Stainless Steel Cored Wire

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For several decades, industry has relied on the dependable quality of J.W. HARRIS solid GMAW (MIG) wires for trouble-free welding of the stainless steels, aluminum, copper-base alloys, magnesium and carbon steels.

Now, since introduction in the early 90's, J.W. HARRIS flux cored stainless steel wires have yielded consistently high performance and productivity.

The classifications produced are E308LT-1, E309LT-1 and E316LT-1, in diameters of .035", .045" and 1/16".

Characteristics: J.W. HARRIS flux cored stainless steel wires are precisely formulated for all position welding versatility with exceptional performance at high speed deposition rates.

Economy - 100% CO2 can be used as the shielding gas, even in the vertical-up and overhead positions.

Arc action is smooth and stable; also, the slag peels easily (less cleanup time). Operator appeal is a plus factor.

Chemical Compositions:

Product	C	Cr	Ni	Mo	Mn	Si	P	S	Cu	Fe
E308LT1-1	0.04	18.0-21.0	9.0-11.0	0.5	0.5-2.5	1.0	0.04	0.03	0.5	Rem.
E309LT1-1	0.04	22.0-25.0	12.0-14.0	0.5	0.5-2.5	1.0	0.04	0.03	0.5	Rem.
E316LT1-1	0.04	17.0-20.0	11.0-14.0	2.0-3.0	0.5-2.5	1.0	0.04	0.03	0.5	Rem.

Single values shown are maximum percentages.

Properties:

Product	Minimum Tensile Strength		Minimum Elongation in 2" (50mm) Percent
	psi	MPa	
E308LT1-1	75,000	515	35
E309LT1-1	75,000	515	30
E316LT1-1	70,000	485	30

General Usage

In each of these welding wires, the 0.04% maximum carbon content increases resistance to intergranular corrosion.

E308LT-1 is most frequently used for base metals of similar composition such as AISI Types 301, 302, 304, 305 and 308.

E309LT-1 is used for welding similar alloys in wrought or cast form; occasionally, to weld Type 304 base metals when severe corrosion conditions exist; and, at times, welding dissimilar steels.

E316LT-1 is used for welding similar alloys (containing about 2% molybdenum); also for high temperature service applications (the presence of molybdenum provides increased creep resistance at elevated temperatures).

Shielding Gases

100% CO2 can be used, even in the vertical-up and overhead positions. While AWS A5.22 indicates the "1" suffix for CO2 external shielding, the use of other shielding is not restricted. If an argon with 20 to 25 percent CO2 mixture is selected, the voltage may be somewhat lower than with 100% CO2. Generally, a gas flow rate of 40 cfh is suggested as a norm from which adjustments can be made, depending on variables encountered.

Wire Stick Out- 5/8" to 3/4" is suggested.

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25 lb. Spools

Product and Description	Stock Number	Size
	308LFCF8	.035
E308LT1-1	308LFCH8	.045
	308LFC38	1/16
	309LFCF8	.035
E309LT1-1	309LFCH8	.045
	309LFC38	1/16
	316LFCF8	.035
E316LT1-1	316LFCH8	.045
	316LFC38	1/16

Welding Parameters J.W. HARRIS Flux Cored Stainless Steel Welding Wired:

Wire Dia.	Weld Position	Type of Joint	Plate Thickness	Amperage	Voltage	Deposition (ipm)
.035" .9mm	Fla	Butt	1/8">	70 - 90	25 - 27	12 - 16
			1/4"	120 - 130	26 - 29	10 - 14
		Fillet	1/4"	110 - 130	26 - 29	12 - 16
	Vertical-Up	Butt & Fillet	3/8"	70 - 90	22 - 25>	6 -10
	Horizontal	Butt	3/32"	100 - 120	24 - 27	12 - 16
	Overhead	Fillet	3/8"	150 - 200	26 - 28	8 - 12
.045" 1.2mm	Flat	Butt	1/4"	180 - 200	29 - 32	12 - 16
		Fillet	3/8"	170 - 200	28 - 32	10 - 16
	Vertical-Up	Butt & Fillet	3/8”	110 - 140	21 - 24	4 - 8
	Horizontal	Butt	1/4"	150 - 180	26 - 30	10 - 16
	Overhead	Fillet	3/8"	150 - 180	26 - 30	10 - 14
1/16" 1.6mm	Flat	Butt	1/4"	210 - 220	27 - 30	14 - 16
		Fillet	3/8"	220 - 250	27 - 31	12 - 18
	Vertical-Up	Butt & Fillet	3/8”	130 - 160	21 - 24	6 - 8
	Horizontal	Butt	1/4"	150 - 200	27 - 30	10 - 16
	Overhead	Fillet	3/8"	150 - 200	27 - 30	12-14

Deposition Rate

Pounds Per Hour

Wire size	100 Amps	150 Amps	200 Amps	250 Amps
.035" /.9mm		7.50	12.13	
.045"/1.2mm	4.85	5.95	8.27	
1/16"/1.6mm		4.74	7.39	11.02

Pound for pound you can be confident that J.W. HARRIS flux cored stainless steel welding wires will deliver all that you might expect, and more!

Don’t Gamble .....Choose Harris Quality!