickel base alloy 200 to copper-nickel and copper alloys as well as K-500.
- Great resistance to Corrosion, Chemicals and Salt Water.

Chemical Composition Limits (%):

	Ni	C	Mn	Fe	Si	Cu	Al	Ti	P	S	OET
Result (%)	62-69	0.15 max	4.0 max	2.5 max	1.25 max	Bal	1.25 max	1.5-3.0	0.02 max	0.015 max	0.50 max

NICKEL 60 (ERNiCu-7) I 36" Cut Lengths (TIG)		UPC #	Part #	U/M	Size
Nickel 60 1/16 × 36 **	4-10 lb. Tubes in 40 lb. Carton *(Available in 1 pound tubes)*	812922011541	**NI60116X36T**	LB	1/16
Nickel 60 3/32 × 36		877511009149	**NI60332X36T**	LB	3/32
Nickel 60 1/8 × 36			**NI6018X36T**	LB	1/8

NICKEL 60 (ERNiCu-7) I 11#/33# Spools (MIG)		UPC #	Part #	U/M	Size
Nickel 60 .035 × 11# Spool	One Spool	812922015549	**NI60035X11SP**	LB	.035
Nickel 60 .035 × 33# Spool **		812922015556	**NI60035X33SP**	LB	.035
Nickel 60 .045 × 33# Spool **		812922015563	**NI60045X33SP**	LB	.045

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WELDCOTE NICKEL 61 TIG & MIG

- Weldcote Alloy 61 is used for the welding of Nickel 200 and 201. The reaction of titanium with carbon maintains a low level of free carbon and enables the filler metal to be used with Nickel 201.
- The weld metal of Alloy 61 has good corrosion resistance, particularly in alkalis.

Applications:

- Dissimilar-welding applications for Alloy 61 include joining Nickel 200 and 201 to stainless steels, carbon steels, Inconel® alloys, Inconel® alloys, copper-nickel alloys, and Monel® alloys.
- This filler metal is also used for joining Monel® alloys and copper-nickel alloys to carbon steels, and for joining copper-nickel alloys to Inconel® and Inconel alloys.

Chemical Composition Limits (%):

	Ni	C	Mn	Fe	S	Si	Cu	Al	Ti	P	OET
Result (%)	93	0.15 max	1.0 max	1.0 max	0.015 max	0.75 max	0.25 max	1.5 max	2-3.5 max	0.03 max	0.50 max

NICKEL 61 (ERNi-1) I 36" Cut Lengths (TIG)		UPC #	Part #	U/M	Size
Nickel 61 1/8 × 36 **	4-10 lb. Tubes in 40 lb. Carton		**NI6118X36T**	LB	1/8

NICKEL 61 (ERNi-1) I 11# /33# Spools (MIG)		UPC #	Part #	U/M	Size
Nickel 61 .035 × 11# Spool **	One Spool	812922015594	**NI61035X11SP**	LB	.035
Nickel 61 .035 × 33# Spool **		812922015600	**NI61035X33SP**	LB	.035

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WELDCOTE NICKEL 67 TIG & MIG

- Weldcote 67 is used for oxyacetylene and gas-tungsten-arc welding of Monel® alloy 450.
- This alloy used for welding on 70/30, 80/20 and 90/10 copper-nickel alloys.

Applications:

- The weld metal of this filler metal has excellent resistance to corrosion and sea water, and is widely used for marine and desalination applications.
- Dissimilar welding applications for Alloy 67 are joints between Monel® alloys or Nickel 200 and copper-nickel alloys.

Chemical Composition Limits (%):

	Ni + Co	Mn	Fe	Si	Cu+Ag	Ti	P	Pb	OET
Result (%)	29-32	1 max	0.40-0.75	0.25 max	Bal	0.20-0.50	0.02 max	0.02 max	0.50 max

NICKEL 67 (ERCuNi) I 36" Cut Lengths (TIG)		UPC #	Part #	U/M	Size
Nickel 67 1/8 × 36	4-10 lb. Tubes in 40 lb. Carton	812922013408	**NI6718X36T**	LB	1/8

NICKEL 67 (ERCuNi) I 11# / 33# Spools (MIG)		UPC #	Part #	U/M	Size
Nickel 67 .035 × 11# Spool	One Spool	812922015518	**NI67035X11SP**	LB	.035
Nickel 67 .035 × 33# Spool **		812922015525	**NI67035X33SP**	LB	.035
Nickel 67 .045 × 33# Spool **		812922015532	**NI67045X33SP**	LB	.045

*** while supplies last***

WELDCOTE NICKEL 82 TIG & MIG

- Weldcote 82 is used for the welding of Inconel® alloys 600, 601 and 690, Incoloy® alloys 800 and 800HT, and Inco® alloy 330.
- This filler metal is also used for surfacing of steel. Weld metal deposited by alloy 82 has high strength and good corrosion resistance, including oxidation resistance and creep- rupture strength at elevated temperatures.

Applications:

- Alloy 82 is used in dissimilar-welding such as joining Inconel® alloys, Incoloy® alloys and Inconel® alloy 330 to nickel, Monel® alloys, stainless steels and carbon steels.
- This filler metal is also used to join stainless steels to nickel alloys to carbon steels.

Chemical Composition Limits (%):

	Ni	C	Mn	Fe	S	Si	Cr	Ti	P	Cb+Ta	Cu	OET
Result (%)	67 min	0.10 max	2.5-3.5 max	3 max	0.015 max	0.50 max	18-22	0.75 max	0.03 max	2-3	0.50 max	0.50 max

NICKEL 82 (ERNiCr-3) I 36" Cut Lengths (TIG)		UPC #	Part #	U/M	Size
Nickel 82 .045 × 36	4-10 lb. Tubes in 40 lb. Carton *(Available in 1 pound tubes)*	877511008401	**NI82045X36T**	LB	.045
Nickel 82 1/16 × 36		877511005851	**NI82116X36T**	LB	1/16
Nickel 82 3/32 × 36		877511005868	**NI82332X36T**	LB	3/32
Nickel 82 1/8 × 36		877511008050	**NI8218X36T**	LB	1/8

NICKEL 82 (ERNiCr-3) I 11#/33# Spools (MIG)		UPC #	Part #	U/M	Size
Nickel 82 .035 × 11# Spool	One Spool	812922015396	**NI82035X11SP**	LB	.035
Nickel 82 .035 × 33# Spool **		812922015402	**NI82035X33SP**	LB	.035
Nickel 82 .045 × 33# Spool **		812922015419	**NI82045X33SP**	LB	.045

*** while supplies last***

WELDCOTE NICKEL 99 TIG

Spec/Classification: AWS ERNi-CI

- Nickel 99 TIG is a high nickel alloy bare wire for TIG welding on cast iron.

Applications:

- Nickel 99 TIG is used for welding on gray cast iron to itself or to dissimilar metals such as low alloy and carbon steel. Nickel 99 TIG can be machined.

NICKEL 99 (ENi) I 36" Cut Lengths (TIG)		UPC #	Part #	U/M	Size
Ni 99 3/32 × 36		812922011039	**NI99332X36T**	LB	3/32
Ni 99 1/8 × 36		812922013576	**NI9918X36T**	LB	1/8

WELDCOTE NICKEL 276 TIG & MIG

- Weldcote 276 is a nickel-molybdenum-chromium alloy with an addition of tungsten designed to have excellent corrosion resistance in a wide range of severe environments.
- The high nickel and molybdenum contents make the nickel steel alloy especially resistant to pitting and crevice corrosion in reducing environments while chromium conveys resistance to oxidizing media. The low carbon content minimizes carbide precipitation during welding to maintain corrosion resistance in as-welded structures.
- This nickel alloy is resistant to the formation of grain boundary precipitates in the weld heat-affected zone, thus making it suitable for most chemical process application in an as welded condition.

Applications:

- Alloy 276 is widely used in the most severe environments such as chemical processing, pollution control, pulp and paper production, industrial and municipal waste treatment, and recovery of natural gas.
- 276 exhibits excellent resistance in a wide variety of chemical process environments.
- This alloy has excellent resistance to pitting and stress corrosion cracking.

Chemical Composition Limits (%):

	Ni	Mo	Cr	Fe	W	Co	Mn	C	V	P	S	Si
Result (%)	Remainder	15.0-17.0	14.5-16.5	4.0-7.0	3.0-4.5	2.5 max	1.0 max	.01 max	.35 max	.04 max	.03 max	.08 max

NICKEL C276 (ERNiCrMo-4) I 36" Cut Lengths (TIG)		UPC #	Part #	U/M	Size
Nickel C276 1/16 × 36	4-10 lb. Tubes in 40 lb. Carton *(Available in 1 pound tubes)*	812922010513	**NIC276116X36T**	LB	1/16

NICKEL C276 (ERNiCrMo-4) I 33# Spools (MIG)		UPC #	Part #	U/M	Size
Nickel C276 .035 × 11# Spool **	One Spool	812922015495	**NIC276035X11SP**	LB	.035
Nickel C276 .035 × 33# Spool **		877511009064	**NIC276035X33SP**	LB	.035
Nickel C276 .045 × 33# Spool **		812922015488	**NIC276045X33SP**	LB	.045

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WELDCOTE NICKEL 625 TIG & MIG

- Weldcote 625 is an Inconel Type nickel-chromium-molybdenum alloy with an addition of niobium. The addition of molybdenum acts with the niobium to stiffen the alloy matrix, providing a high strength without a strengthening heat treatment.
- The alloy resists a wide range of corrosive environments and has a good resistance to pitting and crevice corrosion.

Applications:

- Alloy 625 is used in chemical processing, aerospace and marine engineering oil & gas, pollution control equipment and nuclear reactors.

Chemical Composition Limits (%):

	Ni	Cr	Mo	Nb + Ta	Fe	Ti	C	Mn	Si	S
Result (%)	58.0 min	20 - 23	8 -10	3.15 -4.15	5.0 max	0.40 max	0.10 max	0.50 max	0.50 max	0.15 max

NICKEL 625 (ERNiCrMo-3) I 36" Cut Lengths (TIG)		UPC #	Part #	U/M	Size
Nickel 625 1/16 × 36	4-10 lb. Tubes in 40 lb. Carton *(Available in 1 pound tubes)*	877511008227	**NI625116X36T**	LB	1/16
Nickel 625 3/32 × 36		877511006841	**NI625332X36T**	LB	3/32
Nickel 625 1/8 × 36		877511006834	**NI62518X36T**	LB	1/8
Nickel 625 .045 × 36 **			**NI625045X36T**	LB	.045

NICKEL 625 (ERNiCrMo-3) I 11#/33# Spools (MIG)		UPC #	Part #	U/M	Size
Nickel 625 .035 × 11# Spool	One Spool	812922015433	**NI625035X11SP**	LB	.035
Nickel 625 .035 × 33# Spool		877511007992	**NI625035X33SP**	LB	.035
Nickel 625 .045 × 33# Spool **		812922011176	**NI625045X33SP**	LB	.045

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COPPER BASED ALLOYS FOR MIG & TIG BRAZING

ALUMINUM BRONZE A-1 ALLOY NO. 610 / A-2 ALLOY NO. 618

Spec/Classification: AWS A5.7 Class ERCuAl-A1, ERCuAl-A2 / ASME SFA 5.7

- Weldcote **ALB-A1** is an iron free aluminum bronze filler metals used for MIG and TIG overlay welding of bearing and wear resistant surfaces exposed to corrosive environments such as salt or brackish water and commonly used acids.
- Weldcote **ALB-A2** is an iron bearing MIG and TIG filler metal used for joining aluminum bronze of similar composition, silicon and manganese bronze, high strength copper-zinc alloys, some copper-nickel alloys, ferrous metals and dissimilar metals.

Applications:

A-1: Commonly used in steel and pulp mills to overlay tube sheets, valve seats and refineries.

A-2: Most common applications would include marine maintenance and repair welding of ship propellers.

Nominal Composition (%):

		Si	Pb	Al	Zn	Fe	Mn	Others	Cu
Result (%)	A-1	0.100	0.020	6.0-8.5	0.100	1.500	0.500	0.500	Balance
	A-2	0.100	0.020	8.0-11.0	0.020	1.500		0.500	Balance

Typical Mechanical Properties of Weld Metal:

	A-1	A-2
Melting Point	1945°F (1046°C)	1915°F (1040°C)
Yield Strength	28,000 Psi	35,000 Psi
Elongation	47%	28%
Reduction of area	53%	28%
Tensile Strength	68,000 Psi	79,000 Psi
Brinell Hardness	125 HB	140 HB

Recommended Welding Parameters: ALB-A1, ALB-A2

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Spray Transfer

Wire Diameter	Amps	Volts	Argon (cfh)	Wire Feed (ipm)
.030"	80-140	25-26	25	340-450
.035"	130-200	26-27	30	280-400
.045"	185-245	27-28	30	200-300
1/16"	250-400	28-30	40	150-210

GMAW (TIG) Procedures: (DCSP) 2% Lanthanated Tungsten Electrode Negative or ACHF

Material	Tungsten Dia	Filler Wire Size	Amps (DC)	Amps (AC)	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	80-120	80-120	3/8"-1/2"	15
3/32"	3/32"	3/32"	145-195	145-195	7/16"-1/2"	15
1/8"	3/32"	3/32"	155-205	150-195	7/16"-1/2"	15-20
3/16"	1/8"	3/32"-1/8"	300-350	355-300	7/16"-1/2"	20
1/2"	3/16"	1/8"	515-640	340-485	1/2"	25

** All parameters are suggested as basic guidelines and will vary depending on joint design, number of passes and other factors.*

ALB-A1 ALUMINUM BRONZE I 30# Spools		UPC #	Part #	U/M	Size
ALB-A1 .035 × 30# Spool	One Spool		**ALBA1035X30SP**	LB	.035
ALB-A1 1/16 × 30# Spool **	One Spool	877511002157	**ALBA1116X30SP**	LB	1/16

ALB-A2 ALUMINUM BRONZE I 30# Spools		UPC #	Part #	U/M	Size
ALB-A2 .035 × 30# Spool	One Spool	877511002164	**ALBA2035X30SP**	LB	.035
ALB-A2 .045 × 30# Spool		877511002171	**ALBA2045X30SP**	LB	.045
ALB-A2 1/16 × 30# Spool		877511002188	**ALBA2116X30SP**	LB	1/16

ALB-A2 ALUMINUM BRONZE FOR TIG 36"		UPC #	Part #	U/M	Size
ALB-A2 1/16 × 36	4-10 lb. Tubes in 40 lb. Carton	877511002522	**ALBA2116X36T**	LB	1/16
ALB-A2 3/32 × 36		877511002539	**ALBA2332X36T**	LB	3/32
ALB-A2 1/8 × 36		877511002546	**ALBA218X36T**	LB	1/8

*** while supplies last*

DEOXIDIZED COPPER ALLOY NO. 189

Spec/Classification: AWS A5.7 Class ERCu & AWS A5.27 Class ERCu

- Weldcote DEOX Copper is a 98% copper filler metal used for MIG, TIG and oxy-acetylene welding of copper and copper-alloyed base metals.
- DEOX copper contains small amounts of phosphorus and silicon which act as the deoxidizing agents to promote sound weld joints.
- DEOX Copper is easy flowing and produces weld deposits that are porosity free, electrically conductive and the color will match that of copper.

Applications:

- Excellent for joining copper to mild steel, for overlaying steel and for the fabrication of copper pipes, tanks and copper fittings.
- The oxy-acetylene gas flame must be neutral or slightly oxidizing.
- Tip size must be one to two sizes larger than the base plate.
- Preheating should be done only if the part is thick.
- A boric acid or borax flux is recommended.

Nominal Composition (%):

	Si	Mn	Pb	Al	P	Sn	Others	Cu
Result (%)	0.500	0.500	0.020	0.010	0.150	1.000	0.500	98.000

Physical Properties:

Melting Point	1967°F (1075°C)
Yield Strength	8,000 Psi
Elongation	29%
Reduction of area	45%

Tensile Strength	29,000 Psi
Brinell Hardness	54 HB
Electrical Conductivity (%IACS)	40%

Recommended Welding Parameters: DEOX Copper

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Spray Transfer

Wire Diameter	Amps	Volts	Argon (cfh)	Wire Feed (ipm)
.030"	130-150	21-23	25	460-500
.035"	145-185	23-25	30	400-440
.045"	195-215	26-28	30	280-310
1/16"	260-280	27-30	40	150-210

GMAW (TIG) Procedures: (DCSP) 2% Lanthanated Tungsten Electrode Negative or ACHF

Material	Tungsten Dia	Filler Wire Size	Amps (DC)	Amps (AC)	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	70-150	70-150	3/8"-1/2"	15
3/32"	3/32"	3/32"	150-190	150-220	7/16"-1/2"	15
1/8"	3/32"	3/32"	160-200	160-230	7/16"-1/2"	15-20
3/16"	1/8"	3/32"-1/8"	230-400	225-320	7/16"-1/2"	20
1/2"	3/16"	1/8"	325-500	290-485	1/2"	25

** All parameters are suggested as basic guidelines and will vary depending on joint design, number of passes and other factors.*

DOC-DEOXIDIZED COPPER I 30# Spools		UPC #	Part #	U/M	Size
DOC 1/16 × 30# Spool **	One Spool		**D0C116X30SP**	LB	1/16
DOC 3/32 × 30# Spool **			**D0C332X30SP**	LB	3/32
DOC .035 × 30# Spool		877511002195	**D0C035X30SP**	LB	.035
DOC .045 × 30# Spool		877511002201	**D0C045X30SP**	LB	.045

DOC-DEOXIDIZED COPPER FOR TIG 36"		UPC #	Part #	U/M	Size
DOC 1/16 × 36	4-10 lb. Tubes in 40 lb. Carton	877511002553	**D0C116X36T**	LB	1/16
DOC 3/32 × 36		877511002560	**D0C332X36T**	LB	3/32
DOC 1/8 × 36		877511002577	**D0C18X36T**	LB	1/8
DOC 3/16 × 36 **			D0C316X36T	LB	3/16

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PHOS-BRONZE C ALLOY NO. 521

Spec/Classification: AWS A5.7 Class ERCuSn-C / ASME SFA 5.7

- Weldcote Phos-Bronze C filler metal is used quite extensively for surfacing applications.
- The higher tin (Sn) content (7.0-9.0%) gives “PBC" weld deposits greater hardness and higher tensile / yield strengths than Phos-Bronze A.

Applications:

- “PBC" is commonly used for base metals of similar composition, for joining brass alloys and for joining cast iron to carbon steel.
- Preheating is recommended.

Nominal Composition (%):

	P	Pb	Cu	Sn	Zn	Fe	Others
Result (%)	.03-.35	0.050	balance	7.0-9.0	0.020	0.100	0.500

Physical Properties:

Melting Point	1620°F (882°C)
Yield Strength	35,000 Psi
Elongation	45%

Liquidus	1880°F (1027°C)
Tensile Strength	66,000 Psi
Brinell Hardness	90-100 HB

Recommended Welding Parameters: Phos-Copper C

GMAW (MIG) Parameters: (DC Reverse Polarity) Electrode Positive Spray Transfer

Wire Diameter	Amps	Volts	Argon (cfh)	Wire Feed (ipm)
.030"	130-140	25-26	25	340-450
.035"	140-160	26-27	30	280-400
.045"	165-185	27-28	30	200-300
1/16"	285-335	28-30	40	150-210

GMAW (MIG) Parameters: (DCSP) 2% Lanthanated Tungsten Electrode Negative or ACHF

Material	Tungsten Dia	Filler Wire Size	Amps (DC)	Amps (AC)	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	100-120	100-120	3/8"-1/2"	15
3/32"	3/32"	3/32"	185-195	155-190	7/16"-1/2"	15
1/8"	3/32"	3/32"	185-205	165-195	7/16"-1/2"	15-20
3/16"	1/8"	3/32"-1/8"	300-350	255-300	7/16"-1/2"	20
1/2"	3/16"	1/8"	615-640	440-185	1/2"	25

** All parameters are suggested as basic guidelines and will vary depending on joint design, number of passes and other factors.*

PHB-PHOS BRONZE C	36" Cut Lengths	UPC #	Part #	U/M	Size
PHBC 1/16 × 36	4-10 lb. Tubes in 40 lb. Carton	877511002591	**PHBC116X36T**	LB	1/16
PHBC 3/32 × 36		877511002607	**PHBC332X36T**	LB	3/32
PHBC 1/8 × 36 **		877511002614	**PHBC18X36T**	LB	1/8

PHB-PHOS BRONZE C 30# Spool		Part #	U/M	Size
PHBC .045 × 30# Spool **	One Spool	**PHBC045X30SP**	LB	.045

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SILICON BRONZE ALLOY NO. 656

Spec/Classification: AWS A5.7 Class ERCuSi-A / ASME SFA 5.7

- Weldcote Silicon Bronze is a copper based filler metal containing 3% silicon and small amounts of manganese, tin and zinc.
- Primarily used for MIG, TIG and oxy-acetylene welding of copper, copper-silicon and copper-zinc base metals to themselves and steel.
- Excellent for plain or galvanized steel sheet metal as well as other coated steels.

Physical Properties:

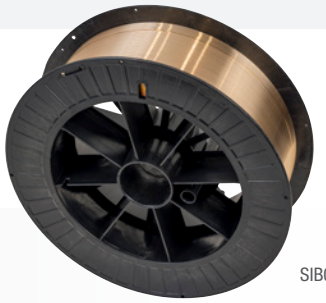
Shielding Gas		Straight Argon	
Solidus	1780°F (971°C)	**Liquidus**	1880°F (1027°C)
Tensile Strength	50,000 Psi	**Brinell Hardness**	80-100 HB (500 kg load)

Nominal Composition (%):

	Cu	Mn	Pb	Si	Sn	Zn	Fe	Al	Others
Result (%)	Balance	1.500	0.020	2.8-4.0	1.000	1.000	0.500	0.010	0.500

Applications:

- Weldcote Metals Silicon Bronze is also used for surfacing areas subject to corrosion.
- The oxy-acetylene gas flame should be slightly oxidizing. Keep the weld puddle small in order to promote fast solidification and minimize cracking.
- A high boric acid flux should be used both before and during welding. Preheating is NOT recommended.



SIB035X30SP

Recommended Welding Parameters: Silicon Bronze Alloy No. 656

GMAW (MIG) Parameters (DC Reverse Polarity) Electrode Positive Spray Transfer

Wire Diameter	Amps	Volts	Argon (cfh)	Wire Feed (ipm)
.030"	130-150	21-23	25	460-500
.035"	145-185	23-25	30	400-440
.045"	195-215	26-28	30	280-310
1/16"	260-280	27-30	40	150-210

GMAW (TIG) Procedures:

(DCSP) 2% Lanthanated Tungsten Electrode Negative or ACHF

Material	Tungsten Dia	Filler Wire Size	Amps (DC)	Amps (AC)	Gas Cup	Argon (cfh)
1/16"	1/16"	1/16"	70-150	70-150	3/8"-1/2"	15
3/32"	3/32"	3/32"	150-190	140-220	7/16"-1/2"	15
1/8"	3/32"	3/32"	155-200	150-230	7/16"-1/2"	15-20
3/16"	1/8"	3/32"-1/8"	230-400	225-320	7/16"-1/2"	20
1/2"	3/16"	1/8"	325-500	290-485	1/2"	25

SIB- SILICON BRONZE I 30# Spool		UPC #	Part #	U/M	Size
SIB .030 × 30# Spool	One Spool	877511002270	**SIB030X30SP**	LB	.030
SIB .035 × 30# Spool		877511002287	**SIB035X30SP**	LB	.035
SIB .045 × 30# Spool		877511002294	**SIB045X30SP**	LB	.045
SIB 1/16 × 30# Spool		877511002300	**SIB116X30SP**	LB	1/16

SIB- SILICON BRONZE I 10# Spool		UPC #	Part #	U/M	Size
SIB .025 × 10# Spool	One Spool	877511002249	**SIB025X10SP**	LB	.025
SIB .030 × 10# Spool		877511002256	**SIB030X10SP**	LB	.030
SIB .035 × 10# Spool		877511002263	**SIB035X10SP**	LB	.035
SIB .045 × 10# Spool		877511004922	**SIB045X10SP**	LB	.045

SIB- SILICON BRONZE I 2# Spool		UPC #	Part #	U/M	Size
SIB .030 × 2# Spool	20-2 lb. Spools per Carton	877511002317	**SIB030X2SP**	LB	.030
SIB .035 × 2# Spool		877511002324	**SIB035X2SP**	LB	.035
SIB .055 × 2# Spool **			SIB045X2SP	LB	.045

SIB- SILICON BRONZE I 36" Cut Lengths 10# Boxes		UPC #	Part #	U/M	Size
SIB .035 × 36	4-10 lb. Tubes in 40 lb. Carton	877511002621	**SIB035X36T**	LB	.035
SIB .045 × 36		877511002638	**SIB045X36T**	LB	.045
SIB 1/16 × 36		877511002645	**SIB116X36T**	LB	1/16
SIB 3/32 × 36		877511002652	**SIB332X36T**	LB	3/32
SIB 1/8 × 36		877511002669	**SIB18X36T**	LB	1/8
SIB 5/32 × 36		877511002676	**SIB532X36T**	LB	5/32
SIB 3/16 × 36		877511002683	**SIB316X36T**	LB	3/16
SIB 1/4 × 36		877511002690	**SIB14X36T**	LB	1/4

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BRAZING ALLOYS

LOW FUMING BRONZE - BARE OR FLUX COATED

Spec/Classification: AWS A5.8 RBCuZn-C & AWS A5.27 RBCuZn-C

- Weldcote Low Fuming Bronze is a general purpose oxy-acetylene brazing rod used for steel, copper alloys, cast iron, nickel alloys and stainless steel.
- A balanced chemical analysis of copper and zinc as well as alloying elements of tin, iron, manganese and silicon produce weld deposits are easily attained simply by applying a neutral or slightly oxidizing flame.

Applications:

- The high silicon content of Weldcote Metals Low Fuming Bronze keeps fumes to a minimum.
- Preheating is required for some applications and bronze brazing flux is required for bare rods. Order as bare or flux-coated.

Nominal Composition (%):

	Cu	Mn	Fe	Si	Al	Pb	Sn	Zn	Others
Result (%)	56.0-60.0	0.01-0.5	0.25-1.2	0.04-0.15	0.010	0.050	0.8-1.1	Balance	0.500

Physical Properties:

Melting Point	1630°F (888°C)
Tensile Strength	65,000 Psi
Brinell Hardness	80-110 HB

LOW FUMING BRONZE I Bare 36"		UPC #	Part #	U/M	Size
LFB 1/16 × 36	4-10 lb. Tubes in 40 lb. Carton	877511002331	**LFB116X36T**	LB	1/16
LFB 3/32 × 36		877511002348	**LFB332X36T**	LB	3/32
LFB 1/8 × 36		877511002355	**LFB18X36T**	LB	1/8
LFB 5/32 × 36		877511002362	**LFB532X36T**	LB	5/32
LFB 3/16 × 36		877511002379	**LFB316X36T**	LB	3/16
LFB 1/4 × 36		877511002386	**LFB14X36T**	LB	1/4
LFB 5/16 × 36		877511002393	**LFB516X36T**	LB	5/16
LFB 3/8 × 36		877511002409	**LFB38X36T**	LB	3/8

LOW FUMING BRONZE - BARE 18"	Part #	U/M	Size
LFB 1/16 × 18 **	**LFB116X18T**	LB	1/16
LFB 3/32 × 18 **	**LFB332X18T**	LB	3/32
LFB 1/8 × 18 **	**LFB18X18T**	LB	1/8

LOW FUMING BRONZE I Fluxcoated 36"		UPC #	Part #	U/M	Size
LFB FC 3/32 × 36	4-10 lb. Tubes in 40 lb. Carton	877511002416	**LFBFC332X36T**	LB	3/32
LFB FC 1/8 × 36		877511002423	**LFBFC18X36T**	LB	1/8
LFB FC 5/32 × 36		877511002430	**LFBFC532X36T**	LB	5/32
LFB FC 3/16 × 36		877511002447	**LFBFC316X36T**	LB	3/16
LFB FC 1/4 × 36		877511002454	**LFBFC14X36T**	LB	1/4

LOW FUMING BRONZE I Fluxcoated 18"		UPC #	Part #	U/M	Size
LFB FC 1/16 × 18	4-10 lb. Boxes in 40 lb. Carton	877511009224	**LFBFC116X18T**	LB	1/16
LFB FC 1/8 × 18 **		877511009248	**LFBFC18X18T**	LB	1/8

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NICKEL SILVER - BARE OR FLUX COATED

Spec/Classification: AWS A5.8 RBCuZn-D & AWS A5.27 RBCuZn-D

- Weldcote Nickel Silver filler metal contains 10% nickel and is used primarily for brazing or oxy-acetylene welding of steel or cast iron where good color match is desirable.
- The weld deposits of Weldcote Metals' Nickel Silver have very high tensile strength, good ductility and excellent corrosion resistance.
- The weld deposits are machinable and work hardens when put into service. For this reason, Nickel Silver is commonly used for building up or overlaying worn parts such as gear teeth, bearings and valve seats. It is also used in the matrix of tungsten carbide rods where it acts as a "binder" for the tungsten carbide particles.
- High strength brazing alloy for joining or overlaying with ferrous and nonferrous alloys.

Applications:

- Excellent for tubular structures.
- A boric acid or borax flux is required.
- Preheating may be desired for some applications.
- A neutral or slightly oxidizing flame is recommended.
- Order as bare or flux-coated.

Nominal Composition (%):

	Cu	Zn	Fe	Si	Al	Pb	P	Ni	Others
Result (%)	46.0-50.0	Balance	0.25-1.2	0.04-0.25	0.010	0.050	0.250	9.0-11.0	0.500

Physical Properties:

Melting Point	1715°F (935°C)
Tensile Strength	95,000 Psi
Brinell Hardness	90-110 HB

NICKEL SILVER I Bare 36"		UPC #	Part #	U/M	Size
Nickel Silver 1/16 × 36 **	4-10 lb. Tubes in 40 lb. Carton	877511002461	**NS116X36T**	LB	1/16
Nickel Silver 3/32 × 36 **		877511002478	**NS332X36T**	LB	3/32
Nickel Silver 1/8 × 36	4-10 lb. Tubes in 40 lb. Carton	877511004595	**NS18X36T**	LB	1/8
Nickel Silver 1/4 × 36		877511002492	**NS14X36T**	LB	1/4

NICKEL SILVER I Fluxcoated 36"		UPC #	Part #	U/M	Size
Nickel Silver Fluxcoated 1/8 × 36	4-10 lb. Tubes in 40 lb. Carton	877511002508	**NSFC18X36T**	LB	1/8
Nickel Silver Fluxcoated 3/16 × 36		877511002515	**NSFC316X36T**	LB	3/16
Nickel Silver Fluxcoated 3/32 × 36 **	4-10 lb. Tubes in 40 lb. Carton		**NSFC332X36T**	LB	3/32

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MILD STEEL ELECTRODES

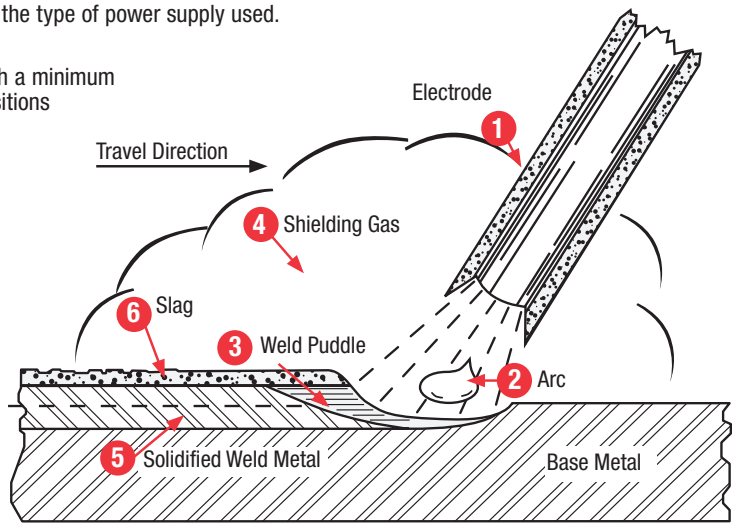
Weldcote Metals' electrodes for mild and low alloy steel welding applications delivering premium weld ability for a wide range of applications while meeting or exceeding AWS specifications.

Mild Steel Electrode Classification:

The American Welding Society's (AWS) classification number series for welding electrodes has been adopted by the welding industry.

The electrode identification system for Shielded Metal Arc Welding (SMAW) is as follows:

- E indicates electrode for arc welding.
- The first two (or three) digits indicate tensile strength (the resistance of the material to forces trying to pull it apart) in thousands of pounds per square inch of the deposited metal.
- The third (or fourth) digit indicates the position of the weld. 0 indicates the classification is not used. 1 is for all positions; 2 is for flat and horizontal positions only; 3 is for flat position only.
- The fourth (or fifth) digit indicates the type of electrode coating and the type of power supply used. Alternating or direct current, straight or reverse polarity.
- Example: The number E6010 indicates an arc welding electrode with a minimum stress relieved tensile strength of 60,000 psi, can be used in all positions and reverse polarity direct current is required.
- The types of coating, welding current, and polarity position designated by the fourth (or fifth) identifying digit of the electrode classification are listed in the table below.



Fourth (or Fifth) identifying digit

Digit	Coating	Weld Current
0	*	*
1	Cellulose Potassium	AC, DCRP, DCSP
2	Titania Sodium	AC, DCSP
3	Titania Potassium	AC, DCSP, DCRP
4	Iron Powder Titania	AC, DCSP, DCRP
5	Low Hydrogen Sodium	DCRP
6	Low Hydrogen Potassium	AC, DCRP
7	Iron Powder Iron Oxide	AC, DCSP
8	Iron Powder Low Hydrogen	AC, DCRP, DCSP

All Weldcote Metals' 5 & 10 lb. electrodes come vacuum packed to ensure product integrity, quality and no product loss.

E6010 ELECTRODE

Spec/Classification: AWS A5.1 Class E6010 / ASME SFA 5.1

- Weldcote E6010 Electrodes with fast freeze are ideal for pipe welding, overhead and vertical welding positions on carbon steels.
- E6010 electrodes are a high cellulose coated electrode designed to provide a smooth stable arc forceful enough to achieve deep penetration into the base metal.
- This electrode exhibits high deposition efficiency and low spatter loss. It produces a weld puddle that wets and spreads well, yet sets up fast enough to make this electrode ideal for a vertical up or vertical down welding techniques.
- 6010 electrodes produce a flat weld bead with course ripples and a thin easily removable slag.

Applications:

Applications are commonly used for out-of-position welding such as pipe welding, ship yards, water towers, pressure vessels, steel castings, storage tanks, square edge butt welds, greasy, painted or poorly cleaned base metals.

Procedure:

- Use a light whipping or weaving motion staying ahead of the puddle.
- Please note that procedures may vary with a change in position, base metals, filler metals, equipment and other changes.

Typical Weld Metal Chemistry (%):

	C	Mn	Si	P	S	Ni	Cr	Mo	V
ASW Spec.	0.20 Max	1.20 Max	1.0 Max	N/A	N/A	0.30 Max	0.20 Max	0.30 Max	0.08 Max
Result (%)	0.1	0.5	0.3	0.013	0.012	0.028	0.017	0.034	0.01

Typical Welding Procedures: DCEP

Diameter	Amps (Flat)	Volts
3/32"	60-80	25-30
1/8"	65-130	25-30
5/32"	110-170	25-30
3/16"	140-200	25-30

Typical Mechanical Properties:

	AWS Spec
Elongation in 2" (%)	22% min
Yield Strength (psi)	48,000 min
Tensile Strength (psi)	60,000 min
Charpy V-notch at -20°F	20 ft-lbs min

6010 MILD STEEL ELECTRODES I 5#		UPC #	Part #	U/M	Size
6010 3/32 Electrode 5# pkg	6-5 lb. Tubes 30 lb. Carton *(Red Plastic Tubes Vacuum Sealed)*	877511007084	**6010332E5**	LB	3/32
6010 1/8 Electrode 5# pkg		877511007077	**601018E5**	LB	1/8
6010 5/32 Electrode 5# pkg		877511007091	**6010532E5**	LB	5/32

6010 MILD STEEL ELECTRODES I 10#		UPC #	Part #	U/M	Size
6010 3/32 Electrode 10# pkg	4-10 lb. Tubes 40 lb. Carton *(Red Plastic Tubes Vacuum Sealed)*	877511003710	**6010332E10**	LB	3/32
6010 1/8 Electrode 10# pkg		877511003727	**601018E10**	LB	1/8
6010 5/32 Electrode 10# pkg		877511003734	**6010532E10**	LB	5/32

6010 MILD STEEL ELECTRODES I 44# Bulk	UPC #	Part #	U/M	Size
6010 1/8 electrode 44# bulk in metal cans **	812922010537	**601018E44**	LB	1/8

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E6011 ELECTRODE

Spec/Classification: AWS A5.1 Class E6011/ASME SFA 5.1

- Weldcote E6011 Electrodes have the same characteristics as E6010 electrodes: fast freeze ideal for pipe welding, overhead and vertical welding positions on carbon steels. Unlike 6010, this electrode may be used with small AC welders as well as DC types.
- E6011 electrodes are a high cellulose coated electrode designed to provide a smooth stable arc forceful enough to achieve deep penetration into the base metal. This electrode exhibits high deposition efficiency and low spatter loss.
- E6011 electrodes combine a strong arc force with fast solidification of weld metal thereby permitting vertical or overhead as well as flat and horizontal welding positions.
- E6011 is especially suited for welding where poor groove fit-up and rusty or oily steel is present.

Applications:

Applications are commonly used for out-of-position welding such as pipe welding, ship yards, water towers, pressure vessels, steel castings, storage tanks, square edge butt welds, greasy, painted or poorly cleaned base metals.

Procedure:

- Use a light whipping or weaving motion staying ahead of the puddle.
- Please note that procedures may vary with a change in position, base metals, filler metals, equipment and other changes.

Typical Weld Metal Chemistry (%):

	C	Mn	Si	P	S	Fe
Result (%)	0.08	0.45	0.18	0.014	0.015	Balance

Typical Welding Procedures: ACEP & DCEP

Diameter	Amps (Flat)	Vertical Overhead	Volts
3/32"	50-80	40-70	25-30
1/8"	70-110	60-110	25-30
5/32"	110-160	110-160	25-30

Typical Mechanical Properties:

	AWS Spec
Elongation in 2" (%)	29.6%
Yield Strength (psi)	Up to 66,100
Tensile Strength (psi)	Up to 72,900

6011 MILD STEEL ELECTRODES I 5#		UPC #	Part #	U/M	Size
6011 3/32 Electrode 5# pkg	6-5 lb. Tubes 30 lb. Carton *(Red Plastic Tubes Vacuum Sealed)*	877511007114	**6011332E5**	LB	3/32
6011 1/8 Electrode 5# pkg		877511007107	**601118E5**	LB	1/8
6011 5/32 Electrode 5# pkg		877511007121	**6011532E5**	LB	5/32

6011 MILD STEEL ELECTRODES I 10#		UPC #	Part #	U/M	Size
6011 3/32 Electrode 10# pkg	4-10 lb. Tubes 40 lb. Carton *(Red Plastic Tubes Vacuum Sealed)*	877511003741	**6011332E10**	LB	3/32
6011 1/8 Electrode 10# pkg		877511003758	**601118E10**	LB	1/8
6011 5/32 Electrode 10# pkg		877511003765	**6011532E10**	LB	5/32

E6013 ELECTRODE

Spec/Classification: AWS A5.1 Class E6013/ASME SFA 5.1 - ABS Approved

- Weldcote E6013 is a high titanic coated electrode.
- This electrode was primarily designed to provide good wetting and shallow penetration for thin sheet metal applications (using smaller diameter electrodes), but with sufficient penetration for welding medium gauge steel.
- As a result, 6013 electrodes may be used in any position with AC or DC (straight or reverse polarity).

Applications:

Applications are automobile and truck bodies, automotive frames, ornamental iron, metal furniture, farm implementations, machinery guards, storage tanks or wherever appearance is important or desirable.

Procedure:

- Use a light whipping or weaving motion staying ahead of the puddle.
- Please note that procedures may vary with a change in position, base metals, filler metals, equipment and other changes.

Typical Weld Metal Chemistry (%):

	C	Mn	Si	P	S	Fe
Result (%)	0.08	0.45	0.18	0.012	0.009	Balance

Typical Welding Procedures: AC<±> and DC<±>

Diameter	Amps (Flat)	Vertical/Overhead
3/32"	60-90	50-80
1/8"	100-120	80-110
5/32"	110-160	100-150

Typical Mechanical Properties:

	AWS Spec
Elongation in 2" (%)	28% min
Yield Strength (psi)	Up to 59,500
Tensile Strength (psi)	Up to 68,200

6013 MILD STEEL ELECTRODES I 5#		UPC #	Part #	U/M	Size
6013 3/32 Electrode 5# pkg	6-5 lb. Tubes 30 lb. Carton *(Red Plastic Tubes Vacuum Sealed)*	877511007145	**6013332E5**	LB	3/32
6013 1/8 Electrode 5# pkg		877511007138	**601318E5**	LB	1/8
6013 5/32 Electrode 5# pkg		877511007152	**6013532E5**	LB	5/32

6013 MILD STEEL ELECTRODES I 10#		UPC #	Part #	U/M	Size
6013 3/32 Electrode 10# pkg	4-10 lb. Tubes 40 lb. Carton *(Red Plastic Tubes Vacuum Sealed)*	877511003772	**6013332E10**	LB	3/32
6013 1/8 Electrode 10# pkg		877511003789	**601318E10**	LB	1/8
6013 5/32 Electrode 10# pkg		877511003796	**6013532E10**	LB	5/32

E6022 / 7010-A1 ELECTRODES

Spec/Classification: AWS A5.1 Class E6022 / ASME SFA 5.1

- **Weldcote E6022** has a smooth, easy to control arc with excellent strike and re-strike characteristics.
- 6022 has low spatter and a light slag. 6022 is designed for deep penetration welding where burn-through spot welding such as roof decking to support beams and similar applications are required.
- **6022** electrodes are typically used in single pass, high speed and welding of groove welds in the flat welding position, lap joints in the horizontal welding position and fillet welds on sheet metal. The weld bead may be more convex and less uniform while welding at higher speeds.

6022 Applications:

Used on moderate to poor or hard to clean steels such as painted, greasy and galvanized or plated steels as well as square edge butt joints. Welding position shall be flat or horizontal. Applications also include sheet metal, light gauge materials and poor or hard to clean steels.

Procedure:

Use short arc or drag technique holding electrode angle to 10-15° from 90° Please note that procedures may vary with a change in position, base metals, filler metals, equipment and other changes.

Typical Weld Metal Chemistry (%):

	C	Mn	Si	Cr	Ni	Cu	Mo	S	P	V	Al	Fe
Result (%)	0.200	0.890	0.054	0.010	0.028	0.017	0.003	0.032	0.011	0.003	0.001	Balance

Typical Welding Procedures: AC<±> and DC<±>

Diameter	Amps (Flat)
3/32"	90-120
1/8"	110-150
5/32"	150-180

Typical Mechanical Properties:

	AWS Spec
Elongation in 2" (%)	24-26%
Yield Strength (psi)	55,000-63,700
Tensile Strength (psi)	64,000-79,000

6022 MILD STEEL ELECTRODES I 10#		UPC #	Part #	U/M	Size
6022 1/8 Electrode 10# pkg	4-10 lb. Tubes 40 lb. Carton *(Red Plastic Tubes Vacuum Sealed)*	812922015655	**602218E10**	LB	1/8
6022 5/32 Electrode 10# pkg		812922015662	**6022532E10**	LB	5/32

6022 MILD STEEL ELECTRODES I 50# Bulk		UPC #	Part #	U/M	Size
6022 5/32 Electrode 50# Bulk in metal can		812922010742	**6022532E50**	LB	5/32

- **7010-A1** is a high cellulose coated electrode designed for welding on pipe lines. This electrode can be welded in all position but it preforms best in the vertical up or vertical down welding position. This electrode has a fast freeze flux when deposit and solidifies quickly.
- 7010-A1 electrode produces a deep penetration with X-ray quality.

7010-A1 Applications:

This electrode is widely used on carbon-moly piping where high pressure and high temperature is present.

Also used on boilers and oil tanks due to its good x-ray soundness.

7010-A1 MILD STEEL ELECTRODES I 10#		UPC #	Part #	U/M	Size
7010-A1 3/32 Electrode 10# pkg	4-10 lb. Tubes 40 lb. Carton *(Red Plastic Tubes Vacuum Sealed)*		**7010A1332E10**	LB	3/32
7010-A1 1/8 Electrode 10# pkg		812922015686	**7010A118E10**	LB	1/8

E7014 ELECTRODE

Spec/Classification: AWS A5.1 Class E7014 / ASME SFA 5.1

- Weldcote E7014 is an iron powder, rutile type electrode designed to operate at higher speeds, in all positions with greater deposition efficiency than Weldcote Metals 6012 or 6013 electrodes.
- This electrode provides a stable arc, flat smooth bead appearance and easy slag removability.
- 7014 is used for all position, single pass and multi-layer welding applications.
- AC or DC (straight or reverses polarity) may be used.

Applications:

- 7014 us an all purpose electrode used wherever the welding efficiency of 6012 or 6013 is not acceptable.
- Typical applications would include: ship structures, bridges, structural steel for buildings, sheet metal, ornamental iron, auto bodies and fenders, machine parts, storage tanks, etc.

Procedure:

Use a light whipping or weaving motion for vertical up or overhead. Vertical down use higher amperage and faster travel speed staying ahead of the puddle. Please note that procedures may vary with a change in position, base metals, filler metals, equipment and other changes.

Typical Weld Metal Chemistry (%):

	C	Mn	Si	Cr	Ni	Cu	Mo	S	P	V	Fe
Result (%)	0.120	0.680	0.330	0.041	0.053	0.012	0.002	0.012	0.021	0.023	Balance

Typical Welding Procedures: AC<±> and DC<±>

Diameter	Amps (Flat)	Vertical/Overhead
3/32"	100-110	80-90
1/8"	130-140	120-130
5/32"	190-200	150-160

Typical Mechanical Properties:

	AWS Spec
Elongation in 2" (%)	29.4%
Yield Strength (psi)	Up to 67,700
Tensile Strength (psi)	Up to 79,000

7014 MILD STEEL ELECTRODES | 5#		UPC #	Part #	U/M	Size
7014 3/32 Electrode 5# pkg	6-5 lb. Tubes 30 lb. Carton *(Red Plastic Tubes Vacuum Sealed)*	877511007176	**7014332E5**	LB	3/32
7014 1/8 Electrode 5# pkg		877511007169	**701418E5**	LB	1/8
7014 5/32 Electrode 5# pkg		877511007183	**7014532E5**	LB	5/32

7014 MILD STEEL ELECTRODES | 10#		UPC #	Part #	U/M	Size
7014 3/32 Electrode 10# pkg	4-10 lb. Tubes 40 lb. Carton *(Red Plastic Tubes Vacuum Sealed)*	877511003802	**7014332E10**	LB	3/32
7014 1/8 Electrode 10# pkg		877511003819	**701418E10**	LB	1/8
7014 5/32 Electrode 10# pkg		877511003826	**7014532E10**	LB	5/32
7014 5/32 electrode 44# Bulk in meal can **			**7014532E44**	LB	5/32
7014 3/16 electrode 18" Length Bulk **			**7014316E**	LB	3/16

LOW MANGANESE FOR MILD STEEL | 10# Package		UPC #	Part #	U/M	Size
6011 LMn 3/32 Electrode 10# pkg **	4-10 lb Tubes 40 lb.Carton	812922016348	**6011LM332E10**	LB	3/32
6011 LMn 5/32 Electrode 10# pkg **		812922016362	**6011LM532E10**	LB	5/32
6013 LMn 3/32 Electrode 10# pkg **		812922016379	**6013LM332E10**	LB	3/32
7018 H4R LMn 5/32 Electrode 10# pkg **		812922016423	**7018LM532E10**	LB	5/32

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E7018 ELECTRODES H4R

Spec/Classification: AWS A5.1 Class E7018 / ASME SFA 5.1 - ABS Approved

- Weldcote E7018 is the most efficient general purpose, iron powder-low hydrogen electrode used for welding carbon steels, free-machining steels and low alloy steels with a minimum yield strength of 50,000 psi.
- Weldcote 7018 has a very good deposition rate, providing a quiet steady arc with low spatter and medium penetration. Weld deposits are of X-ray quality and easy slag removal, exceptional mechanical properties and a smooth uniform bead appearance.
- Weldcote 7018 has excellent operator appeal and may be used in any position with AC or DC (reverse polarity).

Applications:

7018 electrodes are used for many ASTM specifications and low hydrogen levels needed to prevent issues like cracking. More specific applications include process piping, cold rolled steels such as found in heavy machinery fabrications, fired and unfired pressure vessels, shop and field welding of bridges and structural steels, case steels, shipbuilding, just about any medium carbon, low alloy steel where the welds are subject to X-ray inspection.

Procedure:

- Use the drag technique along the weld joint. A 3° to 5° angle is ideal for vertical up welding and using a slight weaving technique.
- Please note that procedures may vary with a change in position, base metals, filler metals, equipment and other changes.

Typical Weld Metal Chemistry (%):

	C	Mn	Si	S	P	Fe
Result (%)	0.08	1.00	0.6	0.011	0.021	Balance

Typical Welding Procedures: ACEP and DCEP

Diameter	Amps (Flat)	Vertical/Overhead
3/32"	65-85	50-80
1/8"	90-130	85-120
5/32"	130-180	110-160

Typical Mechanical Properties:

	AWS Spec
Elongation in 2" (%)	30%
Yield Strength (psi)	81,000
Tensile Strength (psi)	71,000

7018 MILD STEEL ELECTRODES I 5#		UPC #	Part #	U/M	Size
7018 3/32 Electrode 5# pkg	6-5 lb. Tubes 30 lb. Carton *(Red Plastic Tubes Vacuum Sealed)*	877511007206	**7018332E5**	LB	3/32
7018 1 /8 Electrode 5# pkg		877511007190	**701818E5**	LB	1/8
7018 5/32 Electrode 5# pkg		877511007213	**7018532E5**	LB	5/32

7018 MILD STEEL ELECTRODES I 10#		UPC #	Part #	U/M	Size
7018 3/32 Electrode 10# pkg	4-10 lb. Tubes 40 lb. Carton *(Red Plastic Tubes Vacuum Sealed)*	877511003833	**7018332E10**	LB	3/32
7018 1/8 Electrode 10# pkg		877511003840	**701818E10**	LB	1/8
7018 5/32 Electrode 10# pkg		877511003857	**7018532E10**	LB	5/32
7018 3/16 Electrode 10# pkg		877511009507	**7018316E10**	LB	3/16

7018 MILD STEEL ELECTRODES - METAL CANS I 10#	NEW	UPC #	Part #	U/M	Size
7018-H4R 3/32 Electrode 10# in metal can	Metal Can	812922017826	**7018332E10CAN**	LB	3/32
7018-H4R 1/8 Electrode 10# in metal can		812922017833	**701818E10CAN**	LB	1/8

7018 MILD STEEL ELECTRODES - METAL CANS I 44#		Part #	U/M	Size
7018 5/32 Electrode 44# Bulk in metal can **	Metal Can	**7018532E44**	LB	5/32

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E7018AC ELECTRODES

Spec/Classification: AWS A5.1 Class E7018 / ASME SFA 5.1 - ABS Approved

- 7018 AC is a low-hydrogen welding electrode that you can use in all positions on low, medium and high carbon steels.

Applications:

- Ideal for tack welding and general-purpose AC application requiring low penetration.

7018AC MILD STEEL ELECTRODES I 5#		UPC #	Part #	U/M	Size
7018AC 3/32 Electrode 5# pkg	6-5 lb. Tubes 30 lb. Carton *(Red Plastic Tubes Vacuum Sealed)*	877511008685	**7018AC332E5**	LB	3/32
7018AC 1/8 Electrode 5# pkg		877511008692	**7018AC18E5**	LB	1/8
7018AC 5/32 Electrode 5# pkg		877511008708	**7018AC532E5**	LB	5/32

7018AC MILD STEEL ELECTRODES I 10#		UPC #	Part #	U/M	Size
7018AC 3/32 Electrode 10# pkg	4-10 lb. Tubes 40 lb. Carton *(Red Plastic Tubes Vacuum Sealed)*	877511009200	**7018AC332E10**	LB	3/32
7018AC 1/8 Electrode 10# pkg		877511009194	**7018AC18E10**	LB	1/8
7018AC 5/32 Electrode 10# pkg		877511009217	**7018AC532E10**	LB	5/32

E7024 ELECTRODES

Spec/Classification: AWS A5.1 Class E7018 / ASME SFA 5.1 - ABS Approved

- 7024 also known as a drag rod. They deposit a large amount on metal in the flat or horizontal position.

Applications:

- Used in repair of heavy construction equipment, welding structural steel buildings and heavy fabrication.

7024 MILD STEEL ELECTRODES I 50# Bulk	UPC #	Part #	U/M	Size
7024 1/8 Electrode 50# pkg	812922010711	**702418E50**	LB	1/8
7024 5/32 Electrode 50# pkg	812922010728	**7024532E50**	LB	5/32
7024 5.8mm Electrode 18" length Bulk **		**E702458MME**	LB	5.8mm

*** while supplies last*

E10018-G / E11018-M HIGH TENSILE STEEL ELECTRODES

NEW

- **E10018-G** is a high quality electrode used for joining high tensile steels and manganese molybdenum steels.
- The coating is specially formulated to resist moisture pick-up under conditions of high heat and humidity. This electrode offers resistance to moisture reabsorption which helps prevent hydrogen cracking and aids in elimination of starting porosity.
- E10018-G is specifically designed for applications requiring at least 100 ksi tensile strength, good ductility and crack resistance.
- AWS Classification: E10018-G H4R, Welding Current: AC – DCEP

Spec/Classification: AWS A5.5/A5.5M:2006

Applications:

- Manganese-Moly castings
- Alloy Forgings
- Structure and pressure vessels

E10018-G HIGH TENSILE STEEL ELECTRODES		UPC #	Part #	U/M	Size
E10018-G 5/32 High Tensile Steel Electrode	4-10 lb. Tubes 40 lb. Carton	812922017741	**E10018G532**	LB	5/32
E10018-G 3/16 High Tensile Steel Electrode		812922017758	**E10018G316**	LB	3/16

- **E11018-M** is an outstanding electrode designed for use in Military applications which require weld joints with 116 ksi minimum tensile strength.
- This electrode provides excellent puddle control with good wetting action and tie in.
- E11018M offers good arc characteristics and easy slag removal.
- AWS Class: E11018M, ASME SFA A5.5, Current: DCEP.

Applications:

- Joining HY-80, HY-90, HY-100, and T-1 steels

E11018-M HIGH TENSILE STEEL ELECTRODES		UPC #	Part #	U/M	Size
E11018-M 5/32 High Tensile Steel Electrode	4-10 lb. Tubes 40 lb. Carton	812922017765	**E11018M532**	LB	5/32
E11018-M 3/16 High Tensile Steel Electrode		812922017772	**E11018M316**	LB	3/16

STAINLESS STEEL ELECTRODES

308L-16 STAINLESS STEEL

Spec/Classification: AWS A5.4 / ASME SFA 5.4 E308L-16

Weldcote E308L-16 Stainless Steel Electrodes contain extra low carbon for the welding of austenitic, low carbon 18%Cr - 8%Ni stainless steels such as AISI 304-ELC. The weld deposit of this electrode contains a maximum of 0.04% carbon, which greatly reduces the formation of chromium carbides, protecting the corrosion resistant qualities of the base metal and weld. Weldcote308L-16 electrodes have a high deposition rate resulting in excellent efficiency.

Applications:

308L-16 electrodes can be used in all positions.

Typical applications include dairy, distillery, restaurant equipment and chemical tanks.

Typical Weld Metal Chemistry (%):

	C	Mn	Si	Cr	Ni	S	P	Cu	Mo	Fe
Result (%)	0.040	0.5-2.5	0.900	18.0-21.0	9.0-11.0	0.030	0.040	0.750	0.750	Balance

Typical Welding Procedures: DC <±> Ve

Diameter	Amps (Flat)	Vertical/Overhead
3/32"	65-75	(For vertical welding, amperages are to reduced by 10-15 amps)
1/8"	90-105	
5/32"	120-135	
3/16"	135-155	

Typical Mechanical Properties:

	AWS Spec	
Elongation in 2" (%)	40%	
Yield Strength (psi)	55,000 Psi	380 MPa
Tensile Strength (min)	84,500 Psi	580 MPa

308L-16 STAINLESS STEEL ELECTRODES		UPC #	Part #	U/M	Size
308L-16 1/16 × 10" Electrode	4-5 lb. Tubes in 20 lb. Carton	877511003444	**308L16116E**	LB	1/16
308L-16 3/32 × 12" Electrode	4-10 lb. Tubes 40 lb. Carton	877511003451	**308L16332E**	LB	3/32
308L-16 1/8 × 14" Electrode		877511003468	**308L1618E**	LB	1/8
308L-16 5/32 × 14" Electrode		877511003475	**308L16532E**	LB	5/32
308L-16 3/16 × 14" Electrode		877511003482	**308L16316E**	LB	3/16

308-16 STAINLESS STEEL ELECTRODES		UPC #	Part #	U/M	Size
308-16 3/32 × 12" Electrode **	4-10 lb. Tubes 40 lb. Carton	877511003406	**30816332E**	LB	3/32
308-16 1/8 × 14" Electrode **		877511003413	**3081618E**	LB	1/8
308-16 5/32 × 14" Electrode **			**30816532E**	LB	5/32

10-P STAINLESS STEEL ELECTRODES		UPC #	Part #	U/M	Size
10-P 3/32 Premium Stainless Electrode **	4-10 lb. Tubes 40 lb. Carton	877511003406	**10P332E**	LB	3/32
10-P 1/8 Premium Stainless Electrode **		877511003413	**10P18E**	LB	1/8

*** while supplies last***

309L-16 STAINLESS STEEL

Spec/Classification: AWS A5.4 / ASME SFA 5.4 E309L-16

Weldcote E309L-16 Stainless Steel electrodes are used for welding 22%Cr-12%Ni stainless steel, mild or carbon steel to stainless steel and stainless clad steel.

This electrode will produce an austenitic-ferritic, ductile weld deposit that contains a maximum of 0.04% carbon, thereby providing good crack resistance superior to that of 309 electrodes.

Applications:

Typical applications are similar to those of 309-16, but where stronger, corrosion resistance is required.

Typical Weld Metal Chemistry (%):

	C	Mn	Si	Cr	Ni	S	P	Fe
Result (%)	0.035	1.580	0.530	23.450	12.600	0.021	0.024	Balance

Typical Welding Procedures: DC <±> Ve

Diameter	Amps (Flat)	Vertical/Overhead
3/32"	65-75	(For vertical welding, amperages are to reduced by 10-15 amps)
1/8"	90-105	
5/32"	120-135	
3/16"	135-155	

Typical Mechanical Properties:

	AWS Spec	
Elongation in 2" (%)	36%	
Yield Strength (psi)	58,000 Psi	410 MPa
Tensile Strength (min)	88,500 Psi	555 MPa

309L-16 STAINLESS STEEL ELECTRODES		UPC #	Part #	U/M	Size
309L-16 3/32 × 12" Electrode	4-10 lb. Tubes 40 lb. Carton	877511003536	**309L16332E**	LB	3/32
309L-16 1/8 × 14" Electrode		877511003543	**309L1618E**	LB	1/8
309L-16 5/32 × 14" Electrode		877511003550	**309L16532E**	LB	5/32
309L-16 3/16 × 14" Electrode		877511003567	**309L16316E**	LB	3/16

309-16 STAINLESS STEEL ELECTRODES		UPC #	Part #	U/M	Size
309-16 3/32 × 12" Electrode	4-10 lb. Tubes 40 lb. Carton	877511003499	**30916332E**	LB	3/32
309-16 1/8 × 14" Electrode		877511003505	**3091618E**	LB	1/8

310-16 STAINLESS STEEL

Spec/Classification: AWS A5.4 / ASME SFA 5.4 E310-16

Weldcote E310-16 Stainless Steel Electrodes are considered a general purpose electrode used mainly for welding AISI 310 stainless steel but also for straight chromium stainless as well as almost any analysis of carbon and alloy steel. The weld deposit of this electrode will have an austenitic structure with a chemical analysis and oxidation resistance similar to that of the base plate. Weldcote 310-16 provides easy slag removability and a flat regular bead with fine appearance.

Applications:

- More common applications include 25%Cr-20%Ni stainless steel, Cr-Mo stainless steel to mild steel and the clad side of 18%Cr-8%Ni stainless clad steel.
- This electrode can be used in all positions.

Typical Weld Metal Chemistry (%):

	C	Mn	Si	Cr	Ni	S	P	Fe
Result (%)	0.110	1.900	0.520	26.200	20.950	0.012	0.016	Balance

Typical Welding Procedures: DC <±> Ve

Diameter	Amps (Flat)	Vertical/Overhead
3/32"	65-75	(For vertical welding, amperages are to reduced by 10-15 amps)
1/8"	90-105	
5/32"	120-135	
3/16"	135-155	

Typical Mechanical Properties:

	AWS Spec	
Elongation in 2" (%)	34%	
Yield Strength (psi)	61,500 Psi	425 MPa
Tensile Strength (min)	90,500 Psi	625 MPa

310-16 STAINLESS STEEL ELECTRODES		UPC #	Part #	U/M	Size
310-16 3/32 × 12" Electrode	4-10 lb. Tubes 40 lb. Carton	877511003574	**31016332E**	LB	3/32
310-16 1/8 × 14" Electrode		877511003581	**3101618E**	LB	1/8
310-16 5/32 × 14" Electrode		877511003598	**31016532E**	LB	5/32
310-16 3/16 × 14" Electrode		877511003604	**31016316E**	LB	3/16

312-16 STAINLESS STEEL

Spec/Classification: AWS A5.4 / ASME SFA 5.4 E312-16

Weldcote E312-16 Stainless Steel electrodes produce a weld deposit (as welded) with the highest tensile and yield strength of any stainless steel electrode. 312-16 is one of the most widely used stainless steel electrodes for arc welding. It is used to weld dissimilar steels, abrasion resistant steels, high yield steels and for joining high temperature alloys to carbon or low alloy steels.

Applications:

Weldcote 312-16 electrodes produce ductile, crack resistant, porosity-free, weld deposits with greater root penetration and better slag control in tight places. 312-16 is also used for Mn steels, hardening steels, armor steels, spring steels and as a wear resistant build-up and buffer layer for hardfacing. This electrode may be used in all positions.

Typical Weld Metal Chemistry (%):

	C	Mn	Si	Cr	Ni	S	P	Fe
Result (%)	0.12	1.80	0.560	29.30	9.400	0.021	0.022	Balance

Typical Welding Procedures: DC <±> Ve

Diameter	Amps (Flat)	Vertical/Overhead
3/32"	65-75	(For vertical welding, amperages are to reduced by 10-15 amps)
1/8"	90-105	
5/32"	120-135	
3/16"	135-155	

Typical Mechanical Properties:

	AWS Spec	
Elongation in 2" (%)	23%	
Yield Strength (psi)	78,000 Psi	540 MPa
Tensile Strength (min)	109,000 Psi	750 MPa

312-16 STAINLESS STEEL ELECTRODES		UPC #	Part #	U/M	Size
312-16 3/328 × 12" Electrode	4-10 lb. Tubes 40 lb. Carton	877511003611	**31216332E**	LB	3/32
312-16 1/8 × 14" Electrode		877511003628	**3121618E**	LB	1/8
312-16 5/32 × 14" Electrode		877511003635	**31216532E**	LB	5/32

316L-16 STAINLESS STEEL

Spec/Classification: AWS A5.4 / ASME SFA 5.4 E316L-16

Weldcote E316L-16 Stainless Steel electrodes produce weld deposits similar to that of 316-16, but with a miximumof 0.04% carbon.

This extra low carbon content gives the weld deposit excellent resistance against intergranular corrosion caused by carbide precipitation. Weldcote 316L electrodes are used for welding 18%Cr-12%Ni-2.5%Mo stainless steels where the corrosion resistance qualities of AISI 316L are required.

Applications:

- This electrode has a high deposition rate and produces a weld deposit with fine bead appearance and exceptional crack resistance.
- 316L-16 electrodes are most commonly used in the textile, paper, cellulose and chemical equipment industries for the fabrication of 316L, 318 and 319L stainless steel products.

Typical Weld Metal Chemistry (%):

	C	Mn	Si	Cr	Ni	S	P	Mo	Fe
Result (%)	0.035	1.75	0.520	18.70	12.65	0.022	0.024	2.30	Balance

Typical Welding Procedures: DC <±> Ve

Diameter	Amps (Flat)	Vertical/Overhead
3/32"	65-75	(For vertical welding, amperages are to reduced by 10-15 amps)
1/8"	90-105	
5/32"	120-135	
3/16"	135-155	

Typical Mechanical Properties:

	AWS Spec	
Elongation in 2" (%)	36%	
Yield Strength (psi)	58,000 Psi	400 MPa
Tensile Strength (min)	85,500 Psi	590 MPa

316L-16 STAINLESS STEEL ELECTRODES		UPC #	Part #	U/M	Size
316L-16 1/16 × 10" Electrode	4-5 lb. Tubes in 20 lb. Carton	877511003666	**316L16116E**	LB	1/16
316L-16 3/32 × 12" Electrode	4-10 lb. Tubes 40 lb. Carton	877511003673	**316L16332E**	LB	3/32
316L-16 1/8 × 14" Electrode		877511003680	**316L1618E**	LB	1/8
316L-16 5/32 × 14" Electrode		877511003697	**316L16532E**	LB	5/32
316L-16 3/16 × 14" Electrode		877511003703	**316L16316E**	LB	3/16

316-16 STAINLESS STEEL ELECTRODES		UPC #	Part #	U/M	Size
316-16 3/32 × 12" Electrode **	4-10 lb. Tubes 40 lb. Carton	877511003642	**31616332E**	LB	3/32
316-16 1/8 × 14" Electrode **			**3161618E**	LB	1/8

*** while supplies last***

MAINTENANCE & REPAIR ELECTRODES

NICKEL 55 (NI-55) / NICKEL 112 / NICKEL 276

Spec/Classification: AWS/SFA 5.15 Class ENiFeCl

- **Weldcote NI-55** electrodes are used for welding of cast irons to themselves as well as for joining cast irons to mild steels.
- NI-55 is also employed for the repair of castings. The welds are moderately hard and require carbide tipped tools for machining.
- A preheat and interpass temperature of not less than 350°F (175°C) is required during welding. Nickel 55 has a lower nickel content than Nickel 99 electrodes (nominally 55%).
- Weld deposits are usually machinable, but under conditions of high admixture, the welds can become hard and difficult to machine.
- Nickel 55 welds are stronger, more ductile and more tolerant of phosphorus in the casting.
- It also has a lower coefficient of expansion than Nickel 99 resulting in fewer fusion line cracks.

Applications:

Nickel 55 is usually used to repair castings with heavy or thick sections such as motor blocks, housings, machine parts, frames, defective castings and building up worn sections.

Procedure:

- AC or DC (DC+), all position. A preheat and inter pass temperature of no less than 350°F (175°C) is required during welding.
- Lightly peen between passes and use a skip or back-step welding technique. Allow casting to cool slowly.

Nominal Composition (%):

	C	Mn	Si	Fe	Cu	Ni	S	P
Result (%)	0.900	0.740	2.090	40.200	1.900	54.500	0.006	0.012

Typical Welding Procedures: DC <±> Ve

Diameter	Amps (Flat)	Vertical/Overhead
3/32"	65-75	(For vertical welding, amperages are to reduced by 10-15 amps)
1/8"	90-105	
5/32"	120-135	
3/16"	135-155	

Typical Mechanical Properties:

	AWS Spec	
Elongation in 2" (%)	8%	
Yield Strength (psi)	59,500 Psi	410 MPa
Tensile Strength (min)	84,000 Psi	580 MPa

Welding Parameters:

- Direct Current
- Electrode + Ve

NICKEL ELECTRODES 55 (AWS Class ENiFe-CI)		UPC #	Part #	U/M	Size
Ni 55 3/32 Electrode	4-10 lb. Tubes 40 lb. Carton	877511003864	**NI55332E**	LB	3/32
Ni 55 1/8 Electrode		877511003871	**NI5518E**	LB	1/8
Ni 55 5/32 Electrode		877511003888	**NI55532E**	LB	5/32
Ni 55 3/16 Electrode		877511003895	**NI55316E**	LB	3/16

NICKEL ELECTRODES 112 (ENiCrMo-3)		UPC #	Part #	U/M	Size
Nickel 112 3/32 × 12" Electrode **	6-10 lb. Tubes 60 lb. Carton	877511008913	**NI112332E**	LB	0.035
Nickel 112 1/8 × 14" Electrode **		877511008906	**NI11218E**	LB	0.035
Nickel 112 5/32 × 14" Electrode **		812922015501	**NI112532E**	LB	0.045

NICKEL ELECTRODES 276	Part #	U/M	Size
Nickel C-276 1/8 Electrode **	**NIC27618E**	LB	1/8

*** while supplies last***

NICKEL 99 (NI-99) / NICKEL 182 / NICKEL 190

- Weldcote NI-99 electrodes are designed for welding of gray iron castings to themselves as well as joining them to mild steels or stainless steels.
- It is also used extensively to repair castings.
- The welds are quite machinable.
- A preheat and interpass temperature of not less then 350°F (175°C) is recommended during welding.
- Nickel 99 is a nominally 99% nickel electrode. Nickel 99 deposit welds are machinable, which is an important criterion when the casting is to be machined after welding.
- Repairs with Nickel 99 are often single pass welding with high admixture. Even with high admixture, the weld deposit will remain machinable.

Spec/Classification: AWS/SFA 5.15 Class ENi-CI

Applications:

Nickel 99 works best on castings with low or medium phosphorus contents such as thin plates, machinery parts, frames and housings.

Procedure:

- AC or DC reverse or straight polarity. Must have clean weld area.
- Bevel breaks and cracks deep enough so the first pass ties in
- the bottom of the crack. In most cases, preheating is not necessary,
- but heavy sections should be preheated to approximately 400°F.
- Use a short arc and stringer beads are recommended. Skip or back-step weld and peen to relieve stresses.
- Allow the casting to cool slowly.

Welding Parameters:

- Direct Current
- Electrode + Ve

NI9918E

Nominal Composition (%):

	C	Mn	Si	Fe	Cu	Ni	S	P
Result (%)	0.850	0.250	1.730	4.200	1.500	91.500	0.005	0.015

Typical Welding Procedures: DC <±> Ve

Diameter	Amps (Flat)	Vertical/Overhead
3/32"	65-75	(For vertical welding, amperages are to reduced by 10-15 amps)
1/8"	90-105	
5/32"	120-135	
3/16"	135-155	

Typical Mechanical Properties:

	AWS Spec	
Elongation in 2" (%)	5%	
Yield Strength (psi)	72,000 Psi	500 MPa
Tensile Strength (min)	56,500 Psi	390 MPa

NICKEL ELECTRODES 99 (AWS Class ENi)		UPC #	Part #	U/M	Size
Ni 99 3/32 Electrode	4-10 lb. Tubes 40 lb. Carton	877511003901	**NI99332E**	LB	3/32
Ni 99 1/8 Electrode		877511003918	**NI9918E**	LB	1/8
Ni 99 5/32 Electrode		877511003925	**NI99532E**	LB	5/32
Ni 99 3/16 Electrode		877511003932	**NI99316E**	LB	3/16

- **Ni 182** is a Nickel-chromium-iron flux coated general purpose electrode. It is used for welding on nickel-chromium-iron base materials and for joining dissimilar metals like stainless and steel to nickel-chromium alloys. It is also used for welding on Inconel alloy 600, 601 and Inconel 800.

Applications:

- **Ni-182** is commonly used in application in the chemical or petrochemical industries as well as nuclear industries.

NICKEL ELECTRODES 182	UPC #	Part #	U/M	Size
Ni 182 3/32 Electrode	877511008043	**NI182332E**	LB	3/32

- **Ni 190** is a flux coated electrodes designed for welding nickel-copper, Monel 400 and 404 to themselves and to steel. Ni 190 is also suitable for joining many nickel-copper alloy to copper-nickel, carbon steel and low alloy steel.

Applications:

- **Ni-190** is commonly used in electroplating and chemical pickling equipment, sea water desalination plants and in waste water treatment plants.

NICKEL ELECTRODES 190 (ENiCu-7)		UPC #	Part #	U/M	Size
Nickel 190 3/32 × 12" Electrode	6-10 lb. Tubes 60 lb. Carton	812922012265	**NI190332E**	LB	0.035
Nickel 190 1/8 × 14" Electrode		812922015570	**NI19018E**	LB	0.035

ALUMINUM SMOOTH 340

Aluminum Cast & Wrought Base Metal

- Aluminum Smooth 340 Maintenance and Repair electrodes feature a precise combination of core wire and coating, providing high speed deposition of dense, machinable welds. It is recommended for fabrication and repair of cast and wrought aluminum.
- It is excellent for foundry defects, machining errors and all types of salvage work.
- Coated stick rod for fabrication, maintenance of repairs of cast or wrought aluminum base metals

Applications:

It is widely used on sheets, tubes and extrusions in thickness of 1/8" or more. Smooth 340 is also well-suited to torch applications such as aluminum motor blocks and cylinder heads, machine bases and supports, housings and mounts.

Procedure:

Use DC reverse polarity. Weld areas should be clean and heavier sections should be beveled. Best results will be obtained on heavier sections when preheated to 500°F. The electrode should be held in a vertical position. Slag needs to be removed before multiple passes.

Clean with hot water; add 10% sulfuric acid to water if additional cleaning is required.

Amperages:

Diameter	3/32"	1/8"	5/32"
Amps (Flat)	50-85	80-135	100-165

ALUMINUM SMOOTH 340		UPC #	Part #	U/M	Size
Aluminum Smooth 340 3/32 Electrode	1-5 Bags in 5 lb. Tubes	877511004762	**ALSMOOTH340332E**	LB	3/32
Aluminum Smooth 340 1/8 Electrode		877511004779	**ALSMOOTH34018E**	LB	1/8
Aluminum Smooth 340 5/32 Electrode		877511004786	**ALSMOOTH340532E**	LB	5/32

WELDCOTE ARC GOUGING CARBON

Metal Removal on Practically Any Metal

- Arc Gouging Carbon Electrodes are copper clad and designed specifically for the air carbon arc process.
- They are a flexible, efficient and cost effective way for metal removal on practically any metal: carbon steel, other ferrous alloys, cast iron, aluminum, nickel, copper alloys and other nonferrous metals.

Applications:

Metal removal on practically any metal; creating “U" grooves for weld joints, gouging out cracks, removing hard surface materials, removing old welds and many other applications.

Procedure:

AC or DC. The electrode should extend at most 7" from the gouging torch with the air jet between the electrode and work piece. Rod angle to work is 35°to 45°. Always use the push technique. The depth and contour of the groove produced are controlled by the electrode diameter and travel speed. Groove depths greater than 1-1/2 times the diameter must be in multiple passes. The width of the groove is determined by the electrode diameter used and is usually 1/8" wider than the diameter. Consult carbon arc torch manual for air pressure settings.

Amperages:

Diameter	5/32"	3/16"	1/4"	5/16"	3/8"
Amps (Flat)	90-150	200-250	300-400	350-450	250-450

WELDCOTE ARC GOUGING CARBON		UPC #	Part #	U/M	Size
Gouging carbons 5/32 × 12	100 pcs. per box 500 pcs. per case 2000 pcs master	877511004014	**GCARBONS532X12**	PC	5/32 × 12" (4.0mm × 305mm)
Gouging carbons 3/16 × 12	50 pcs. per box 250 pcs. per case 1000 pcs master	877511004021	**GCARBONS316X12**	PC	3/16 × 12" (4.8mm × 305mm)
Gouging carbons 1/4 × 12		877511004038	**GCARBONS14X12**	PC	1/4 × 12" (6.4mm × 305mm)
Gouging carbons 5/16 × 12		877511004045	**GCARBONS516X12**	PC	5/16 × 12" (7.9mm × 305mm)
Gouging carbons 3/8 × 12		877511004052	**GCARBONS38X12**	PC	3/8 × 12" (9.5mm × 305mm)
Gouging carbons 1/2 × 12		877511009903	**GCARBONS12X12**	PC	1/2 x 12" (9.5mm × 305mm)

SUPER 120 ELECTRODE

Dissimilar Metal Combinations - 120,000 Psi Tensile

- Super 120 Electrodes are excellent for repairing tools, dies, spring steel and any dissimilar metal combinations, except for aluminum and copper alloys due to exceptional strength and crack resistance.
- Super 120 is also recommended for repairing worn parts and as an underlay for hard-facing.
- AKA Stud removal rod - excellent strength and superior ductility and crack resistance on many grades of steels and stainless as well as dissimilar alloys.

Amperages:

Diameter	3/32"	1/8"	5/32"	3/16"
Amps (Flat)	35-70	60-110	75-140	130-200

Applications:

Repairing tools, dies, spring steel and any dissimilar metal combinations.

Consider this the maintenance and repair “stand-by" in every industry throughout the world. base metals, filler metals, equipment and other changes.

Procedure:

Use either AC or DC reverse polarity (electrode +). The weld area should be free of rust, grease, paint and other materials which cause weld contamination. A 90°vee joint should be used when joining heavy sections. Maintain a short arc length and use stringer beads.

For high carbon steels, a preheat of 400° is recommended. Weld positions are flat, horizontal, vertical up and overhead.

SUPER 120		UPC #	Part #	U/M	Size
Super 120 3/32 Electrode	4-10 lb. Tubes 40 lb. Carton	877511004793	**SUPER120332E**	LB	3/32
Super 120 1/8 Electrode		877511004809	**SUPER12018E**	LB	1/8
Super 120 5/32 Electrode		877511004816	**SUPER120532E**	LB	5/32

WELDCOTE 2300 ELECTRODE

Multi-Purpose Phosphor Bronze Electrodes

- Weldcote 2300 Stick Weld Bronze Electrodes are a versatile, copper based alloy that joins copper, brass and dissimilar metals.
- Weldcote 2300 is used for buildup, joining and repairs of many surfaces needing a frictional resistance of buildup finish.
- When used as an overlay, it offers excellent resistance to frictional wear.
- Copper base stick electrode used for joining and repairs of many wear surface needing a frictional resistance or buildup finish.

Amperages:

Diameter	1/8"
Amps (Flat)	60-120

Applications:

It is typically used for the repair of bushings, gears, propellers, impeller blades, couplings and numerous other applications.

Procedure:

Use either AC or DC reverse polarity. Clean weld area. Copper and heavy sections of cast iron must be preheated. Preheat of phosphor bronze castings should be approximately 400°F and copper should be preheated to approximately 750°F.
Preheat must be maintained while welding. Use lowest current for sound weaving technique. Once the weld is cooled, slag may be removed by chipping and brushing.

WELDCOTE 2300		UPC #	Part #	U/M	Size
Weldcote 2300 1/8 Electrode	4-10 lb. Tubes 40 lb. Carton	877511009422	**230018E10**	LB	1/8

WELDCOTE CUT ROD

High Speed Cutting, Trimming, Piercing and Removing Metals with Welding

- Cut Rod is a special cutting electrode with a heavy coating. Arc start and welding are easy with this electrode and it can be used with high currents.
- Cut Rod should be positioned perpendicular to the work and used in cutting and gouging of metals like cast iron, aluminum, and stainless steels.
- Metal working for cutting, trimming, piercing and removing metals with ease and control with basic welding.

Amperages:

Diameter	1/8"	5/32"	3/16"
Amps (Flat)	140-350	175-400	225-450

Applications:

This electrode is frequently used for removing rivets and bolts, enlarging openings, trimming metals, etc.

Procedure:

- AC or DC straight (electrode -) For the fastest and cleanest cuts, use DC straight polarity (electrode -). When piercing, hold electrode vertical to work, strike arc, and push in and out until hole has been formed.
- When cutting sheets or plates, start at the edge, strike arc, and use electrode like a saw; push and pull with the electrode at a 45° angle to the work piece.
- In all cases the arc must be kept as short as possible.

WELDCOTE CUT ROD		UPC #	Part #	U/M	Size
Cut Rod 1/8 electrode	3-8 lb. Tubes 24 lb. Carton	877511006735	**CUTROD18E**	LB	1/8
Cut Rod 5/32 electrode		877511006742	**CUTROD532E**	LB	5/32

WELDCOTE CHAMFER ARC

Gouging, Veeing, Scarfing and Removal of Metals

- Chamfer Arc Electrodes are used for gouging and cleaning of faulty welds of metals like cast iron, stainless steels, and aluminum for which the oxy-acetylene method is not applicable.
- Chamfer Arc is a heavily coated special gouging electrode which is very easy to use.
- Metal working electrode used for veeing, gouging, scarfing, and removing metals with basic welding equipment.

Amperages:

Diameter	1/8"	5/32"	3/16"
Amps (Flat)	210-350	250-400	300-500

Applications:

Gouging and chamfering of ferrous and non-ferrous metals. Chamfer Arc electrodes are ideal for removing unwanted or defective weld metal, preparing parts prior to welding, removing risers and reducing large areas of metal prior to machining.

Also used when oxy-acetylene is not applicable.

Procedure:

- AC or DC straight polarity. For arc start, hold electrode perpendicular and then leaned 15° and pulled forward.
- Chamfer Arc electrodes should not be pushed into the work more than half the coating thickness.
- If the groove is not deep enough, the process should be repeated after the work piece has cooled.

WELDCOTE CHAMFER ARC		UPC #	Part #	U/M	Size
Chamfer Arc 1/8 Electrode	1-5 Bags in 5 lb. Tubes	877511006766	**CHAMFERARC18E**	LB	1/8
Chamfer Arc 5/32 Electrode		877511006773	**CHAMFERARC532E**	LB	5/32

WELDCOTE 2800 NICKEL FREE ELECTRODES

- 2800 is a Nickel Free Cast Iron maintenance and repair electrode.
- It is a non-machinable can iron electrode for repairs and joining steel and cast iron that may be oily, grease, burned out casting and many other poorly cleaned base metals.

Applications:

- 2800 is used for joining problem cast iron to steel.
- Used for repair on cracked machine bases, pump housings, burned furnace grates and low quality cast iron.

WELDCOTE 2800 NICKEL FREE ELECTRODES		UPC #	Part #	U/M	Size
Weldcote 2800 1/8 nickel free Electrode	4-10 lb. Tubes 40 lb. Carton	877511008753	**280018E**	LB	1/8

SPOT ARC ELECTRODES

- Description: Spot Arc electrode is an easy self-stricking electrodes for low amperage needs such as spot welding gums.
- Spot are electrodes can be used in the flat, , vertical up, and down, and overhead without changing amperage settings.
- Spot Arc electrode can bend without flux breaking off. Fast Freeze slag characteristics.

Applications:

- Ideal for low amperage needs such as spot welding guns.
- Can be used on sheet metals, automotive body work.

SPOT ARC ELECTRODES		UPC #	Part #	U/M	Size
Spot Arc 1/16 Electrode	4-10 lb. Tubes 40 lb. Carton	877511007893	**SPOTARC116E**	LB	1/16
Spot Arc 5/64 Electrode		877511007909	**SPOTARC564E**	LB	5/64

88-83 PREMIUM STEEL ELECTRODES

- 88-83 is a high performance, high Tensile – all position Ac-DC electrode.
- Trouble free, steel electrode with higher tensile strength than ordinary mild steel electrodes.
- Tensile strength at 88,000 psi and elongation up to 24% in 2".

Applications:

- Auto and truck bodies, trailer flooring, tanks, frames, guards, non-critical pipe, shelving, etc.
- Ac or DC Reverse polarity. Used in the flat, horizontal and vertical down position.

88-83 PREMIUM STEEL ELECTRODES		UPC #	Part #	U/M	Size
88-83 1/8 premium steel Electrode	4-10 lb. Tubes, 40 lb. Carton	812922015938	**888318E**	LB	1/8

WC PIPELINE 80 ELECTRODES

NEW

Spec/Classification: AWS A5.5, Class = E8010-P1, Class = E8010-G

- Designed for vertical down welding of cross-country and in-plant pipe.
- High productivity in vertical down and out-of-position pipe welding.
- Deep penetration. Clean, visible weld puddle.
- Meets NACE MR0175 for sour gas applications.
- Test data available for SSC (NACE TM0177).

Applications:

- Root pass welding of up to X80 grade pipe.
- Hot, fill and cap pass of up to X70 grade pipe.

E8010-P1 WC PIPELINE ELECTRODES		UPC #	Part #	U/M	Size
E8010-P1 5/32 Pipeline Electrode	4-10 lb. Tubes 40 lb. Carton	812922017789	**E8010P1532**	LB	5/32
E8010-P1 3/16 Pipeline Electrode		812922017796	**E8010P1316**	LB	3/16

E8010-G WC PIPELINE ELECTRODES		UPC #	Part #	U/M	Size
E8010-G 5/32 Pipeline Electrode	4-10 lb. Tubes 40 lb. Carton	812922017802	**E8010G532**	LB	5/32
E8010-G 3/16 Pipeline Electrode		812922017819	**E8010G316**	LB	3/16

MAINTENANCE – HARD FACING ELECTRODES

WELDCOTE 900

- 900 is a general purpose hard facing electrode with low hydrogen and high strength for high stress steel.
- The Rockwell range is 55-58 depending on the carbon content of the base metal.
- Used for severe abrasion and considerable impact.

Applications:

- 900 can be used for build-up and hardfacing on tractor rolls, cranes, bucket teeth, plowshares, drill bits and gears.
- The weld deposit is capable of resisting a variety of wear types ranging from metal to metal wear to severe abrasion.
- Use AC or DC straight polarity for highest buildups.

WELDCOTE 900 HARD SURFACING ELECTRODE		UPC #	Part #	U/M	Size
Weldcote 900 1/8 Hard Surfacing Electrode	4-10 lb. Tubes 40 lb. Carton	877511008852	**90018E**	LB	1/8
Weldcote 900 5/32 Hard Surfacing Electrode		877511008784	**900532E**	LB	5/32

WELDCOTE BUILD-UP HF-300

NEW

- Weldcote Build-Up HF-300 is highly used in the overlay and buildup on metals where moderate abrasion, severe impact and corrosion resistant is required.
- This electrode can be machined.
- It has Rockwell C hardness of 26-31.

Applications:

- Weldcote Build-Up HF-300 is used on tractor rollers, concrete mixer blades and sprockets.
- Use AC of DC straight polarity.

WELDCOTE BUILD-UP HF-300 LOW HYDROGEN TYPE ELECTRODE		UPC #	Part #	U/M	Size
Weldcote Build-Up HF-300 1/8 Electrode	4-10 lb. Tubes 40 lb. Carton	812922017628	**HF300118E**	LB	1/8
Weldcote Build-Up HF-300 5/32 Electrode		812922017635	**HF300532E**	LB	5/32
Weldcote Build-Up HF-300 3/16 Electrode		812922017642	**HF300316E**	LB	3/16

WELDCOTE HF-700 IRON POWDER TYPE ELECTRODE

NEW

- General purpose Hard Facing electrode. Hardness of RC 56-58 allows for good abrasion resistance along with the moderate impact resistance.
- Excellent Hard Facing electrode for low open circuit voltage AC welding machines.

WELDCOTE HF-700 IRON POWDER TYPE ELECTRODE		UPC #	Part #	U/M	Size
HF-700 1/8 Iron Powder Type Electrode	4-10 lb. Tubes 40 lb. Carton	812922017659	**HF70018E**	LB	1/8
HF-700 5/32 Iron Powder Type Electrode		812922017666	**HF700532E**	LB	5/32
HF-700 3/16 Iron Powder Type Electrode		812922017673	**HF700316E**	LB	3/16

WELDCOTE HF-800 AIR HARDENING TYPE ELECTRODE

NEW

- Hard Facing for severe abrasion light to medium impact and corrosion resistance.
- Rockwell C 58-62. Use AC/DC.

WELDCOTE HF-800 AIR HARDENING TYPE ELECTRODE		UPC #	Part #	U/M	Size
HF-800 1/8 Air Hardening Type Electrode	4-10 lb. Tubes 40 lb. Carton	812922017680	**HF80018E**	LB	1/8
HF-800 5/32 Air Hardening Type Electrode		812922017697	**HF800532E**	LB	5/32
HF-800 3/16 Air Hardening Type Electrode		812922017703	**HF800316E**	LB	3/16

WELDCOTE HF-900 MANGASESE WELD ELECTRODE

- Weldcote HF-900 is a hard facing electrode for buildup on manganese steel where heavy impact and severe abrasion is present.
- Rockwell C hardness is 50-55.

Applications:

- Weldcote HF-900 is used for repairing railroad switches, bucket teeth, rock crushers, mill hammers and bulldozer parts.
- Use AC of DC straight polarity.

WELDCOTE HR-900 MANGASESE WELD ELECTRODE		UPC #	Part #	U/M	Size
HF-900 1/8 Mangasese Weld Electrode	4-10 lb. Tubes 40 lb. Carton	812922017710	**HF90018E**	LB	1/8
HF-900 5/32 Mangasese Weld Electrode		812922017727	**HF900532E**	LB	5/32
HF-900 3/16 Mangasese Weld Electrode		812922017734	**HF900316E**	LB	3/16

HARDCOVER 450

AWS Classifications Hardfacing

- HARDCOVER 450 (HC450) is a hardfacing electrode well suited for metal to metal wear applications involving steel, manganese steel and cast iron.
- The weld deposits are very crack resistant and multiple layers are easily applied for thick build-ups.
- HC450 is intended for impact and moderate abrasion.

Applications

- Especially suited for metal wear applications involving steel, manganese steel and cast iron.
- Welding Current: AC – DCEN, Hardness 58 – 60 Rc.

HARDCOVER 450	NEW	UPC #	Part #	U/M	Size
HARDCOVER 450 1/8 Electrode	4-10 lb. Tubes 40 lb. Carton	812922017840	**HC45018E**	LB	1/8
HARDCOVER 450 5/32 Electrode		812922017857	**HC450532E**	LB	5/32
HARDCOVER 450 3/16 Electrode		812922017864	**HC450316E**	LB	3/16

HARDCOVER 470

AWS Classifications Hardfacing

- HARDCOVER 470 (HC470) is a chromium carbide electrode used in smooth overlays for protecting most iron base surfaces against severe abrasive wear and moderate impact.
- The microstructure of this alloy consists of austenitic alloy matrix and chromium/complex carbides.
- HC470 is specially formulated to totally eliminate the 'worm tracking' type porosity commonly found in this alloy group.

Applications

- Crusher jaws, hammers, bucket lips andteeth.
- Wear plates, pins, axles, shafts, cams, eccentrics.
- Welding Current: AC – DC, Hardness 55 – 60 Rc.

HARDCOVER 470	NEW	UPC #	Part #	U/M	Size
HARDCOVER 470 1/8 Electrode	4-10 lb. Tubes 40 lb. Carton	812922017871	**HC47018E**	LB	1/8
HARDCOVER 470 5/32 Electrode		812922017888	**HC470532E**	LB	5/32
HARDCOVER 470 3/16 Electrode		812922017895	**HC470316E**	LB	3/16

WELDCOTE ALUMITE

High Strength Fluxless Zinc Alloy Solder for Pot Metals, Zinc & Aluminum

Alumiteis a fluxless brazing rod for the fabrication, maintenance and repair of aluminum alloys, zinc die cast, pot metal and white metal. It is also an excellent general purpose high strength solder.

Applications:

Aluminum alloys, zinc die cast, pot metal and white metal such as machine bases and supports, housings, mounts, and can buildup and fill in areas. It can also be used as a high strength solder.

Procedure:

- Clean joint of as much residual debris, grease or other contaminants as possible. Break surface oxides by mechanical means (scratching, scraping, etc), bevel heavy sections and use fixtures or jigs to hold parts in alignment.
- With a slightly carburizing flame, heat the base metal to working temperature of the alloy taking care to keep the flame moving.
- Apply alloy by rubbing the rod against heated base metal. Do not heat the rod directly.
- Allow the part to cool before removing from fixtures.

WELDCOTE ALUMITE		UPC #	Part #	U/M	Size
Alumite 1/8	4-5 lb. Tubes 20 lb. Carton	877511007916	**ALUMITE18**	LB	1/8

WELDCOTE ALUMINUM - FLUX CORED

All Purpose Flux Cored Brazing Rod

Flux Cored Aluminum for Maintenance and Repair (Tubular aluminum rod) is an all-purpose brazing/braze welding alloy for oxy-acetylene applications to aluminum. Flux percentage is ideally calculated to optimize performance. Flux Cored Aluminum has a virtually seamless, closed tube, thus protecting the active flux core from the atmosphere.

Applications:

Flux Cored Aluminum is ideal for joining all brazable grades of aluminum sheet, plate, tubing, piping, extrusions, rods and wires. It can be used to repair brazable aluminum castings, filling in holes, building up worn or missing sections and joining cast to wrought parts. General purpose outdoor use on repairing aluminum skids, platforms, loading docks, truck bodies, irrigation piping, fences and railings whenever inert gas welding or shielded metal arc welding is impractical.

Procedure:

- Remove oxides and foreign material from weld area preferably by mechanical means (scraping, filing, etc). Bevel parts thicker than 3/16" to form a 60°vee.
- With the oxy/fuel torch adjusted to a slightly carburizing flame, heat work broadly to about 1000°F. Melt ¼" of the rod off onto the work piece (the flux will also turn to a liquid); continue heating until alloy flows out.
- Lower the angle of the torch; continue adding alloy a drop at a time until weld is complete.
- Allow part to cool slowly. Remove all flux residue with stiff brush and hot water.

WELDCOTE ALUMINUM		UPC #	Part #	U/M	Size
Flux-Cored Aluminum 1/8 × 32"	4-5 lb. Tubes 20 lb. Carton	877511007947	**FCALUM18**	LB	1/8

WELDCOTE CAST IRON ROD

Alloy Fusion Welding Rod

Cast Iron Rodis a high quality gray iron oxy-acetylene welding rod designed for gas welding of cast iron, general fabrication or buildup new or worn surfaces on castings. Cast Iron Rod produces machinable weld deposits that have the same color, composition and granular structure as the base metal (gray iron). The weld, if properly made, can be as strong as the original casting.

Applications:

For gas welding of cast iron in fabrication or buildup on new or worn surface on castings. Cast Iron rod is used to repair machine bases, manifolds, engine blocks, cylinder heads and gear housings.

Procedure:

- Bevel heavy sections to form a 75°vee. Always use a neutral flame to prevent porosity due to oxidation of carbon.
- Preheat part to 800°F before starting to weld. Heat rod end, dip in Weldcote Cast Iron Flux and transfer to weld area (fusion welding).
- Melt off a small amount of rod; continue heating until deposit flows out.
- Add filler metal a drop at a time making sure each deposit is fused to the base metal; use Weldcote Cast Iron flux for good cleaning and protection.
- After welding allow part to cool slowly to prevent hardening and cracking.

WELDCOTE CAST IRON		UPC #	Part #	U/M	Size
Cast Iron Rod for Oxy-Fuel 1/4 × 18"	4-10 lb. Tubes 40 lb. Carton	877511008395	**CASTIRON14X18L**	LB	1/4 × 18"
Cast Iron Flux	1 Pound Jar		**CASTIRONFLUX**	EA	1 Jar

WELDCOTE GALVANIZING SOLDER

Repairing Damaged Galvanized Materials

GALVINIZING SOLDER is a self-fluxing solder alloy for repairing damaged galvanized materials. It is very easy to apply and bonds to most metals. GALVINIZING-SOLDER will not peel or burn off and is superior to original galvanize.

It has an excellent resistance to corrosion.
Working temperature is about 600°F.

Applications:

GALVINIZING-SOLDER rust-proofs burned and/or damaged galvanized coatings on sheet, bar or pipe. It is an excellent filler metal on rusty auto or truck bodies and cabs rather than plastics; also on all applications where parts cannot be disassembled to take to galvanizing tanks. It is used in field pipeline welding to prevent corrosion of welded areas.

Procedure:

- No flux is required. Apply GALVINIZING-SOLDER while metal is still hot.
- A clean wire brush will aid in tinning the surface. It can also be tinned with a paddle or cloth.
- Do not direct a flame on the alloy. Rub the rod on the metal, when it melts the temperature is correct.

WELDCOTE GALVANIZING SOLDER		UPC #	Part #	U/M	Size
GALVINIZING-SOLDER 1/4 × 1/4 × 14"	4-5 lb. Tubes 20 lb. Carton	877511007756	**GALVSOLDER14**	LB	1/4 × 1/4 × 14"

TUNGSTEN ELECTRODES

Spec/Classification: AWS A5.12M 2009 / ASME SFA 5.12 ISO 6848

2% Thoriated (RED) EWTh-2 (principle oxide: 1.7-2.2% Thorium oxide)

Overall, best all purpose tungsten electrode. Best for use in Direct Current (D/C) applications using transformer based constant current power sources. Good D/C arc starts and stability, medium erosion rate, medium amperage range, medium tendency to spit. Best for use on non corroding steels, titanium alloys, nickel alloys, copper alloys.
For aluminum, electrically point tungsten by D/C Reverse Polarity.

Rare Earth (Turquoise) EWG (principle oxides: 1.5% Lanthanum, 0.08% Zirconium, 0.08% Yttrium oxides)

Best for automated or robotic applications in Alternating Current (A/C) pr Direct Current (D/C) due to low voltage tolerance (changes in tip to work piece distance) using inverter or transformer based constant current power sources. Very stable tip geometry runs cooler than 2% Lanthanated with longer life, low to medium amperage range. Best low amp starts. Good for low alloyed steels, non corroding steels, aluminum alloys, magnesium alloys, titanium alloys, nickel alloys, copper alloys.

PURE (GREEN) EWP/WP (principle oxide: None)

Good for use in Alternation Current (A/C) for aluminum alloys and magnesium alloys in low to medium amperage applications using transformer based constant current power sources only. Balls easy, tends to spit at higher amperages.

1.5% LANTHANATED (GOLD) EWLa-15 (principle oxide: 1.3-1.7% Lanthanum oxide)

Best for use in Direct Current (D/C) as an alternative to 2% Lanthanated using inverter or transformer based constant current power sources. Best D/C arc starts and stability, low erosion rate, wide amperage range, no spitting. Best for non corroding steels, titanium alloys, nickel alloys, copper alloys.

2% LANTHANATED (BLUE) EWLa-2 (principle oxide: 1.8-2.2% Lanthanum oxide)

Good for use in both Alternating Current (A/C) or Direct Current (D/C) applications using inverter or transformer based constant current power sources. Excellent arc starting, low burn off rate, good arc stability (even at lower voltages), excellent re-ignition and extends higher operating current range. Ideal for steel, stainless steels, low alloyed steels, aluminum alloys, magnesium alloys, titanium alloys, copper alloys and nickel alloys.

2% CERIATED (GRAY) EWCe-2(principle oxide: 1.8-2.2% Cerium Oxide)

Best for use in Alternating Current (A/C) or Direct Current (D/C) applications using inverter or transformer based constant current power sources. Good ignition and re-ignition properties, long service life, excellent arc stability. Low erosion rate, best at low amperage range, no spitting, good D/C arc starts and stability. Good for low-alloyed steels, non corroding steels aluminum alloys, magnesium alloys, titanium alloys nickel alloys, copper alloys.

0.3% Zirconiated (BROWN) EWZr-1 (principle oxide: 0.3% Zirconium oxide)

Best for Alternating Current (NC) for aluminum alloys and magnesium alloys using inverter or transformer based constant current power sources. Retains balled tip during welding and has a high resistance to contamination.
Better arc starts, stability and less spitting than pure.

TUNGSTEN ELECTRODE GUIDE

ISO 6848 Color Chart	10 Piece			3 Piece			
	Size	UPC #	Part #	UPC #	Part #	U/M	Size
RED	.040 × 7"	877511004359	**TUNG040X7X2TH**			PK	.040
2% Thoriated AWS A5.12 EWTh-2 ISO 6848 WT20	1/16" × 7"	877511004366	**TUNG116X7X2TH**	812922013460	**TUNG116X7X2TH3**	PK	1/16
	3/32" × 7"	877511004373	**TUNG332X7X2TH**	812922013477	**TUNG332X7X2TH3**	PK	3/32
	1/8" × 7"	877511004380	**TUNG18X7X2TH**	812922013484	**TUNG18X7X2TH3**	PK	1/8
	5/32" × 7"	877511005660	**TUNG532X7X2TH**			PK	5/32
	3/16" × 7"	812922010537	**TUNG316X7X2TH**			PK	3/16
TURQUOISE	1/16" × 7"	812922013330	**TUNG116X7RE**			PK	1/16
Rare Earth AWS A5.12 EWG ISO 6848	3/32" × 7"	812922013323	**TUNG332X7RE**	812922013477	**TUNG332X7RE3**	PK	3/32
	1/8" × 7"	812922013330	**TUNG18X7RE**	812922013484	**TUNG18X7RE3**	PK	1/8
GREEN	1/16" × 7"	877511004403	**TUNG116X7PURE**	8129220113378	**TUNG116X7PURE3**	PK	1/16
Pure Green AWS A5.12 EWP IS06848WP	3/32" × 7"	877511004410	**TUNG332X7PURE**	812922013385	**TUNG332X7PURE3**	PK	3/32
	1/8" × 7"	877511004427	**TUNG18X7PURE**	812922013392	**TUNG18X7PURE3**	PK	1/8
	5/32" × 7"	877511005653	**TUNG532X7PURE**			PK	5/32
GOLD	1/16" × 7"	877511004632	**TUNG116X7LAN15**			PK	1/16
1.5% Lanthanated AWS A5.12 EWLa-1.5 ISO 6848 WL15	3/32" × 7"	877511004649	**TUNG332X7LAN15**	812922016041	**TUNG332X7LAN153**	PK	3/32
	1/8" × 7"	877511004656	**TUNG18X7LAN15**			PK	1/8
BLUE	1/16" × 7"	812922016058	**TUNG116X7LAN2**	812922012449	**TUNG116X7LAN23**	PK	1/16
2% Lanthanated AWS A5.12 EWLa-2 ISO 6848 WL2	3/32" × 7"	812922016065	**TUNG332X7LAN2**	812922012425	**TUNG332X7LAN23**	PK	3/32
	1/8" × 7"	812922016072	**TUNG18X7LAN2**	812922012432	**TUNG18X7LAN23**	PK	1/8
GRAY	1/16 × 7"	877511005691	**TUNG116X7X2CER**			PK	1/16
2% Ceriated AWS A5.12 EWCe-2 ISO 6848 WC20	3/32 × 7"	877511005707	**TUNG332X7X2CER**	812922015259	**TUNG332X7X2CER3**	PK	3/32
	1/8" × 7"	877511005714	**TUNG18X7X2CER**	812922015266	**TUNG18X7X2CER3**	PK	1/8
	5/32" × 7"	877511005677	**TUNG532X7X2CER**			PK	5/32
BROWN	3/32" × 7"	812922015792	**TUNG332X7EWZR1**			PK	3/32
3% Zirconiated AWS A5.12 EWZr-1 ISO 6848 WZ3	1/8" × 7"	812922015808	**TUNG18X7EWZR1**			PK	1/8
8% Zirconiated AWS A5.12 EWZr-8	3/32" × 7"	812922015761	**TUNG332X7EWZR8**			PK	3/32
	1/8" × 7"	812922015778	**TUNG18X7EWZR8**			PK	1/8

HIGH SILVER ALLOYS

High Silver Alloys:

Weldcote Metals offers approximately 10 different high silver brazing alloys for joining most ferrous and nonferrous metals (excluding aluminum and magnesium). Weldcote high silver alloys are manufactured to the highest quality standards and from only the highestpurity raw materials, eliminating undesirable trace elements that can interfere with brazing operations. Weldcote Metals' high silver brazing alloys are meticulously formulated to provide maximum strength and corrosion resistance when joining stainless steel, copper alloys, nickel alloys, precious metals and any combination of these metals.

Bare or Flux-Coated:

- In brazing applications, capillary action is of primary importance. To promote capillary action to joints, surfaces must be cleaned of contaminants. In most cases, this is done by dipping the filler metal into a jar of paste flux before applying to the joint and heat source.
- In many cases the use of paste flux can be avoided by using one of Weldcote Metals' flux-coated silver brazing rods (E.g.. 45FCF116X18L).
- The extruded coating on these filler metals provides excellent cleansing action which promotes "wetting-in" and capillary flow. The coating is flexible, low-fuming and has a long shelf life.

WELDCOTE 35CF BRAZING ALLOY

Spec/Classification: AWS A5.8 Bag-35 / ASME SFA5.8 Bag-35

Weldcote 35CF is a cadmium free silver brazing alloy with a moderate melting range and frequently used in production brazing operations. Weldcote 35CF is commonly used to join any combinations of copper, brass, steel and bronze.

Nominal Composition (%):

	Ag	Cu	Zn	Others
Result (%)	34.0-36.0	31.0-33.0	31.0-35.0	0.15

Physical Data:

Solidus	1265°F (685°C)
Liquidus	1390°F (754°C)
Brazing Range	1390-1545°F (754-871°C)
Color	Yellow-Gold
Specific Gravity	9.03
Density (troy oz./cu.in.)	4.90
Electrical Conductivity (% of IACS)	19.5
Electrical Resistivity (Microhm-cm)	8.18

Available Sizes: Troy Ounce Coils of 1/16" and 3/32"

35% Bag-35		UPC #	Part #	U/M	Size
Weldcote "35CF" 1/16" × 3 troy oz coil	One Coil		**35CF116X3T0C**	EA	1/16
Weldcote "35CF" 1/16" × 5 troy oz coil **		877511005042	**35CF116X5T0C**	EA	1/16

*** while supplies last*

WELDCOTE 45CF BRAZING ALLOY

Spec/Classification: AWS A5.8 Bag-45 / ASME SFA5.8 Bag-45

Weldcote 45CF is a general purpose cadmium free silver brazing alloy with a wide melting range and widely used on many brazing operations. Weldcote 45CF is commonly used to join any combinations of copper, brass, steel and bronze.

Nominal Composition (%):

	Ag	Cu	Zn	Others
Result (%)	44.0-46.0	29.0-31.0	23.0-27.0	0.15

Physical Data:

Solidus	1225°F (663°C)
Liquidus	1370°F (743°C)
Brazing Range	1370-1550°F (743-843°C)
Color	Yellow White to Light Gold
Specific Gravity	9.11
Density (troy oz./cu.in.)	4.80
Electrical Conductivity (% of IACS)	19.0
Electrical Resistivity (Microhm-cm)	9.08

Available Sizes: Troy Ounce Coils of 1/32",3/64",1/16" & 3/32" Rods of 1/16" & 3/32"

45% Bag-5		UPC #	Part #	U/M	Size
Weldcote "45CF" 1/32" × 1 troy oz coil	One Coil	877511006926	**45CF132X1T0C**	EA	1/32
Weldcote "45CF" 1/32" × 3 troy oz coil		812922010681	**45CF132X3T0C**	EA	1/32
Weldcote "45CF" 1/32" × 5 troy oz coil		877511008012	**45CF132X5T0C**	EA	1/32
Weldcote "45CF" 3/64 × 1 troy oz coil **	One Coil	877511006957	**45CF364X1T0C**	T/O	1/16
Weldcote "45CF" 1/16" × 50 troy oz coil	One Coil	877511005141	**45CF116X50T0C**	T/O	1/16
Weldcote "45CF" 1/16" × 1 troy oz coil		877511005158	**45CF116X1T0C**	EA	1/16
Weldcote "45CF" 1/16" × 3 troy oz coil		877511005165	**45CF116X3T0C**	EA	1/16
Weldcote "45CF" 1/16" × 5 troy oz coil		877511005172	**45CF116X5T0C**	EA	1/16
Weldcote "45CF" 1/16" × 18" length 15 t/o	One Tube	877511005189	**45CF116X18L15T0**	T/O	1/16
Weldcote "45CF" 3/32" × 1 troy oz coil	One Coil	877511005219	**45CF332X1T0C**	EA	3/32
Weldcote "45CF" 3/32" × 3 troy oz coil		877511005226	**45CF332X3T0C**	EA	3/32
Weldcote "45CF" 3/32" × 5 troy oz coil		877511005233	**45CF332X5T0C**	EA	3/32
Weldcote "45CF" 3/32" × 18" length 15 t/o	One Tube	877511005240	**45CF332X18L15T0**	T/O	3/32
Weldcote "45CF" 3/32" × 36" length 50 t/o	One Carton	877511008258	**45CF332X36L50T0**	T/O	3/32
Weldcote "45CF" 1/8" × 50 troy oz coil	One Coil	877511007299	**45CF18X50T0C**	T/O	1/8

45% Bag-5 Flux-Coated		UPC #	Part #	U/M	Size
Weldcote "45CF" 1/16" × 18" length	One tube	877511005196	**45FCF116X18L**	LB	1/16
Weldcote "45CF" 1/16" × 18" length 4oz		877511006636	**45FCF116X18L4**	EA	1/16
Weldcote "45CF" 3/32" × 18" length		877511005257	**45FCF332X18L**	LB	3/32
Weldcote "45CF" 3/32" × 18" length 4oz		877511006643	**45FCF332X18L4**	EA	3/32

*** while supplies last*

WELDCOTE 50NCF BRAZING ALLOY

Spec/Classification: AWS A5.8 Bag-24 / ASME SFA5.8 Bag-24

Weldcote 50NCF is a cadmium free silver brazing alloy with nickel and the lowest working temperature in the cad-free nickel family which has great flow, wetting, ductility and penetration.

Weldcote 50NCF is commonly used to join any combination of copper, brass,steel, bronze, carbide tips and stainless steel. The addition of nickel improves the corrosion resistance needed with stainless and nickel alloys while minimizing stress corrosion cracking as well as interface corrosion.

Nominal Composition (%):

	Ag	Cu	Zn	Ni	Others
Result (%)	49.0-51.0	19.0-21.0	26.0-30.0	1.5-2.5	0.15

Physical Data:

Solidus	1220°F (660°C)
Liquidus	1305°F (707°C)
Brazing Range	1305-1550°F (710-843°C)
Color	White-Yellow to Light Gold
Specific Gravity	9.17
Density (troy oz./cu.in.)	4.80
Electrical Conductivity (% of IACS)	18.5
Electrical Resistivity (Microhm-cm)	11.85

Available Sizes: Troy Ounce Coils of 1/16" and 3/32"

50%N Bag-24		UPC #	Part #	U/M	Size
Weldcote "50NCF" 1/16" × 50 troy oz coil	One Coil	877511005097	**50NCF116X50T0C**	T/O	1/16
Weldcote "50NCF" 1/16" × 1 troy oz coil		877511005103	**50NCF116X1T0C**	EA	1/16
Weldcote "50NCF" 1/16" × 3 troy oz coil		877511005110	**50NCF116X3T0C**	EA	1/16
Weldcote "50NCF" 1/16" × 5 troy oz coil		877511005127	**50NCF116X5T0C**	EA	1/16

WELDCOTE 56CF BRAZING ALLOY

Spec/Classification: AWS A5.8 Bag-7 / ASME SFA5.8 Bag-7

Weldcote 56CF is a cadmium free silver brazing alloy with a narrow melting range and the lowest working temperature in the cad-free family yielding premium flow, wetting, ductility and penetration. Weldcote 56CF is commonly used to join any combinations of copper, brass, steel, bronze and stainless steel. This alloy is a great choice for food handling equipment and color match on stainless and nickel alloys while minimizing stress corrosion cracking.

Physical Data:

Solidus	1145°F (618°C)
Liquidus	1205°F (652°C)
Brazing Range	1205-1400°F (652-760°C)
Color	White to Light Gold
Specific Gravity	9.47
Density (troy oz./cu.in.)	5.00
Electrical Conductivity (% of IACS)	20.5
Electrical Resistivity (Microhm-cm)	9.58

Nominal Composition (%):

	Ag	Cu	Zn	Sn	Others
Result (%)	55.0-57.0	21.0-23.0	15.0-19.0	4.5-5.5	0.15

Available Sizes: Troy Ounce Coils of 1/32", 3/64", 1/16" & 3/32" Rods of 1/16" & 3/32"

56% Bag-7		UPC #	Part #	U/M	Size
Weldcote "56CF" 1/32" × 1 troy oz coil	One Coil	877511006964	**56CF132X1T0C**	EA	1/32
Weldcote "56CF" 1/32" × 3 troy oz coil		812922010698	**56CF132X3T0C**	EA	1/32
Weldcote "56CF" 1/32" × 5 troy oz coil		812922010704	**56CF132X5T0C**	EA	1/32
Weldcote "56CF" 3/64" × 1 troy oz coil	One Coil	877511006995	**56CF364X1T0C**	EA	3/64
Weldcote "56CF" 1/16" × 1 troy oz coil	One Coil	877511005271	**56CF116X1T0C**	EA	1/16
Weldcote "56CF" 1/16" × 3 troy oz coil		877511005288	**56CF116X3T0C**	EA	1/16
Weldcote "56CF" 1/16" × 5 troy oz coil		877511005295	**56CF116X5T0C**	EA	1/16
Weldcote "56CF" 1/16" × 18" length 15 t/o	One tube	877511005301	**56CF116X18L15T0**	T/O	1/16
Weldcote "56CF" 1/16" × 36" length 50 t/o	One carton	877511008234	**56CF116X36L50T0**	T/O	1/16
Weldcote "56CF" 3/32" × 1 troy oz coil	One Coil	877511005332	**56CF332X1T0C**	EA	3/32
Weldcote "56CF" 3/32" × 3 troy oz coil		877511005349	**56CF332X3T0C**	EA	3/32
Weldcote "56CF" 3/32" × 5 troy oz coil		877511005356	**56CF332X5T0C**	EA	3/32

56% Bag-7 Flux-Coated		UPC #	Part #	U/M	Size
Weldcote "56CF" 1/16" × 18" length	One tube	877511005318	**56FCF116X18L**	LB	1/16
Weldcote "56CF" 1/16" × 18" length 4oz		877511006650	**56FCF116X18L4**	EA	1/16
Weldcote "56CF" 3/32" × 18" length		877511005370	**56FCF332X18L**	LB	3/32
Weldcote "56CF" 3/32" × 18" length 4oz		877511006667	**56FCF332X18L4**	EA	3/32

SILVER BRAZING ALLOYS

WELDCOTE "0" (BCuP-2) BRAZING ALLOY

Spec/Classification: AWS A5.8M BCuP-2 / ASME SFA5.8 BCuP-2

Weldcote 0 (BCuP-2 Phos-Copper Silver 0%) is a Phos-Copper brazing alloy formulated to join copper, brass and bronze. This alloy is commonly used where there is a close or controlled fit up. Weldcote brazing flux is needed when working on brazable grades of brass or bronze.

Phos-Copper alloys are self-fluxing on copper but should not be used on copper alloys containing more than 10% nickel, steels and ferrous metals or in any sulfurous atmospheres. Aluminum bronze requires the use of aluminum bronze brazing flux.

Nominal Composition (%):

	P	Cu	Others
Result (%)	7.0-7.5	Balance	0.15

Physical Data:

Solidus	1310°F (710°C)
Liquidus	1460°F (793°C)
Brazing Range	1350-1500°F (732-816°C)
Color	Bright Copper
Specific Gravity	8.13
Density (troy oz./cu.in.)	0.287
Electrical Conductivity (% of IACS)	8.5
Electrical Resistivity (Microhm-cm)	21.5

Available Sizes: 20" Rods of 1/16", 3/32", 1/8" and .050 × 1/8"

BCuP-2 | 25# Bulk Packaging		UPC #	Part #	U/M	Size
Weldcote "0" 1/16 × 20" Bulk	One Carton	877511005387	**0116X20L**	LB	1/16
Weldcote "0" 3/32 × 20" Bulk		877511005400	**0332X20L**	LB	3/32

BCuP-2 | 1# Plastic Tube		UPC #	Part #	U/M	Size
Weldcote "0" 1/16 × 20" 1# Tube	One Tube	877511005394	**0116X20L1**	LB	1/16
Weldcote "0" 3/32 × 20" 1# Tube		877511005417	**0332X20L1**	LB	3/32
Weldcote "0" 1/8 × 20" 1# Tube		877511005431	**018X20L1**	LB	1/8
Weldcote "0" .050 × 1/8 × 20" 1# Tube		877511005455	**0050X18X20L1**	LB	.050 × 1/8

WELDCOTE "2" (BCuP-6) BRAZING ALLOY

Spec/Classification: AWS A5.8A5.8M BCuP-6 / ASME SFA5.8 BCuP-6

Weldcote 2 (BCuP-6 Phos-Copper Silver 2%) is a Phos-Copper brazing alloy formulated to join copper, brass and bronze. This alloy is commonly used where there is a close or controlled fit up of .003" to .005".

Weldcote brazing flux is needed when working on brazable grades of brass or bronze. Phos-Copper alloys are self-fluxing on copper but should not be used on copper alloys containing more than 10% nickel, steels and ferrous metals or in any sulfurous atmospheres. Aluminum bronze requires the use of aluminum bronze brazing flux.

Nominal Composition (%):

	P	Cu	Ag	Others
Result (%)	7.0-7.5	Balance	1.8-2.2	0.15

Physical Data:

Solidus	1190°F (643°C)
Liquidus	1450°F (790°C)
Brazing Range	1350-1500°F (732-816°C)
Color	Bright Copper
Specific Gravity	8.02
Density (troy oz./cu.in.)	0.350
Electrical Conductivity (% of IACS)	8.3
Electrical Resistivity (Microhm-cm)	22.5

Available Sizes: 20" Rods of .050" × 1/8"

BCuP-6 Phos-Copper Silver 2%		UPC #	Part #	U/M	Size
Weldcote "2" .050 × 1/8 × 20" 1# Tube	One Tube	877511008298	**2050X18X20L1**	LB	.050 × 1/8
Weldcote "2" .050 × 1/8 × 20" Bulk **			**2050X18X20L**	LB	.050 × 1/8

*** while supplies last*

WELDCOTE "5" (BCuP-3) BRAZING ALLOY

Spec/Classification: AWS A5.8A5.8M BCuP-3 / ASME SFA5.8 BCuP-3

Weldcote 5 (BCuP-3 Phos-Copper Silver 5%) is a phos-copper brazing alloy formulated to join copper, brass and bronze. This alloy may be used where joint clearance is wider than desired and will full moderate size gaps. Weldcote brazing flux is needed when working on brazablegrades of brass or bronze. Phos-copper alloys are self-fluxing on copper but should not be used on copper alloys containing more than 10% nickel, steels, and ferrous metals or in any sulfurous atmospheres. Aluminum bronze requires the use of aluminum bronze brazing flux.

Nominal Composition (%):

	P	Cu	Ag	Others
Result (%)	5.8-6.2	Balance	4.8-5.2	0.15

Physical Data:

Solidus	1190°F (643°C)
Liquidus	1450°F (790°C)
Brazing Range	1350-1500°F (732-816°C)
Color	Bright Copper
Specific Gravity	8.02
Density (troy oz./cu.in.)	0.350
Electrical Conductivity (% of IACS)	8.3
Electrical Resistivity (Microhm-cm)	22.5

Available Sizes: 20" Rods of 1/16", 1/8" and .050" × 1/8"

BCuP-3 | 1# Plastic Tube		UPC #	Part #	U/M	Size
Weldcote "5" 1/16 × 20" 1# Tube	One Tube	877511005479	**5116X20L1**	LB	1/16
Weldcote "5" 3/32 × 20" 1# Tube		877511005493	**5332X20L1**	LB	3/32
Weldcote "5" 1/8 × 20" 1# Tube		877511005516	**518X20L1**	LB	1/8
Weldcote "5" .050 × 1/8" × 1# Tube		877511005530	**5050X18X20L1**	LB	.050 × 1/8

WELDCOTE "6" (BCuP-4) BRAZING ALLOY

Spec/Classification: AWS A5.8A5.8M BCuP-4 / ASME SFA5.8 BCuP-4

Weldcote 6 (BCuP-4 Phos-Copper Silver 6%) is a Phos-Copper brazing alloy formulated to join copper, brass and bronze. This alloy is commonly used where there is a close or controlled fit up of .001" to .005". Weldcote brazing flux is needed when working on brazablegrades of brass or bronze. Phos-Copper alloys are self-fluxing on copper but should not be used on copper alloys containing more than 10% nickel, steels and ferrous metals or in any sulfurous atmospheres. Aluminum bronze requires the use of aluminum bronze brazing flux.

Nominal Composition (%):

	P	Cu	Ag	Others
Result (%)	5.2-5.6	Balance	5.8-6.2	0.15

Physical Data:

Solidus	1190°F (643°C)
Liquidus	1325°F (730°C)
Brazing Range	1325-1500°F (730-816°C)
Color	Bright Copper
Specific Gravity	8.02
Density (troy oz./cu.in.)	0.350
Electrical Conductivity (% of IACS)	8.3
Electrical Resistivity (Microhm-cm)	22.5

Available Sizes: 20" Rods of .050" × 1/8"

BCuP-4 Phos-Copper Silver 6%		UPC #	Part #	U/M	Size
Weldcote "6" .050 × 1/8 × 20" 1# Tube	One Tube	877511008272	**6050X18X20L1**	LB	.050 × 1/8

WELDCOTE "15" (BCuP-5) BRAZING ALLOY

Spec/Classification: AWS A5.8A5.8M BCuP-5 / ASME SFA5.8 BCuP-5

Weldcote 15 (BCuP-5 Phos-Copper Silver 5%) is a phos-copper brazing alloy formulated to join copper, brass and bronze. This alloy is the standard of the industry for many air conditioning and refrigeration applications as well as electrical. Weldcote brazing flux is needed when working on brazable grades of brass or bronze. Phos-copper alloys are self-fluxing on copper but should not be used on copper alloys containing more than 10% nickel, steels, and ferrous metals or in any sulfurous atmospheres. Aluminum bronze requires the use of aluminum bronze brazing flux.

Nominal Composition (%):

	P	Cu	Ag	Others
Result (%)	4.8-5.2	Balance	14.5-15.5	0.15

Physical Data:

Solidus	1190°F (643°C)
Liquidus	1475°F (802°C)
Brazing Range	1300-1500°F (704-816°C)
Color	Bright Silver Copper
Specific Gravity	8.44
Density (troy oz./cu.in.)	0.301
Electrical Conductivity (% of IACS)	9.91
Electrical Resistivity (Microhm-cm)	17.38

Available Sizes: 20" Rods of 1/16", 3/32", 1/8" and .050" × 1/8"

BCuP-3	1# Plastic Tube		UPC #	Part #	U/M	Size
Weldcote "15" 1/16 × 20" 1# Tube		One Tube	877511005479	**15116X20L1**	LB	1/16
Weldcote "6" 3/32 × 20" 1# Tube			877511005578	**15332X20L1**	LB	3/32
Weldcote "15" 1/8 × 20" 1# Tube			877511005592	**1518X20L1**	LB	1/8
Weldcote "15" .050 × 1/8 × 20" 1# Tube			877511005615	**15050X18X20L1**	LB	.050 × 1/8

SILVER BEARING SOLDERS

WELDCOTE 96/4 SIL-BRITE (96% Tin / 4% Silver)

Spec/Classification: Manufactured to J-STD-006, ASTM-B32 Alloy Grand Sn96, NSF51 and QQ-S-571F

Weldcote 96/4 has excellent strength with high elongation and vibration resistance for sound joints in many applications. 96/4 has a low melting temperature and bonds with all the ferrous and non-ferrous alloys including stainless, nickel, copper tubing, brass, etc. This alloy will prevent distortion and loss of your base metal properties. For use on copper tubing, it will result in a stronger overall finished assembly than the typical braze alloys. This solder is used where solder joints require added strength: E.g. Air conditioning industry. Used in applications where the joint is under stress from physical tension or a pressurized environment.

Applications:

HVAC, Plumbing, Jewelry and Handyman repair service.

Nominal Composition (%):

	Ag	Sn
Result (%)	3.5-4.5	Balance

Physical Data:

Solidus	430°F (221°C)
Liquidus	475°F (246°C)
Electrical Conductivity	16.5 IACS
Color	Bright Silver
Elongation	49%
Density	7.40 g/cm^3
Tensile Strength	14,000 psi
Shear Strength	11,000 psi

Available Sizes: 1 Pound Spool - Diameters 1/16", 1/8" • 5 Pound Spool - Diameter 1/8"

WELDCOTE 96/4 (96% Tin / 4% Silver)		UPC #	Part #	U/M	Size
96/4 Solder 1/16 × 1# Spool	One Spool	877511007817	**964116X1SP**	LB	1/16
96/4 Solder 1/8 × 1# Spool		877511007831	**96418X1SP**	LB	1/8
96/4 Solder 1/8 × 5# Spool		877511007848	**96418X5SP**	LB	1/8

WELDCOTE 94/6 SIL-BRITE (94% Tin / 6% Silver)

Spec/Classification: Manufactured to J-STD-006, ASTM-B32 Alloy Grand Sn96, NSF51 and QQ-S-571F

Weldcote 94/6 has excellent strength with high elongation and vibration resistance for sound joints in many applications. 94/6 has a low melting temperature and bonds with all the ferrous and non-ferrous alloys including stainless, nickel, copper tubing, brass, etc. This alloy will prevent distortion and loss of your base metal properties. For use on copper tubing, it will result in a stronger overall finished assembly than the typical braze alloys. 94/6 solder is used in applications in the jewelry industry, plumbing, food service equipment andrepair. Solders well to stainless and used in applications where a stronger joint is required.

Applications:

HVAC, Plumbing, Jewelry and Handyman repair service.

Nominal Composition (%):

	Ag	Sn
Result (%)	5.4-6.0	Balance

Physical Data:

Solidus	430°F (221°C)
Liquidus	536°F (280°C)
Electrical Conductivity	17.0 IACS
Color	Bright Silver
Elongation	49%
Density	7.47 g/cm^3
Tensile Strength	15,000 psi
Shear Strength	13,000 psi

Available Sizes: 1 Pound Spool - Diameters 1/16", 3/32" & 1/8" • 5 Pound Spool - Diameter 1/8"

WELDCOTE 94/6 (94% Tin / 6% Silver)		UPC #	Part #	U/M	Size
94/6 Solder 1/16 × 1# Spool	One Spool	877511007855	**946116X1SP**	LB	1/16

WELDCOTE SOLDERS

WELDCOTE 40/60 (Tin/Lead Solid Core)

Spec/Classification: Manufactured to J-STD-006, ASTM-B32 Alloy Grand Sn-40A and QQ-S-571F

Weldcote 40/60 Tin/Lead Solid Solder can be used to solder copper and most copper alloys, lead, nickel alloys and steel.

The 40/60 solder is a general purpose solder used for non-electrical applications. It is used for applications in the sheet metal, stained glass,galvanized gutters and radiator repair industries.
If used for electrical applications use with general purpose paste flux.

The tin-lead solders are not recommended in high stress or vibration joints in the cooling industry due to the lack of sufficient elongation properties. This product contains lead and should not be used in potable water systems.

Nominal Composition (%):

	Sn	Pb
Result (%)	39.5-41.5	Balance

Physical Data:

Solidus	362°F (183°C)
Liquidus	460°F (238°C)
Electrical Conductivity	43.6 (W/m-K)
Electrical Resistivity	166 (10^9 ohm-m)
Color	Silver
Elongation	25%
Density	9.34 g/cm^3
Tensile Strength	6,320 psi
Shear Strength	5,680 psi

Available Sizes:

1 Pound Bar • 1 Pound Spool - Diameters 1/16", 3/32" & 1/8" • 5 Pound Spool - Diameter 1/8"

WELDCOTE 40/60 (Tin/Lead Solid)		UPC #	Part #	U/M	Size
40/60 Solder 1# Bar **	One Bar		**40601BAR**		1# Bar
40/60 Solder 1/16 × 1# Spool	One Spool	877511007312	**4060116X1SP**	LB	1/16
40/60 Solder 3/32 × 1# Spool		877511007329	**4060332X1SP**	LB	3/32
40/60 Solder 1/8 × 1# Spool		877511007336	**406018X1SP**	LB	1/8
40/60 Solder 1/8 × 5# Spool		877511007343	**406018X5SP**	LB	1/8

*** while supplies last*

WELDCOTE 40/60 (Tin/Lead Acid Core)

Spec/Classification: Manufactured to J-STD-006, ASTM-B32 Alloy Grand Sn-40A Tayp WOAP-2, and QQ-S-571F

Weldcote 40/60 Tin/Lead Acid Core Solder contains a 2.30 –3.20% acid core. Acid core solders are used for soldering materials with poor solderability (steels, zinc, heavy oxidized nickel, aluminum, etc.). With some exceptions, tin-lead solders can be used to solder copper and most copper alloys, lead, nickel alloys and steel.

The 40/60 acid core solder is a general purpose solder used for non-electrical applications. It is used for applications in the sheet metal, stained glass, galvanized gutters, and radiator repair industries. The tin-lead solders are not recommended in high stress or vibration joints in the cooling industry due to the lack of sufficient elongation properties. This product contains lead and should not be used in potable water systems.

Nominal Composition (%):

	Sn	Pb
Result (%)	39.5-41.5	Balance

Physical Data:

Solidus	362°F (183°C)
Liquidus	460°F (238°C)
Electrical Conductivity	43.6 (W/m-K)
Electrical Resistivity	166 (10^9 ohm-m)
Color	Silver
Elongation	25%
Density	9.34 g/cm^3
Tensile Strength	6,320 psi
Shear Strength	5,680 psi

Available Sizes:

1 Pound Bar • 1 Pound Spool - Diameters 1/16", 3/32" & 1/8" • 5 Pound Spool - Diameter 1/8"

WELDCOTE 40/60 (Tin/Lead Acid Core)		UPC #	Part #	U/M	Size
40/60 Acid Core 1/16 × 1# Spool	One Spool	877511007350	**4060AC116X1SP**	LB	1/16
40/60 Acid Core 3/32 × 1# Spool		877511007367	**4060AC332X1SP**	LB	3/32
40/60 Acid Core 1/8 × 1# Spool		877511007374	**4060AC18X1SP**	LB	1/8
40/60 Acid Core 1/8 × 5# Spool		877511007381	**4060AC18X5SP**	LB	1/8

WELDCOTE 40/60 (Tin/Lead Rosin Core)

Spec/Classification: Manufactured to J-STD-006, ASTM-B32 Alloy Grand Sn-40A Tayp WOAP-2, and QQ-S-571F

Weldcote 40/60 Tin/Lead Rosin Core Solder contains a 2.30-3.20% rosin core. Rosin core solders are used in applications where you are soldering to metals that are fair to excellent in solderability: coppers, brass, bronze and nickels. With some exceptions, tin-lead solders can be used to solder copper and most copper alloys, lead, nickel alloys and steel.

The 40/60 rosin core solder is a general purpose solder used for electrical applications. It is used for applications in the sheet metal, stained glass, galvanized gutters and radiator repair industries. The tin-lead solders are not recommended in high stress or vibration joints in the cooling industry due to lack of sufficient elongation properties. This product contains lead and should not be used in potable water systems.

Physical Data:

Solidus	362°F (183°C)
Liquidus	460°F (238°C)
Electrical Conductivity	43.6 (W/m-K)
Electrical Resistivity	166 (10^9 ohm-m)
Color	Silver
Elongation	25%
Density	9.34 g/cm^3
Tensile Strength	6,320 psi
Shear Strength	5,680 psi

Nominal Composition (%):

	Sn	Pb
Result (%)	39.5-41.5	Balance

Available Sizes:

1 Pound Bar • 1 Pound Spool - Diameters 1/16", 3/32" & 1/8" • 5 Pound Spool - Diameter 1/8"

WELDCOTE 40/60 (Tin/Lead Rosin Core)		UPC #	Part #	U/M	Size
40/60 Rosin Core 1/16 × 1# Spool	One Spool	877511007398	**4060RC116X1SP**	LB	1/16
40/60 Rosin Core 3/32 × 1# Spool		877511007404	**4060RC332X1SP**	LB	3/32
40/60 Rosin Core 1/8 × 1# Spool		877511007411	**4060RC18X1SP**	LB	1/8
40/60 Rosin Core 1/8 × 5# Spool **			**4060RC18X5SP**		

*** while supplies last***

WELDCOTE 50/50 (Tin/Lead Solid Core)

Spec/Classification: Manufactured to J-STD-006, ASTM-B32 Alloy Grand Sn-50 and QQ-S-571F

Weldcote 50/50 Tin/Lead Solid Solder can be used to solder copper and most copper alloys, lead, nickel alloys and steel. The 50/50 solder is a general purpose solder used for non-electrical applications.

It is used for applications in the sheet metal, stained glass, galvanized gutters, and radiator repair industries.

The tin-lead solders are not recommended in high stress or vibration joints in the cooling industry due to the lack of sufficient elongation properties. This product contains lead and should not be used in potable water systems.

Physical Data:

Solidus	362°F (183°C)
Liquidus	420°F (215°C)
Electrical Conductivity	47.8 (W/m-K)
Electrical Resistivity	153 (10^9 ohm-m)
Color	Silver
Elongation	35%
Density	8.91 g/cm^3
Tensile Strength	6,450 psi
Shear Strength	5,840 psi

Nominal Composition (%):

	Sn	Pb
Result (%)	50.0	50.0

Available Sizes: 1 Pound Bar • 1 Pound Spool - Diameters 1/16", 3/32" & 1/8" • 5 Pound Spool - Diameter 1/8" • Tri-Bar - 7/16" × 20" Approximately Weighs .55 to .60 lbs.

WELDCOTE 50/50 (Tin/Lead Solid)		UPC #	Part #	U/M	Size
50/50 Bar Solder 1# Bar	One Bar	877511007435	**50501BAR**	LB	1# Bar
50/50 Solder 1/16 × 1# Spool	One Spool	877511007442	**5050116X1SP**	LB	1/16
50/50 Solder 3/32 × 1# Spool		877511007459	**5050332X1SP**	LB	3/32
50/50 Solder 1/8 × 1# Spool		877511007466	**505018X1SP**	LB	1/8
50/50 Solder 1/8 × 5# Spool		877511007473	**505018X5SP**	LB	1/8
50/50 Tri Bar	One Bar	877511007480	**5050TRIBAR**	LB	7/16 × 20"

WELDCOTE 50/50 (Tin/Lead Acid Core)

Spec/Classification: Manufactured to J-STD-006, ASTM-B32 Alloy Grand Sn-50 Tayp WOAP-2, and QQ-S-571F

Weldcote 50/50 Tin/Lead Acid Core Solder contains a 2.30-3.20% acid core. Acid core solders are used for soldering materials with poor solderability: steels, zinc, heavily oxidized nickel, aluminum, etc. With some exceptions, tin-lead solders can be used to solder copper and most copper alloys, lead, nickel alloys and steel.

The 50/50 acid core solder is a general purpose solder used for non-electrical applications. It is used for applications in the sheet metal, stained glass, galvanized gutters, and radiator repair industries. The tin-lead solders are not recommended in high stress or vibration joints in the cooling industry due to the lack of sufficient elongation properties. Thisproduct contains lead and should not be used in potable water systems.

Nominal Composition (%):

	Sn	Pb
Result (%)	50.0	50.0

Physical Data:

Solidus	362°F (183°C)
Liquidus	460°F (238°C)
Electrical Conductivity	47.8 (W/m-K)
Electrical Resistivity	153 (10^9ohm-m)
Color	Silver
Elongation	35%
Density	8.91 g/cm^3
Tensile Strength	6,450 psi
Shear Strength	5,840 psi

Available Sizes: 1 Pound Bar • 1 Pound Spool - Diameters 1/16", 3/32" & 1/8" • 5 Pound Spool - Diameter 1/8" • Tri-Bar - 7/16" × 20" Approximately Weighs .55 to .60 lbs.

WELDCOTE 50/50 (Tin/Lead Acid Core)		UPC #	Part #	U/M	Size
50/50 Acid Core 1/16 × 1# Spool	One Spool	877511007497	**5050AC116X1SP**	LB	1/16
50/50 Acid Core 3/32 × 1# Spool		877511007503	**5050AC332X1SP**	LB	3/32
50/50 Acid Core 1/8 × 1# Spool		877511007510	**5050AC18X1SP**	LB	1/8
50/50 Acid Core 1/8 × 5# Spool		877511007527	**5050AC18X5SP**	LB	1/8

WELDCOTE 50/50 (Tin/Lead Rosin Core)

Spec/Classification: Manufactured to J-STD-006, ASTM-B32 Alloy Grand Sn-50 Tayp WOAP-2, and QQ-S-571F

Weldcote 50/50 Tin/Lead Rosin Core Solder contains a 2.30-3.20% rosin core. Rosin core solders are used in applications where you are soldering to metals that are fair to excellent in solderability: coppers, brass, bronze and nickels. With some exceptions, tin-lead solders can be used to solder copper and most copper alloys, lead, nickel alloys and steel. The 50/50 rosin core solder is a general purpose solder used for electrical applications.

It is used for applications in the sheet metal, stained glass, galvanized gutters, and radiatorrepair industries. The tin-lead solders are not recommended in high stress or vibration joints in the cooling industry due to the lack of sufficient elongation properties. This product contains lead and should not be used in potable water systems.

Nominal Composition (%):

	Sn	Pb
Result (%)	50.0	50.0

Physical Data:

Solidus	362°F (183°C)
Liquidus	460°F (238°C)
Electrical Conductivity	47.8 (W/m-K)
Electrical Resistivity	153 (10^9ohm-m)
Color	Silver
Elongation	35%
Density	8.91 g/cm^3
Tensile Strength	6,450 psi
Shear Strength	5,840 psi

Available Sizes: 1 Pound Bar • 1 Pound Spool - Diameters 1/16", 3/32" & 1/8" • 5 Pound Spool - Diameter 1/8" • Tri-Bar - 7/16" × 20" Approximately Weighs .55 to .60 lbs.

WELDCOTE 50/50 (Tin/Lead Rosin Core)		UPC #	Part #	U/M	Size
50/50 Rosin Core 1/16 × 1# Spool	One Spool	877511007534	**5050RC116X1SP**	LB	1/16
50/50 Rosin Core 3/32 × 1# Spool		877511007541	**5050RC332X1SP**	LB	3/32
50/50 Rosin Core 1/8 × 1# Spool		877511007558	**5050RC18X1SP**	LB	1/8

WELDCOTE 60/40 (Tin/Lead Solid Core)

Spec/Classification: Manufactured to J-STD-006, ASTM-B32 Alloy Grand Sn-60 and QQ-S-571F

Weldcote 60/40 Tin/Lead Solid Solder is used extensively for electrical applications with general purpose paste flux.

With some exceptions, tin-lead solders canbe used to solder copper and most copper alloys, lead, nickel alloys and steel.

The 60/40 solder is also used for wave dip soldering on electrical assemblies where lower temperatures are required. The tin-lead solders are not recommended in high stress or vibration joints inthe cooling industry due to the lack of sufficient elongation properties. This product contains lead and should not be used in potable watersystems.

Nominal Composition (%):

	Sn	Pb
Result (%)	59.5-61.5	Balance

Physical Data:

Solidus	362°F (183°C)
Liquidus	375°F (190°C)
Electrical Conductivity	49.8 (W/m-K)
Electrical Resistivity	145 (10^9 ohm-m)
Color	Silver
Elongation	40%
Density	8.67 g/cm^3
Tensile Strength	6,400 psi
Shear Strength	5,700 psi

Available Sizes:

1 Pound Bar • 1 Pound Spool - Diameters 1/16", 3/32" & 1/8" • 5 Pound Spool - Diameter 1/8"

WELDCOTE 60/40 (Tin/Lead Solid)		UPC #	Part #	U/M	Size
60/40 Bar Solder 1# Bar	One Bar	877511007572	**60401BAR**	LB	1# Bar
60/40 Solder 1/16 × 1# Spool	One Spool	877511007589	**6040116X1SP**	LB	1/16
60/40 Solder 3/32 × 1# Spool		877511007596	**6040332X1SP**	LB	3/32
60/40 Solder 1/8 × 1# Spool		877511007602	**604018X1SP**	LB	1/8
60/40 Solder 1/8 × 5# Spool		877511007619	**604018X5SP**	LB	1/8

WELDCOTE 60/40 (Tin/Lead Acid Core)

Spec/Classification: Manufactured to J-STD-006, ASTM-B32 Alloy Grand Sn-60 Tayp WOAP-2, and QQ-S-571F

Weldcote 60/40 Tin/Lead Acid Core Solder contains a 2.30-3.20% acid core. Acid core solders are used for soldering materials with poor solderability: steels, zinc, heavily oxidized nickel aluminum, etc. With some exceptions, tin-lead solders can be used to soldercopper and most copper alloys, lead, nickel alloys and steel.

The acid core solders are not recommended for electrical applications due to corrosive properties of the flux residue.

The tin-lead solders are not recommended in high stress or vibration joints in the cooling industry due to the lack of sufficient elongation properties. This product contains lead and should not be used in potable water systems.

Nominal Composition (%):

	Sn	Pb
Result (%)	59.5-61.5	Balance

Physical Data:

Solidus	362°F (183°C)
Liquidus	375°F (190°C)
Electrical Conductivity	49.8 (W/m-K)
Electrical Resistivity	145 (10^9 ohm-m)
Color	Silver
Elongation	40%
Density	8.67 g/cm^3
Tensile Strength	6,400 psi
Shear Strength	5,700 psi

Available Sizes:

• 1 Pound Bar • 1 Pound Spool - Diameters 1/16", 3/32" & 1/8" • 5 Pound Spool - Diameter 1/8"

WELDCOTE 60/40 (Tin/Lead Acid Core)		UPC #	Part #	U/M	Size
60/40 Acid Core 3/32 × 1# Spool **	One Spool		**6040AC332X1SP**	LB	3/32
60/40 Acid Core 1/8 × 1# Spool		877511007640	**6040AC18X1SP**	LB	1/8
60/40 Acid Core 1/8 × 5# Spool **		877511007657	**6040AC18X5SP**	LB	1/8

*** while supplies last***

WELDCOTE 60/40 (Tin/Lead Rosin Core)

Spec/Classification: Manufactured to J-STD-006, ASTM-B32 Alloy Grand Sn-60 Tayp WOAP-2, and QQ-S-571F

Weldcote 60/40 Tin/Lead Rosin Core Solder contains a 2.30-3.20% rosin core. Rosin core solders are used in applications where you are soldering metals that are fair to excellent in solderability: coppers, brass, bronze and nickels. With some exceptions, tin-leadsolders can be used to solder copper and most copper alloys, lead, nickel alloys and steel.

The 60/40 solder is used extensively for electrical applications and also used for wave dip soldering od electrical assemblies where lower temperatures are required. The rosin core solders are not recommended in high stress or vibration joints in the cooling industry due to the lack of sufficient elongation properties. Thisproduct contains lead and should not be used in potable water systems.

Nominal Composition (%):

	Sn	Pb
Result (%)	59.5-61.5	Balance

Physical Data:

Solidus	362°F (183°C)
Liquidus	375°F (190°C)
Electrical Conductivity	49.8 (W/m-K)
Electrical Resistivity	145 (10^9 ohm-m)
Color	Silver
Elongation	40%
Density	8.67 g/cm^3
Tensile Strength	6,400 psi
Shear Strength	5,700 psi

Available Sizes:

• 1 Pound Bar • 1 Pound Spool - Diameters 1/16", 3/32" & 1/8" • 5 Pound Spool - Diameter 1/8"

WELDCOTE 60/40 (Tin/Lead Rosin Core)		UPC #	Part #	U/M	Size
60/40 Rosin Core 1/16 × 1# Spool	One Spool	877511007664	**6040RC116X1SP**	LB	1/16
60/40 Rosin Core 3/32 × 1# Spool		877511007671	**6040RC332X1SP**	LB	3/32
60/40 Rosin Core 1/8 × 1# Spool		877511007688	**6040RC18X1SP**	LB	1/8

WELDCOTE 95/5 (Tin/Lead Antimony Solid Core)

Spec/Classification: Manufactured to J-STD-006, ASTM-B32 Grand Sb-5 and QQ-S-571F

Weldcote 95/5 Tin Antimony solder is useful for applications where moderately elevated temperature is a factor. With a high electrical conductivity and high fluidity, it is recommended for lead free installation of small diameter, tight fitting connections.
If used for electrical applications use with general purpose paste flux.

Used in joining of copper tubing in refrigeration and air conditioning applications.

This product contains lead and should not be used in potable water systems. These solders are not recommended for use on brass.

Nominal Composition (%):

	Sn	Pb
Result (%)	50.0	50.0

Physical Data:

Solidus	450°F (232°C)
Liquidus	464°F (240°C)
Electrical Conductivity	11.9% at 68°F (IACS)
Electrical Resistivity	145n m at 77°F
Color	Silver
Elongation	N/A
Density	7.26 g/cm^3
Tensile Strength	5,900 psi
Shear Strength	6,200 psi

Available Sizes:

1 Pound Bar • 1 Pound Spool - Diameters 1/16", 3/32" & 1/8" • 5 Pound Spool - Diameter 1/8"

WELDCOTE 95/5 (95% Tin / 5% Lead Antimony)		UPC #	Part #	U/M	Size
95/5 Bar Solder 1# Bar	One Bar	877511007701	**9551BAR**	LB	1# Bar
95/5 Solder 1/16 dia × 1# Spool	One Spool	877511007718	**955116X1SP**	LB	1/16
95/5 Solder 3/32 dia × 1# Spool		877511007725	**955332X1SP**	LB	3/32
95/5 Solder 1 /8 dia × 1# Spool		877511007732	**95518X1SP**	LB	1/8
95/5 Solder 1/8 dia × 5# Spool		877511007749	**95518X5SP**	LB	1/8

FLUXES

WELDCOTE WHITE PASTE FLUX

Spec/Classification: AWS A5.31, Type FB3A, AMS 3410, Fed Spec 0-F-499, Type B

- Weldcote White Paste Flux is formulated as a general purpose silver brazing flux. It is ideal for brazing copper, brass, nickel,carbon steel, stainless steel and precious metals. Residues are water soluble.
- Weldcote White Paste Flux is a creamy, white silver brazing paste flux that is active and protective to 870°C/1600°F.
- It was formulated for the majority of brazing operations and is recommended for use with copper, copper based alloys, steel, stainless steel, nickel, carbides, precious metals and heat resistant alloys.
- Weldcote White Paste Flux is available in dispensable form suitable for spraying or other automatic application methods. The flux will not harden or crystallize, retaining its creamy texture up to two (2) years.

Physical Properties:

Form	Creamy Paste
Color	White
Specific Gravity	1.6
Water Content	Less than 35%
pH	8.3 ±0.2
Flash Point	None
Freezing Effects	None
Active Temp Range	540°C/1000°F - 870°C/1600°F

Applications:

- Weldcote White Paste Flux may be used in concentrated form or diluted with water to a thinner consistency.
- Heating the flux to 60°C/140°F -82°C/180°F makes it less viscous and more reactive. Heat the flux slowly to reduce spattering or excessive bubbling.
- The raw flux and residues are soluble in hot water (at least 140°F/60°C).
- Chipping or grinding is not necessary.

Procedure:

- Remove any oil, grease or other contaminants from the surface to be brazed.
- Apply flux to joint by dipping, swabbing or brushing area being brazed. The flux may be used as supplied or diluted.
- Apply heat by torch, induction or other means to the area being brazed after the flux has been applied to activate the flux.
- Feed the braze alloy into the joint, unless a brazing perform is already in place.
- Clean flux residues from brazed joint using hot water (60°C ±5°C/140°F ±10°F) for best results. If unavailable, room temperature water may also be used.

Appropriate Filler Metals: BAg / BCuP

Safety Precautions:

- Weldcote White Paste Flux contains potassium bifluoride (CAS # 7789-29-9) and potassium fluoborate (CAS # 14075-53-7) and shouldbe handled with care.
- Avoid contact with skin, eyes and clothing.
- Use NIOSH approved safety googles, rubber gloves and a rubber apron. As an added precaution, wash hands thoroughly after each use. Brazing should be done with adequate ventilation.
- Disposal of raw flux and flux residues must be carried out in accordance with local and federal environmental guidelines.
- Weldcote White Paste Flux has a two (2) year shelf life when stored properly.
- Refer to SDS for additional safety information.

WHITE PASTE FLUX-FOR SILVER BRAZING		UPC #	Part #	U/M	Size
White Paste Flux 1/4 pound Jar	One Jar	877511008203	**WPFLUX14JAR**	EA	1/4 Pound
White Paste Flux 1/2 pound Jar		877511005875	**WPFLUX12JAR**	EA	1/2 Pound
White Paste Flux 1 pound Jar		877511005882	**WPFLUX1JAR**	EA	1 Pound
White Paste Flux 6 ounce with brush cap		877511005899	**WPFLUX6OZ**	EA	6 Ounces
White Paste Flux 25 pind pail **			**WPFLUX25PAIL**	EA	25 Pound

*** while supplies last***

WELDCOTE BLACK PASTE FLUX

Spec/Classification: AWS A5.31, Type FB3C, AMS 3411, Fed Spec 0-F-499, Type B

- Weldcote Black Paste Flux is formulated for the majority of brazing operations. It is recommended for use with copper, copperbased alloys, brass, nickel, carbon steel, stainless steel and precious metals and heat resistant alloys. Residues are water soluble.
- Weldcote Black Paste Flux is a creamy, black silver brazing paste flux that is active and protective to 980°C/1800°F. it was formulated for the majority of brazing operations and is recommended for use with copper, copper based alloys, steel, stainless steel, nickel, carbides, precious metals and heat resistant alloys.
- Weldcote Black Paste Flux is available in dispensable form suitable for spraying or other automatic application methods.
- The flux will not harden or crystallize, retaining its creamy texture up to two (2) years.

Physical Properties:

Form	Creamy Paste
Color	Black
Specific Gravity	1.6
Water Content	Less than 35%
pH	8.3 ± 0.2
Flash Point	None
Freezing Effects	None
Active Temp Range	540°C/1000°F - 980°C/1800°F

Applications:

- Weldcote Black Paste Flux may be used in concentrations form or diluted with water to a thinner consistency.
- Heating the flux to 60°C/140°F -82°C/180°F makes it less viscous and more reactive. Heat the flux slowly to reduce spattering or excessive bubbling.
- The raw flux and residues are soluble in hot water. Chipping or grinding is not necessary.
- Weldcote Black Paste Flux is a general purpose brazing flux used in a wide variety of joining applications for many different finished products including: appliances, automotive, carbide tools, dental tools, orthodontia, farm machinery, heat exchanges, heat equipment, maintenance, mining tools, musical instruments, plumbing fixtures, refrigeration and air conditioning, ship repair, steel furniture and welding equipment.

Procedure:

- Remove any oil, grease or other contaminants from the surface to be brazed.
- Apply flux to joint by dipping, swabbing or brushing area being brazed. The flux may be used as supplied or diluted.
- Apply heat by torch, induction or other means to the area being brazed after the flux has been applied to activate the flux.
- Feed the braze alloy into the joint, unless a brazing perform is already in place.
- Clean flux residues from brazed joint using hot water (60°C ±5°C/140°F ±10°F) for best results. If unavailable, room temperature water may also be used.

Appropriate Filler Metals: BAg / BCuP

Safety Precautions:

- Weldcote Black Paste Flux contains potassium bifluoride (CAS # 7789-29-9) and potassium fluoborate (CAS # 14075-53-7) and shouldbe handled with care.
- Avoid contact with skin, eyes and clothing.
- Use NIOSH approved safety googles, rubber gloves and a rubber apron. As an added precaution, wash hands thoroughly after each use. Brazing should be done with adequate ventilation.
- Disposal of raw flux and flux residues must be carried out in accordance with local and federal environmental guidelines.
- Weldcote Black Paste Flux has a two (2) year shelf life when stored properly.
- Refer to SDS for additional safety information.

BLACK PASTE FLUX-FOR SILVER BRAZING		UPC #	Part #	U/M	Size
Black Paste Flux 1/2 pound Jar	One Jar	877511005905	BPFLUX12JAR	EA	1/2 Pound
Black Paste Flux 1 pound Jar		877511005912	BPFLUX1JAR	EA	1 Pound
Black Paste Flux 5 pound Jar		877511009408	BPFLUX5JAR	EA	5 Pound

WELDCOTE WHITE ANTI BORAX FLUX

Spec/Classification: AWS A5.31, Type FB3J, MIL-F-16136B, Type A & B

- Weldcote White Anti Borax Flux is a brazing powder flux that is active in the temperature range 1400-2200°F/760-1205°C.
- It is used for brazing brass, bronze, copper, steel, stainless steel, malleable iron, and heat resistant alloys.
- Weldcote White Anti Borax Flux promotes deep penetration of the filler metal in the joints, resulting in high bond-strength. It dissolves and removes oxides rapidly and thoroughly with a minimum of bubbling, keeping impurities and porosity out of joints.

Physical Properties:

Form	Powder
Color	White
Specific Gravity	1.5 (average)
Flammability	None
Volatile Content	0.10%
Freezing Effects	None
Active Temp Range	760°C/1400°F - 1205°C/2200°F

Applications:

Weldcote White Anti Borax Flux is used in the following applications:

Appliances, farm machinery, heat exchangers, heat equipment, maintenance, ship repair, steel furniture and welding equipment.

Procedure:

- Thoroughly clean the work piece; breaks should beenlarged to a V-notch.
- Heat the end of the metal rod with a torch and dip into the flux or sprinkle the flux on the work piece. At the righttemperature, flux will turn into a liquid that rapidly flows into all cracks and crevices, removing oxides and other impurities.
- Continue to melt the filler rod until the break or joint is filled, avoiding overheating. It is well to remember that in brazing, only the filler metal is melted.
- Weldcote White Anti Borax Flux may also be used as a paste by adding water and mixing well.
- Brush the paste on the work piece and also on the brazing rod, allow the paste to dry, and apply heat.
- Flux residues wash off completely using hot water.

Appropriate Filler Metals: BAg / BNi / RBCuZn / BCu / BAu

Safety Precautions:

- Weldcote White Anti Borax Flux contains no fluorides and is reasonably safe to use. Respiratory protection should be worn in heavy dust concentrations.
- The flux is not absorbed through healthy, intact skin, but is absorbed through burned or wounded skin areas, or if ingested. Absorption or ingestion may cause pathological disturbance. Brazing should be carried out only in well-ventilated areas.
- Disposal of raw flux and flux residues must be carried out in accordance with local and federal environmental guidelines.
- Weldcote White Anti Borax Flux has a two (2) year shelf life when stored properly.
- Refer to SDS for additional safety information.

POWDERED FLUX-GENERAL PURPOSE BRAZING		UPC #	Part #	U/M	Size
White Anti Borax Flux 1 pound Jar	One Jar	877511005929	**WPWDFLUX1JAR**	EA	1 Pound

WELDCOTE GENERAL PURPOSE LIQUID SOLDERING FLUX

Spec/Classification: Fed Spec O-F 506C, Type 1 Form B

- Weldcote Liquid Soldering Flux is a water based, general purpose, inorganic-acid flux formulated for soldering stainless steel and other industrial metals.
- The flux contains zinc chloride, ammonium chloride and hydrochloric acid, that make this flux activeatroom temperature where it begins to clean metals and remove oxides.
- The flux exerts a strong scavenging action to remove oxide coatings and other impurities from the metal surface to produce strong joints. Pre-cleaning is not necessary under most conditions.

Physical Properties:

Form	Colorless Liquid
Specific Gravity	1.326 ± 0.01 @ 20°C
pH	0.1
Flash Point	None
Freezing Effects	None
Residues	Completely Water-Soluble
Spread Factor	80 Minimum
Recommended Soldering Range	93°C/200°F - 315°C/600°F

Applications:

- Weldcote Liquid Soldering Flux is excellent for use on stainless steel, monel, high-chrome alloys, Inconel, nickel, copper, brass, ferrous alloys and many more metals.
- It is not recommended for aluminum and magnesium.

Procedure:

Directions: Weldcote Liquid Soldering Flux may be applied with a brush, swab or by dipping. The flux exhibits the best activity between 93°C/200°F and 315°C/600°F.

Post-solder residues are water-soluble and hot water rinses (140°F or higher) may be adequate for most applications.

The following steps are recommended for optimum soldering results.

- Remove any oil, grease, or other contaminants from the surface to be soldered.
- Apply flux to joint by dipping, spraying, dragging, swabbing or brushing to area being soldered.
- Preheat or air-dry area to be soldered after flux has been applied to activate the flux and yield optimum soldering characteristics and reduce or eliminate spattering.
- Apply solder, dip part, place torch or iron to area being soldered.
- To insure complete removal of flux residues, first use water containing 2% HCl followed by as many hot water rinses as necessary.

Safety Precautions:

- Weldcote Liquid Soldering Flux is a corrosive product and should be handled with care and the normal precautions taken when working with chemical products. When soldering with Weldcote Liquid Soldering Flux, adequate exhaust ventilations should be provided.
- Avoid contact with eyes, skin and mucous membranes.
- Always wear NIOSH approved safety equipment when working with chemicals. Store in plastic containers away from heat.
- Disposal of raw flux and flux residues must be carried out in accordance with local and federal environmental guidelines. Due to the presence of zinc, a heavy metal, disposal of post-solder residues and wash-water must be carried out in accordance with local, state, and/or federal environmental guidelines.
- Refer to SDS for additional safety information.

GENERAL PURPOSE LIQUID SOLDERING FLUX		UPC #	Part #	U/M	Size
Liquid Soldering Flux 4 oz bottle	One Bottle	877511007763	**LIQUIDFLUX40Z**	EA	4 Ounce
Liquid Soldering Flux 16 oz bottle		877511007770	**LIQUIDFLUX160Z**	EA	16 Ounce
Liquid Soldering Flux 1 gallon bottle		877511007787	**LIQUIDFLUX1GL**	EA	1 Gallon

WELDCOTE GENERAL PURPOSE SOLDERING PASTE FLUX

Spec/Classification: Fed Spec O-F 506C, Type 1, Form A & MIL-S-6872A

- Weldcote Soldering Paste Flux is a Petrolatum-based soldering paste that contains zinc chloride and ammonium chloride.
- The petrolatum helps protect the solder joint against corrosive attack and the paste form insures that the flux stays put until soldering.

Physical Properties:

Form	Yellow Paste
Specific Gravity	0.95-1.00
Flash Point	285°C (540°F)
Boiling Point	337°C (640°F)
Spread Factor	80 Minimum
Recommended Soldering Range	93°C/200°F - 315°C/600°F

Applications:

- Weldcote Soldering Paste Flux is useful on most common metals.
- It is employed mainly in plumbing and maintenance applications.
- It is not recommended for aluminum and magnesium.

Procedure:

- Directions: Weldcote Soldering Paste Flux is generally applied using an acid brush. The flux is active between 93°C/200°F and 315°C/600°F. Although the flux is self-cleaning, it is recommended that the parts first be cleaned with a rough surface. For most applications, the residues can be removed with a damp rag. However, the following cleaning steps must be followed in critical applications. Remove any oil,grease, or other contaminants from the surface to be soldered.
- Degrease with an organic solvent
- Rinse in hot water containing 2% HCl solution
- Use as many hot deionized water rinses as necessary.

Safety Precautions:

- Weldcote Soldering Paste Flux contains Petrolatum, Zinc Chloride and Ammonium Chloride.
- Inhalation of fumes can cause injury to the respiratory tract and skin. In case of external contact, wash with soap and water. For eyes, flush with water for 15 minutes andget immediate medical attention. If swallowed, give plenty of water or milk and call a physician. Keep out of reach of children.
- Do not store near heat, as petrolatum melts at 135°F. Corrosive products should be handled with care and the normal precautions taken when working with chemical products.
- When soldering with Weldcote Soldering Paste Flux, adequate exhaust ventilations should be provided.
- Avoid contact with eyes, skin and mucous membranes. Always wear NIOSH approved safety equipment when working with chemicals. Store in plastic containers away from heat.
- Disposal of raw flux and flux residues must be carried out in accordance with local and federal environmental guidelines. Due to the presence of zinc, a heavy metal, disposal of post-solder residues and wash-water must be carried out in accordance with local, state, and/or federal environmental guidelines.
- Refer to SDS for additional safety information.

GENERAL PURPOSE SOLDERING PASTE FLUX		UPC #	Part #	U/M	Size
Soldering Paste Flux 4 oz jar	One Jar	877511007794	**PASTEFLUX40Z**	EA	4 Ounce
Soldering Paste Flux 16 oz jar		877511007800	**PASTEFLUX160Z**	EA	16 Ounce

WELDCOTE SOLAR FLUX (Type B)

Spec/Classification: Conforms to Mil-Spec MIL-F-7516B, Classes 2 and 4

- Weldcote Solar Flux is a complex chemical compound in the form of a very fine powder.
- Weldcote Solar flux is mixed with alcohol and brushed on the back of the weld joint.
- It is formulated to shield the BACK of the weld joint from oxygen, dissipate heat and unwanted oxides, and to clean the surface of the metal.

Applications:

- It will aid in the flow of filler metal over base metal and form a protective barrier to prevent re-oxidation and heat scale.
- Type B is for welding stainless steel and alloy steels. Weldcote Solar Flux Type B can be used for pipe and tube welding, maintenance welding, in-field welding, certain specified aircraft airframe and jet engine repairs for all shapes and configurations.
- The shelf life of Type B, that has never been mixed with a mixing fluid, in the closed can, is infinite.

Safety Precautions:

- Weldcote Solar Flux Type B contains free crystalline silica as a component of silicon dioxide.
- It is primarily a nuisance dust. For eyes, flush with water. If swallowed, give plenty of water or milk and call a physician. Keep out of reach of children When welding with Weldcote Solar Flux, adequate exhaust ventilations should be provided. Avoid contact with eyes, skin and mucous membranes.
- Always wear NIOSH approved safety equipment when working with chemicals.
- Store in plastic containers away from heat.
- Disposal of raw flux and flux residues must be carried out in accordance with local and federal environmental guidelines. Due to the presence of zinc, a heavy metal, disposal of post-solder residues and wash-water must be carried out in accordance with local, state, and/or federal environmental guidelines.
- Refer to SDS for additional safety information.

Physical Properties:

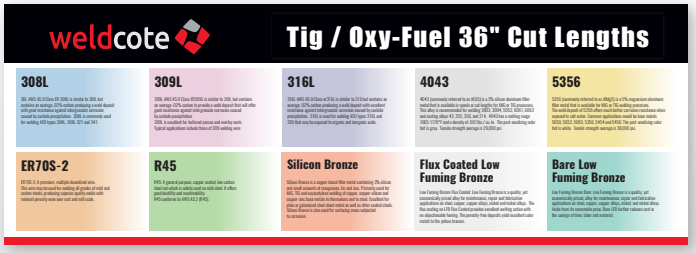
Form	Powder
Color	Dark Gray
Specific Gravity	2.2 average
Volatile Content	<0.1%
Flash Point	None
Lower Explosion Limit	None
Humidity Effect	Slight

SOLAR FLUX		UPC #	Part #	U/M	Size
Solar Flux Type B 1pound cans	One Can	812922014856	**SOLARFLUXB**	EA	1 Pound
Solar Flux Type I 1pound cans **	One Can		**SOLARFLUXI**	EA	1 Pound

*** while supplies last***

Point of Purchase Small Packaging - 36" Cut Lengths Display Options

Floor Display - 24 x 24"



Display Header - 36"

SMALL PACKAGING

Point of Purchase Small Packaging - 36" Cut Lengths Metals TIG

ER70S-2		UPC #	Part #	U/M	Size
ER70S-2 .035 × 36 1 pound tube pkg	Ten One Pound Tubes	877511006537	**E70S2035X36T1P**	LB	.035
ER70S-2 .045 × 36 1 pound tube pkg		877511006575	**E70S2045X36T1P**	LB	.045
ER70S-2 1/16 × 36 1 pound tube pkg		877511006131	**E70S2116X36T1P**	LB	1/16
ER70S-2 3/32 × 36 1 pound tube pkg		877511006155	**E70S2332X36T1P**	LB	3/32
ER70S-2 1/8 × 36 1 pound tube pkg		877511006179	**E70S218X36T1P**	LB	1/8
E70S-2 1/16 × 36 3 pound tube	Three Pound Tubes	812922010186	**E70S2116X36T3P**	LB	1/16
E70S-2 3/32 × 36 3 pound tube		812922010193	**E70S2332X36T3P**	LB	3/32

ER70S-6		UPC #	Part #	U/M	Size
E70S-6 .035 × 36 1 pound tube pkg	Ten One Pound Tubes	877511006551	**E70S6035X36T1P**	LB	.035
E70S-6 .045 × 36 1 pound tube pkg		812922011831	**E70S6045X36T1P**	LB	.045
ER70S-6 1/16 × 36 1 pound tube pkg		877511006193	**E70S6116X36T1P**	LB	1/16
ER70S-6 3/32 × 36 1 pound tube pkg		877511006216	**E70S6332X36T1P**	LB	3/32
ER70S-6 1/8 × 36 1 pound tube pkg		877511006230	**E70S618X36T1P**	LB	1/8
E70S-6 1/16 × 36 3 pound tube	Three Pound Tubes	812922010216	**E70S6116X36T3P**	LB	1/16
E70S-6 3/32 × 36 3 pound tube		812922010223	**E70S6332X36T3P**	LB	3/32
E70S-6 1/8 × 36 3 pound tube		812922010230	**E70S618X36T3P**	LB	1/8

R45		UPC #	Part #	U/M	Size
R45 1/16 × 36 1 pound tube pkg	Ten One Pound Tubes	877511006292	**R45116X36T1P**	LB	1/16
R45 3/32 × 36 1 pound tube pkg		877511006308	**R45332X36T1P**	LB	3/32
R45 1/8 × 3 1 pound tube pkg		877511006315	**R4518X36T1P**	LB	1/8

R60		UPC #	Part #	U/M	Size
R60 1/16 × 36 1 pound tube pkg	Ten One Pound Tubes	877511006322	**R60116X36T1P**	LB	1/16
R60 3/32 × 36 1 pound tube pkg		877511006339	**R60332X36T1P**	LB	3/32
R60 1/8 × 36 1 pound tube pkg		877511006346	**R6018X36T1P**	LB	1/8

Point of Purchase One Pound 36" Cut Lengths Aluminum TIG

4043		UPC #	Part #	U/M	Size
4043 1/16 × 36 1 pound tube pkg	Ten One Pound Tubes	877511006124	**4043116X36T1P**	LB	1/16
4043 3/32 × 36 1 pound tube pkg		877511006148	**4043332X36T1P**	LB	3/32
4043 1/8 × 36 1 pound tube pkg		877511006162	**404318X36T1P**	LB	1/8
4043 1/16 × 36 3 pound tube	Three Pound Tubes	812922010124	**4043116X36T3P**	LB	1/16
4043 3/32 × 36 3 pound tube		812922010131	**4043332X36T3P**	LB	3/32
4043 1/8 × 36 3 pound tube		812922010148	**404318X36T3P**	LB	1/8

5356		UPC #	Part #	U/M	Size
5356 1/16 × 36 1 pound tube pkg	Ten One Pound Tubes	877511006186	**5356116X36T1P**	LB	1/16
5356 3/32 × 36 1 pound tube pkg		877511006209	**5356332X36T1P**	LB	3/32
5356 1/8 × 36 1 pound tube pkg		877511006223	**535618X36T1P**	LB	1/8
5356 1/8 × 36 3 pound tube	Three Pound Tubes	812922010179	**535618X36T3P**	LB	1/8
5356 3/32 × 36 3 pound tube		812922010162	**5356332X36T3P**	LB	3/32

Point of Purchase One Pound 36" Cut Lengths Copper Based Alloys TIG

SIB - Silicon Bronze		UPC #	Part #	U/M	Size
SIB .035 × 36 1 pound tube pkg	Ten One Pound Tubes	812922011107	**SIB035X36T1P**	LB	.035
SIB .045 × 36 1 pound tube pkg		877511006445	**SIB045X36T1P**	LB	.045
SIB 1/16 × 36 1 pound tube pkg		877511006353	**SIB116X36T1P**	LB	1/16
SIB 3/32 × 36 1 pound tube pkg		877511006360	**SIB332X36T1P**	LB	3/32
SIB 1/8 × 36 1 pound tube pkg		877511006377	**SIB18X36T1P**	LB	1/8

Point of Purchase One Pound 36" Cut Lengths Stainless TIG

308		UPC #	Part #	U/M	Size
308 1/16 × 36 1 pound tube pkg	Ten One Pound Tubes	877511009804	**308116X36T1P**	LB	1/16
308 3/32 × 36" 1 pound tube pkg		877511009811	**308332X36T1P**	LB	3/32

308L		UPC #	Part #	U/M	Size
308L .030 × 36 1 pound tube pkg	Ten One Pound Tubes	877511009927	**308L030X36T1P**	LB	.030
308L .035 × 36 1 pound tube pkg		877511009057	**308L035X36T1P**	LB	.035
308L .045 × 36 1 pound tube pkg		877511007220	**308L045X36T1P**	LB	.045
308L 1/16 × 36 1 pound tube pkg		877511005943	**308L116X36T1P**	LB	1/16
308L 3/32 × 36 1 pound tube pkg		877511005967	**308L332X36T1P**	LB	3/32
308L 1/8 × 36 1 pound tube pkg		877511005981	**308L18X36T1P**	LB	1/8
308L 1/16 × 36 3 pound tube	Ten One Pound Tubes	812922010032	**308L116X36T3P**	LB	1/16
308L 3/32 × 36 3 pound tube		812922010049	**308L332X36T3P**	LB	3/32

309L		UPC #	Part #	U/M	Size
309L .045 × 36 1 pound tube pkg	Ten One Pound Tubes	812922012982	**309L045X36T1P**	LB	.045
309L 1/16 × 36 1 pound tube pkg		877511006001	**309L116X36T1P**	LB	1/16
309L 3/32 × 36 1 pound tube pkg		877511006025	**309L332X36T1P**	LB	3/32
309L 1/8 × 36 1 pound tube pkg		877511006049	**309L18X36T1P**	LB	1/8

316L		UPC #	Part #	U/M	Size
316L .035 × 36 1 pound tube pkg	Ten One Pound Tubes	877511006797	**316L035X36T1P**	LB	035
316L .045 × 36 1 pound tube pkg		877511007237	**316L045X36T1P**	LB	.045
316L 1/16 × 36 1 pound tube pkg		877511006063	**316L116X36T1P**	LB	1/16
316L 3/32 × 36 1 pound tube pkg		877511006087	**316L332X36T1P**	LB	3/32
316L 1/8 × 36 1 pound tube pkg		877511006100	**316L18X36T1P**	LB	1/8
316L 1/16 × 36 3 pound tube	Three Pound Tubes	812922010094	**316L116X36T3P**	LB	1/16
316L 3/32 × 36 3 pound tube		812922010100	**316L332X36T3P**	LB	3/32

Super 120 Stainless TIG	UPC #	Part #	U/M	Size
AKA Stud removal rod – excellent strength and superior ductility and crack resistance on many grades of steels and stainless as well as dissimilar alloys.				
Super 120 1/16 × 36 1 pound tube pkg	812922013422	SUPER120116X36P	LB	1/16
Super 120 3/32 × 36 1 pound tube pkg	812922013156	SUPER120332X36P	LB	3/32

Point of Purchase One Pound 36" Cut Lengths Brazing Alloys TIG

Low Fuming Bronze - Bare		UPC #	Part #	U/M	Size
LFB 1/16 × 36 1 pound tube pkg	Ten One Pound Tubes	877511006247	**LFB116X36T1P**	LB	1/16
LFB 3/32 × 36 1 pound tube pkg		877511006254	**LFB332X36T1P**	LB	3/32
LFB 1/8 × 36 1 pound tube pkg		877511006261	**LFB18X36T1P**	LB	1/8
LFB 5/32 × 36 1 pound tube pkg		812922010988	**LFB532X36T1P**	LB	5/32
LFB 3/32 × 36 3 pound tube	Three Pound Tubes	812922010254	**LFB332X36T3P**	LB	5/32

Low Fuming Bronze - Fluxcoated		UPC #	Part #	U/M	Size
LFB FC 1/16 × 18 1 pound tube pkg	Ten One Pound Tubes	812922011206	**LFBFC116X18T1P**	LB	1/16
LFB FC 3/32 × 36 1 pound tube pkg		877511006278	**LFBFC332X36T1P**	LB	3/32
LFB FC 1/8 × 36 1 pound tube pkg		877511006285	**LFBFC18X36T1P**	LB	1/8
LFB FC 5/32 × 36 1 pound tube pkg		812922011749	**LFBFC532X36T1P**	LB	5/32
LFB FC 3/32 × 36 3 pound tube	Three Pound Tubes	812922010025	**LFBFC332X36T3P**	LB	3/32
LFB FC 1/8 × 36 3 pound tube		812922010278	**LFBFC18X36T3P**	LB	1/8

Galvanizing Solder		UPC #	Part #	U/M	Size
Galvanizing Solder 1 pound tube pkg	Ten One Pound Tubes	812922016292	**GALVSOLDER14E1P**	LB	

Point of Purchase Small Packaging - Specialty

One pound Electrodes - Repair & Maintenance

Nickel Electrodes		UPC #	Part #	U/M	Size
Ni 55 3/32 Electrode 1 pound tube pkg	Ten One Pound Tubes	877511006384	**NI55332E1P**	LB	3/32
Ni 55 1/8 Electrode 1 pound tube pkg		877511006810	**NI5518E1P**	LB	1/8
Ni 55 5/32 Electrode 1 pound tube pkg		877511007251	**NI55532E1P**	LB	5/32
Ni 99 3/32 Electrode 1 pound tube pkg	Ten One Pound Tubes	877511006858	**NI99332E1P**	LB	3/32
Ni 99 1/8 Electrode 1 pound tube pkg		877511006865	**NI9918E1P**	LB	1/8
Ni 99 5/32 Electrode 1 pound tube pkg		877511009699	**NI99532E1P**	LB	5/32

Aluminum Smooth 340 Electrodes For Maintenance and Repair					
Coated stick rod for fabrication, maintenance of repairs of cast or wrought aluminum base metals					
Aluminum Smooth 340 3/32 Electrode 1/2 pound tube pkg	Ten One Pound Tubes	877511006896	**ALSM00TH340332P**	LB	3/32
Aluminum Smooth 340 1/8 Electrode 1/2 pound tube pkg		877511006544	**ALSM00TH34018EP**	LB	1/8
Aluminum Smooth 340 5/32 Electrode 1/2 pound tube POP		877511008425	**ALSM00TH340532P**	LB	5/32

Super 120 Electrodes Alloyed Steel Electrodes For Maintenance and Repair					
AKA Stud removal rod – excellent strength and superior ductility and crack resistance on many grades of steels and stainless as well as dissimilar alloys.					
Super 120 3/32 Electrode 1 pound tube pkg	Ten One Pound Tubes	877511008517	**SUPER120332E1P**	LB	3/32
Super 120 1/8 Electrode 1 pound tube pkg		877511008067	**SUPER12018E1P**	LB	1/8

Flux-Cored Aluminum - Tubular Aluminum Rod		UPC #	Part #	U/M	Size
Tubular aluminum torch rod with a flux filled center that delivers matching properties for filling and build up work on aluminum base metals					
Flux-Cored Aluminum 1/8 × 32" 1 pound tube pkg	Ten One Pound Tubes	877511009682	**FCALUM181P**	LB	1/8

Alumite		UPC #	Part #	U/M	Size
Zinc alloy torch rod for maintenance and repair on Pot metals, Zinc and Aluminum base metals					
Alumite 1/8 1 pound tube pkg	Ten One Pound Tubes	877511009514	**ALUMITE18E1P**	LB	1/8

Point of Purchase Small Packaging - Stainless Electrodes

One pound Electrodes - Stainless Electrodes

308L - 16		UPC #	Part #	U/M	Size
308L-16 1/16 × 10" Electrode 1 pound tube pkg	Ten One Pound Tubes	877511006636	**308L16116E1P**	LB	1/16
308L-16 3/32 × 12" Electrode 1 pound tube pkg		877511008456	**308L16332E1P**	LB	3/32
308L-16 1/8 × 14" Electrode 1 pound tube pkg		877511006827	**308L1618E1P**	LB	1/8

309L - 16		UPC #	Part #	U/M	Size
309L-16 3/32 × 12" Electrode 1 pound tube pkg	Ten One Pound Tubes	877511008937	**309L16332E1P**	LB	3/32
309L-16 1/8 × 14" Electrode 1 pound tube pkg		877511009323	**309L1618E1P**	LB	1/8

316 - 16		UPC #	Part #	U/M	Size
316L-16 1/16 × 12" Electrode 1 pound tube pkg	Ten One Pound Tubes	877511009347	**316L16116E1P**	LB	1/16
316L-16 3/32 × 12" Electrode 1 pound tube pkg		877511009330	**316L16332E1P**	LB	3/32
316L-16 1/8 × 14" Electrode 1 pound tube pkg		812922010018	**316L1618E1P**	LB	1/8

Additional products available with minimum order of ten pound tubes:

2300 Phosphor Bronze, Hardfacing, Spot Arch Electrodes

ALSM00TH34018E

MAINTENANCE & REPAIR ALLOYS COMPARISON CHART

For Welding, Brazing, Soldering and Metal Working

WELDCOTE METALS	ALLSTATE	HARRIS WELCO	WASHINGTON ALLOY
SUPER120	275;Stud Plus	Super Missileweld	Tensileweld
ALUMINUM SMOOTH 340	34	26	AL 345
SPOT ARC	–	315	Speedweld 300
NI-55	8-60	NIC-L-WELD 59	NICKEL55/CASCADE 18A
NI-99	8	NIC-L-WELD 99	NICKEL99/CASCADE 17A
88-83	Monoweld; Steelarc Plus	83-88	Super500
GALVINIZING SOLDER	Galvover	GAL-VIZ	Galvbar
2800	6 IMP	28	EST/CASCADE 15A
900	Hard-Tuff 56	9	Super 700
CHAMFER ARC	Chamfer Rod	Chamfer Arc	Chamfer Arc Rod
CUT ROD	Cutting Rod	Cut Rod	Cut Rod
ALUMITE	53;55	52	Alu-Zinc
FLUX-CORED ALUMINUM	Sealcor	Cor-Al	Fluxcored Aluminum
		P-10	

WELDCOTE METALS	CERTANIUM	UTP	HI-ALLOY/INWELD
SUPER120	770SP;707	65	500;500ND SA-1 BLUE
ALUMINUM SMOOTH 340	608	48	35
SPOT ARC	–	–	–
NI-55	–	ECONOCAST 55	5; NI-55
NI-99	–	ECONOCAST 99	9; NI-99
88-83	702	612	Marvelweld/909
GALVINIZING SOLDER	Galvoplate	–	Galv Repair
2800	885	81	64
900	250	67S	–
CHAMFER ARC	100	82	Metal Mover/414
CUT ROD	101	82-AS	Cut Arc/450
ALUMITE	61	41	155
FLUX-CORED ALUMINUM	68C	AL FC	FluxKored/230

WELDCOTE METALS	EUTECTIC	X-ERGON	MG
SUPER120	680	100XL/1000	Super 600;660
ALUMINUM SMOOTH 340	2101;36021	141;Alumi-Arc	400
SPOT ARC	–	–	–
NI-55	2-23;232;235;555;3055	Castweld	260
NI-99	24X;240;3099;CASTEC	Castweld HPM	250
88-83	BEAUTYWELD;777	Duraweld Gold #106	500
GALVINIZING SOLDER	15	–	–
2800	27;QUENCHWELD B	–	220
900	N2;N61;N700;N1003	153; Abrade-X	760
CHAMFER ARC	EXOTRODE/QUENCHWELD A	161;Arc-Force	570
CUT ROD	Cut Trode #1	Arc-Prep	560
ALUMITE	19;196	243;Alu-Bond	470
FLUX-CORED ALUMINUM	21 FCE	242	420

WELDCOTE METALS	ROCKMOUNT	UNIWELD	CRONATRON
SUPER120	BRUTUS A	5000	333;330
ALUMINUM SMOOTH 340	NEWPTUNE A	4000	510
SPOT ARC	–	–	–
NI-55	–	55	211
NI-99	–	99	222
88-83	TARTAN A	2000	338
GALVINIZING SOLDER	-	–	–
2800	JUPITER NM	3800	235
900	OLYMPIA A	6300	–
CHAMFER ARC	ELECTRA	2400	110/1100
CUT ROD	–	–	–
ALUMITE	NEPTUNE S	4200	52;53
FLUX-CORED ALUMINUM	NEPTUNE GCF	–	54C

Small Packaging Electrodes 9-Hook Display with Product

without Product

Weldcote Metals does not imply or infer that the material listed are identical

WELDING HOSE & ACCESSORIES

WELDING HOSE

- **Grade R:** General purpose hose used in Oxygen / Acetylene applications.
- **Grade T:** Advanced composition hose used in Oxygen / Alternate Fuel applications such as Propylene and Propane.

TWIN HOSE GRADE R | BB FITTINGS		UPC #	Part #	U/M
Twin Hose Grade R 1/4 × 12-1/2' BB Fittings	20 Sections per Carton	812922013637	**14RX12**	EA
Twin Hose Grade R 1/4 × 25' BB Fittings	10 Sections per Carton	812922013644	**14RX25**	EA
Twin Hose Grade R 1/4 × 50' BB Fittings	5 Sections per Carton	812922013651	**14RX50**	EA
Twin Hose Grade R 1/4 × 100' BB Fittings	3 Sections per Carton	812922013668	**14RX100**	EA
Twin Hose Grade R 1/4 Reel-600 ft.	1 Reel	812922013675	**14RX600REEL**	EA
Twin Hose Grade R 3/16 × 12-1/2' BB Fittings	20 Sections per Carton	812922013682	**316RX12**	EA
Twin Hose Grade R 3/16 × 25' BB Fittings	10 Sections per Carton	812922013699	**316RX25**	EA
Twin Hose Grade R 3/16 × 50' BB Fittings	5 Sections per Carton	812922013705	**316RX50**	EA
Twin Hose Grade R 3/16 × 100' BB Fittings	3 Sections per Carton	812922013712	**316RX100**	EA
Twin Hose Grade R 3/16 Reel-600 ft.	1 Reel	812922013729	**316RX600REEL**	EA
Twin Hose Grade R 3/8 × 25' BB Fittings	10 Sections per Carton		**38RX25**	EA
Twin Hose Grade R 3/8 × 50' BB Fittings	5 Sections per Carton	812922013743	**38RX50**	EA
Twin Hose Grade R 3/8 × 100' BB Fittings	3 Sections per Carton	812922013750	**38RX100**	EA

TWIN HOSE GRADE T | BB FITTINGS		UPC #	Part #	U/M
Twin Hose Grade T 1/4 × 25' BB Fittings	10 Sections per Carton	812922013767	**14TX25**	EA
Twin Hose Grade T 1/4 × 50' BB Fittings	5 Sections per Carton	812922013774	**14TX50**	EA
Twin Hose Grade T 1/4 × 100' BB Fittings	3 Sections per Carton	812922013781	**14TX100**	EA
Twin Hose Grade T 1/4 Reel-600 ft.	1 Reel	812922013798	**14TX600REEL**	EA
Twin Hose Grade T 3/16 × 12-1/2' BB Fittings	20 Sections per Carton	812922013804	**316TX12**	EA
Twin Hose Grade T 3/16 × 25' BB Fittings	10 Sections per Carton	812922013811	**316TX25**	EA
Twin Hose Grade T 3/16 × 50' BB Fittings	5 Sections per Carton	812922013828	**316TX50**	EA
Twin Hose Grade T 3/16 × 100' BB Fittings	3 Sections per Carton	812922013835	**316TX100**	EA
Twin Hose Grade T 3/8 × 25' BB Fittings	10 Sections per Carton	812922013842	**38TX25**	EA
Twin Hose Grade T 3/8 × 50' BB Fittings	5 Sections per Carton	812922013859	**38TX50**	EA
Twin Hose Grade T 3/8 × 100' BB Fittings	3 Sections per Carton	812922013866	**38TX100**	EA

WELDING HOSE - INERT GAS FITTINGS & SINGLE HOSE

HOSE ARGON I INERT GAS FITTINGS		UPC #	Part #	U/M
Hose,- Argon - 6' w/Inert Gas Fitting	50 Sections per Carton	812922015860	**ARG14X6**	EA
Hose,- Argon - 10' w/Inert Gas Fitting	30 Sections per Carton	812922013873	**ARG14X10**	EA
Hose, - Argon - 25' w/Inert Gas Fitting	20 Sections per Carton	812922013880	**ARG14X25**	EA
Hose, - Argon - 50' w/Inert Gas Fitting	10 Sections per Carton	812922015136	**ARG14X50**	EA
Hose, - Argon - 100' w/Inert Gas Fitting	5 Sections per Carton	812922015143	**ARG14X100**	EA

SINGLE HOSE GRADE R		UPC #	Part #	U/M
Hose, Single - Grade R - Reel 1/4 Reel FT Green (Oxygen) 800 ft.	1 Reel	812922013897	**14SOX800REEL**	EA
Hose, Single - Grade R - Reel 1/4 Reel FT Red (Fuel Gas) 800 ft.	1 Reel	812922013903	**14SFX800REEL**	EA

HOSE-RUBBER AIR HOSE		UPC #	Part #	U/M
Hose-Rubber Air Hose 3/8" × 50 FT W 1/4" MNPT		812922015846	**AIR38X50**	EA
Hose-Rubber Air Hose 3/8" × 100 FT W 1/4" MNPT		812922015853	**AIR38X100**	EA

HOSE REPAIR KITS

	UPC #	Part #	U/M
Hose Repair Kit, B Size Fittings	812922014054	**RK-24-WCM**	EA
Hose Repair Kit	812922014061	**RK-26-WCM**	EA
Hose Repair Kit, A&B Size Fittings	812922014078	**RK-27-WCM**	EA

HOSE REELS

		UPC #	Part #	U/M
Twin Welding Hose Reel - with 50' of 1/4" Grade R Twin Hose Retractable	1 Reel	812922013910	**HRR14R50**	EA
Twin Welding Hose Reel - with 50' of 1/4" Grade T Twin Hose Retractable		812922013927	**HRR14T50**	EA
Twin Welding Hose Ree l- with 100' of 1/4" Grade T Twin Hose Retractable		812922013552	**HRR14T100**	EA
Empty Welding Hose Reel for 100' Hose-Manual	1 Reel	812922013934	**HRMWOT**	EA
Retractable Air Hose Reel 3/8" × 50'		812922015297	**AIRHRR50**	EA
Retractable Air Hose Reel 3/8" × 100'		812922015303	**AIRHRR100**	EA

FLASH ARRESTOR SETS

Flashback Arrestors are safety equipment devices that stop or impedes the reverse flow of a flashback.

- Built in check valve to prevent reverse flow of gas
- Fits all 9/16”-18” size regulators and torches
- Bronze sintered element stops multiple flashes
- U/L Listed
- High flow capacity
- 100% flame and leak tested

	UPC #	Part #	U/M
B-Size, Reg Flash Arrestor Set	812922014030	**FBK-100-WCM**	EA
B-Size, Torch Flash Arrestor Set	812922014047	**FBK-200-WCM**	EA

QUICK CONNECT SETS

Quick Connectors provide fast, reliable, positive connections and disconnections for hoses, torches and regulators.

- Built in demand valve opens when positive connection is made and instant closure on reverse flow with total shutoff.
- Fits all 9/16"-18" size torches, regulators and hoses.
- Cannot interchange oxygen with fuel
- UL Listed
- 200 psig maximum operating pressure

	UPC #	Part #	U/M
Torch Style Quick Connect Set	812922015907	**QCT-100-WCM**	EA
Regulator Style Quick Connect Set	812922015891	**QCR-200-WCM**	EA

CYLINDER CAPS FOR HIGH PRESSURE AND ACETYLENE

Cylinder Caps for High Pressure and Acetylene.

- Cylinder caps are sprayed with a primer to prevent rusting.
- All Weldcote Metals' Cylinder Caps are stamped longitudinally “TC/DOT/ISO” to certify compliance to all three codes.

		UPC #	Part #	U/M
Open Cyl Cap Acetylene Fine 3 1/2 ×11 W/Screw **			**OCAPAF312X11**	
Cylinder Cap-Acetylene Coarse 3-1/2 × 8	24 per Case (Only sold in standard cases)	877511004557	**CYLCAPAC312X8**	EA
Cylinder Cap-Acetylene Fine 3-1/2 × 11		877511004564	**CYLCAPAF312X11**	EA
Cylinder Cap-HPOxygen Coarse 3-1/2 × 7		877511004571	**CYLCAPOC318X7**	EA
Cylinder Cap-HPOxygen Fine 3-1/2 × 11		877511004588	**CYLCAPOF318X11**	EA

Only sold in standard cases

*** while supplies last***

PRESSURE GAUGES

Brass and Steel Painted Brass
All Weldcote Metals' Pressure Gauges are UL or RU Listed

BRASS PRESSURE GAUGES		UPC #	Part #	U/M
Gauge 1-1/2" × 100 Psi	10 Gauges per Box	877511004120	**GAUGE112X100**	EA
Gauge 1-1/2" × 200 Psi		877511004137	**GAUGE112X200**	EA
Gauge 1-1/2" × 30 Psi Red Line		877511004144	**GAUGE112X30**	EA
Gauge 1-1/2" × 400 Psi		877511004151	**GAUGE112X400**	EA
Gauge 1-1/2" × 4000 Psi		877511004168	**GAUGE112X4000**	EA
Gauge 2" × 100 Psi		877511004175	**GAUGE2X100**	EA
Gauge 2" × 200 Psi		877511004182	**GAUGE2X200**	EA
Gauge 2" × 30 Psi Red Line		877511004199	**GAUGE2X30**	EA
Gauge 2" × 400 Psi		877511004205	**GAUGE2X400**	EA
Gauge 2" × 4000 Psi U.L.		877511004212	**GAUGE2X4000**	EA
Gauge 2½" × 100 Psi		877511004229	**GAUGE212X100**	EA
Gauge 2-1/2" × 200 Psi		877511004236	**GAUGE212X200**	EA
Gauge 2-1/2" × 30 Psi Red Line		877511004243	**GAUGE212X30**	EA
Gauge 2-1/2" × 400 Psi		877511004250	**GAUGE212X400**	EA
Gauge 2-1/2" × 4000 Psi U.L.		877511004267	**GAUGE212X4000**	EA
Gauge Replacement Cover 2"		877511004281	**GAUGECVR2**	EA
Flow Gauge 2" Brass Case		812922015440	**FLOWGAUGE2**	EA

STEEL/BRASS PLATED PRESSURE GAUGES		UPC #	Part #	U/M
Gauge 1-1/2" × 100 Psi	10 Gauges per Box	812922012586	**GAUGE112X100S**	EA
Gauge 1-1/2" × 30 Psi Red Line		812922012609	**GAUGE112X30S**	EA
Gauge 1-1/2" × 200 Psi Steel/Brass Plated			**GAUGE112X200S**	EA
Gauge 1-1/2" × 400 Psi Steel/Brass Plated			**GAUGE112X400S**	EA
Gauge 1-1/2" × 4000 Psi		812922012623	**GAUGE112X4000S**	EA
Gauge 2" × 100 Psi		812922012630	**GAUGE2X100S**	EA
Gauge 2" × 200 Psi		812922012647	**GAUGE2X200S**	EA
Gauge 2" × 30 Psi Red Line		812922012654	**GAUGE2X30S**	EA
Gauge 2" × 400 Psi		812922012661	**GAUGE2X400S**	EA
Gauge 2" × 4000 Psi U.L.		812922012678	**GAUGE2X4000S**	EA
Gauge 2-1/2" × 100 Psi		812922012685	**GAUGE212X100S**	EA
Gauge 2-1/2" × 200 Psi		812922012692	**GAUGE212X200S**	EA
Gauge 2-1/2" × 30 Psi Red Line		812922012708	**GAUGE212X30S**	EA
Gauge 2-1/2" × 400 Psi		812922012715	**GAUGE212X400S**	EA
Gauge 2-1/2" × 4000 Psi U.L.		812922012722	**GAUGE212X4000S**	EA
Flow Gauge 2" Steel Case		812922015471	**FLOWGAUGE2S**	EA

CABLE CONNECTORS

		UPC #	Part #	U/M
Cable Connector 102M	One per Box	877511003963	**CONNECTOR102M**	EA
Cable Connector 300 amp		877511004687	**CCONN300AMP**	EA
Cable Connector 500 amp		877511004694	**CCONN500AMP**	EA

ELECTRODE HOLDERS

		UPC #	Part #	U/M	Size
Electrode Holder 200amp	One per Box	877511004311	**ELECHLDR200AMP**	EA	200 amp
Electrode Holder 250amp		877511004328	**ELECHLDR250AMP**	EA	250 amp
Electrode Holder 300amp		877511004335	**ELECHLDR300AMP**	EA	300 amp
Electrode Holder Short Stub		877511004342	**ELECHLDRSHORT**	EA	

GROUND CLAMPS

Tweco® Style

COPPER GROUND CLAMP TWECO® STYLE		UPC #	Part #	U/M	Size
Tweco® Style Ground Clamp 200amp	One per Box	812922012937	**GCT200AMP**	EA	200 amp
Tweco® Style Ground Clamp 300amp		812922012944	**GCT300AMP**	EA	300 amp
Tweco® Style Ground Clamp 500amp		812922012951	**GCT500AMP**	EA	500 amp
Ground Clamp 300amp	One per Box	877511004663	**GCLAMP300AMP**	EA	300 amp
Ground Clamp 500amp		877511004670	**GCLAMP500AMP**	EA	500 amp

WELDING PLIERS, HEAT TREATED

Welper and Sidekick Pliers perform many functions:

- Remove Spatter from inside, outside and edge of nozzle.
- Wire drawing tool.
- Contact tip removal and installation.
- Insulation bushing removal & installation.
- Hammering.
- Wire cutting.
- Nozzle removal and installation.

		UPC #	Part #	U/M
WELPER YS-50 Welding Pliers	10 per carton	631291960010	**WELPER**	EA
SIDE-KICK MIG Welding Plier	6 per carton	812922011190	**SIDEKICK**	EA

CUTTING ATTACHMENT

4IN1 Cutting Attachment converts any standard torch into a convenient, multi-use tool that makes it possible to accurately bevel, cut circles, odd shapes and straight edges.

	UPC #	Part #	U/M
4-in-1 Cutting Attachment	812922014436	**4IN1**	EA

TIP CLEANERS

- Tip Cleaners are ideal for keeping all cutting tips & contact tips debris free.
- Multiple diameter round files for any orifice and a flat file for burs or edges.

		UPC #	Part #	U/M
Tip Cleaner - Standard	10 per Box	877511003949	**TCSTD**	EA
Tip Cleaner - King		877511003956	**TCKING**	EA

CHIPPING HAMMERS

		UPC #	Part #	U/M
Chisel & Cone	24 per Box	877511004113	**CONECHISEL**	EA
Cross Chisel & Cone		877511004434	**CROSSCHISEL**	EA

MAGNETIC HOLDERS

		UPC #	Part #	U/M	Size
Magnet Holder - Medium	10 per Box	877511004618	**MAGNETHLDRMED**	EA	Medium
Magnet Holder - Large		877511004601	**MAGNETHLDRLG**	EA	Large

PICK KITS

	UPC #	Part #	U/M
4 Way Pick Kit **	812922014412	**4WAY**	EA

*** while supplies last***

MAGNETIC FLASHLIGHTS

		UPC #	Part #	U/M
Pocket LED Magnetic Work Light, 8 Super Bright LEDs	12 Pieces per Pop Box	812922015228	**FLOODLIGHT**	EA

Only sold in standard cartons of 12

SPOOL ADAPTER

The Universal Spool Adapter quickly adapts to most full size wire-feeders and integrated MIG Machines to use a 4 inch (1lb or 2lb) spools without altering the standardized 2 inch spindle assembly.

- Spool adapter positions the spool close to wire inlet guide allowing smoother wire feeding.
- It allows you to use a 4 inch spool for small jobs.
- Large rubber grommet to align the spool and wire with the inlet guide drive roll system.

		UPC #	Part #	U/M
Universal Welding Wire Spool Adapter	One Adapter	812922015884	SPLADAPTER	EA

MARKERS & CONTACT TIPS

SOAPSTONE & HOLDERS-METAL MARKING DEVICE

		UPC #	Part #	U/M	Size
Flat Soapstone	6 Gross per Box	877511003970	**SOAPSTONEFLAT**	GR	Flat 1/2"×5"
Round Soapstone		877511003987	**SOAPSTONERND**	GR	Round 1/4"×5"
Holder Flat Soapstone	10 Holders per Box	877511003994	**HLDRFLATSOAP**	EA	
Holder Round Soapstone		877511004007	**HLDRRNDSOAP**	EA	

Only Sold in Standard Box

SILVER-STREAK™ MARKERS

		UPC #	Part #	U/M
Silver-Streak™ Marking Pen	One pen	877511007046	**PEN**	EA
Silver-Streak™ Round Refills - 6 per Tube	One tube	877511007053	**PENREFILL**	EA

CONTACT TIPS - MILLER™ STYLE

CONTACT TIPS - MILLERTM STYLE		UPC #	Part #	U/M	Size
Contact Tip .023 For MIG Gun 10 Pack	10 Tips per Pack / 50 Packs per Box	812922012548	**CTIP66**	PK	.023
Contact Tip .030 For MIG Gun 10 Pack		812922011565	**CTIP67**	PK	.030
Contact Tip .035 For MIG Gun 10 Pack		812922011572	**CTIP68**	PK	0.035
Contact Tip .045 For MIG Gun 10 Pack		812922011589	**CTIP69**	PK	0.045

CONTACT TIPS - TWECO® STYLE

25 Pieces per Pack - Ziplock Polybag with a Header Card		UPC #	Part #	U/M	Size
Tweco Contact Tip 25 Pack 11-23	25 Tips per Bag	812922014115	**11-23**	PK	.023
Tweco Contact Tip 25 Pack 11-30		812922014122	**11-30**	PK	.030
Tweco Contact Tip 25 Pack 11-35		812922014139	**11-35**	PK	.035
Tweco Contact Tip 25 Pack 11-45 **			**11-45**	PK	.045
Tweco Contact Tip 25 Pack 14-30		812922014177	**14-30**	PK	.030
Tweco Contact Tip 25 Pack 14-35		812922014184	**14-35**	PK	.035
Tweco Contact Tip 25 Pack 14-45		812922014207	**14-45**	PK	.045
Tweco Contact Tip 25 Pack 14-52		812922014214	**14-52**	PK	.052
Tweco Contact Tip 25 Pack 14H-35		812922014238	**14H-35**	PK	.035
Tweco Contact Tip 25 Pack 14H-45		812922014252	**14H-45**	PK	.045
Tweco Contact Tip 25 PackK 14H-52 **	25 tips per bag	812922014276	**14H-52**	PK	.052
Tweco Contact Tip 25 Pack 14H-116 **		812922014283	**14H-116**	PK	.063
Tweco Contact Tip 25 Pack 14-116 **		812922014467	**14-116**	PK	.063
Tweco Contact Tip 25 Pack 14H-564 **		812922014474	**14H-564**	PK	.078
Tweco Contact Tip 25 Pack 15H-116 **		812922014313	**15H-116**	PK	.063
Tweco Contact Tip 25 Pack 15H-332		812922014337	**15H-332**	PK	.094
Tweco Contact Tip 25 Pack 15H-564 **		812922014320	**15H-564**	PK	.078

5 Pieces per Pack - Ziplock Polybag With a Header Card					
Tweco Contact Tip 5 Pack 11-23	5 tips per Bag	812922015365	**11-23-5PK**	PK	.023
Tweco Contact Tip 5 Pack 11-30		812922015389	**11-30-5PK**	PK	.030
Tweco Contact Tip 5 Pack 11-35		812922015402	**11-35-5PK**	PK	.035
Tweco Contact Tip 5 Pack 11-45 **		812922015426	**11-45-5PK**	PK	.045
Tweco Contact Tip 5 Pack 14-35		812922015488	**14-35-5PK**	PK	.035
Tweco Contact Tip 5 Pack 14-45		812922015501	**14-45-5PK**	PK	.045
Tweco Contact Tip 5 Pack 14H-35 **		812922015563	**14H-35-5PK**	PK	.035
Tweco Contact Tip 5 Pack 14H-45			**14H-45-5PK**	PK	.045
Tweco Contact Tip 5 Pack 14H-52 **			**14H-52-5PK**	PK	.052
Tweco Contact Tip 5 Pack 14H-116 **			**14H-116-5PK**	PK	.063
Tweco Contact Tip 5 Pack 14H-564 **			**14H-564-5PK**	PK	.078

10 Pieces per Pack - Ziplock Polybag With a Header Card					
Tweco Contact Tip 10 Pack 11-23	10 tips per Bag	812922015372	**11-23-10PK**	PK	.023
Tweco Contact Tip 10 Pack 11-30		812922015396	**11-30-10PK**	PK	.030
Tweco Contact Tip 10 Pack 11-35		812922015419	**11-35-10PK**	PK	.035
Tweco Contact Tip 10 Pack 14-30		812922015471	**14-30-10PK**	PK	.030
Tweco Contact Tip 10 Pack 14-35		812922015495	**14-35-10PK**	PK	.035
Tweco Contact Tip 10 Pack 14-45 **			**14-45-10PK**	PK	.045
Tweco Contact Tip 10 Pack 14H-45 **		812922015594	**14H-45-10PK**	PK	.045
Tweco Contact Tip 10 Pack 14H-35 **		812922015570	**14H-35-10PK**	PK	.035
Tweco Contact Tip 10 Pack 14H-52 **		812922015617	**14H-52-10PK**	PK	.052
Tweco Contact Tip 10 Pack 14H-116 **		812922015556	**14H-116-10PK**	PK	.063
Tweco Contact Tip 10 Pack 14H-564 **			**14H-564-10PK**	PK	.078

Weldcote Contact Tips are manufactured using Copper Chrome Zirconium which has increased hardness, improved wear resistance and longer life than standard .copper contact tips

*** while supplies last*

CHEMICAL AIDS

ANTI-SPATTER

- Anti-Spatters Prevent Spatter From Adhering to Surrounding Metal Surfaces During Welding.
- Water-Based Formula Allows Easy Clean Up Without the Use of Solvent Cleaners.

ANTI-SPATTER		UPC #	Part #	U/M
Anti-Spatter 16 oz	12 per Case	877511004731	**ANTISPAT16**	EA
Anti-Spatter 24 oz		877511004748	**ANTISPAT24**	EA
Anti-Spatter 1 Gallon Solvent Based	1 Gallon		**ANTISPAT1GL**	EA
Anti-Spatter 5 Gallon Solvent Based **	5 Gallon		**ANTISPAT5GAL**	EA

ANTI-SPATTER WATER BASE		UPC #	Part #	U/M
Anti-Spatter 16 oz Aqua Shield	12 per Case	812922011824	**ANTISPAT16WB**	EA

Only Sold in Standard Cases

*** while supplies last*

NOZZLE GEL

Nozzle Gel is Directly Applied to the MIG Gun Nozzle and Contact tip to Prevent Adhesion of Weld Spatter.

NOZZLE GEL		UPC #	Part #	U/M
Nozzle Gel 16 oz	12 per Case	877511004755	**NOZZLEGEL16**	EA

Only Sold in Standard Cases

AEROSOL CANS-GALVANIZING SPRAY

Weldcote Galvanizing Spray provide zinc protection on welds, galvanized steel, base iron and other surfaces exposed to harsh and corrosive environments.

AEROSOL CANS-GALVANIZING SPRAY		UPC #	Part #	U/M
Galvanizing Spray 12.75 oz. Bright Regalv	12 per Case		**GALVSPRAY13B**	EA
Galvanizing Spray 13 oz		812922012838	**GALVSPRAY13**	EA

Only Sold in Standard Cases

COOLANT

Both Blue, Red , and Green Coolants are specially formulated for use on all water circulating systems.

- Recommended for Plasma, MIG, TIG, resistance welding and general industrial applications.
- **Blue Coolant** 19°F / -7°C, **Red Coolant** 6°F / -14°C

COOLANT		UPC #	Part #	U/M
Blue Coolant 1 Gallon 19°F / (7)°C	4 per Case	812922014443	**BLUECOOLANT**	EA
Red Coolant 1 Gallon 6°F / (14)°C	4 per Case	812922014450	**REDCOOLANT**	EA
Green Coolant (60) Degrees F 1 Gallon **	1 Gallon		**GREENCOOLANT**	EA

Only Sold in Standard Cases

*** while supplies last*

Cast Iron Flux				
Cast Iron Flux 1 po und jar		877511008920	**CASTIRONFLUX1JR**	EA

Chemical Sharpener				
Chemical Sharpener 4 oz replacement jar			**CHEMSHARP4OZ**	EA

MIG Nozzle Cleaner				
MIG nozzle cleaner		812922014429	**MIGREAMER**	EA

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PRODUCT CATALOG

July 2023

weldcote metals

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fax: 704-739-6116

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phone: 866-923-2167, fax: 909-923-7016

Weldcote Abrasive & Manufacturing Distribution Center & Training:

7720 Lehigh Avenue Niles, IL 60714

phone: 224-998-2600, 888-258-0121
fax: 224-998-2649

Weldcote Distribution & Sales:

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