

SelectAlloy 316L-AP

Stainless Steel / Gas Shielded / Flux Cored

PRODUCT DATA SHEET

FEATURES

- Low C, < 0.04 wt%, minimizes carbide precipitation (sensitization) which makes the weld metal more resistant to intergranular corrosion.
- The addition of Mo improves resistance to pitting and crevice corrosion compared to type 308 stainless steel.
- Designed for welding in all positions where well washed beads can be achieved in both 100% CO₂ or 75-80% Ar/balance CO₂ shielding gas
- Smooth arc transfer and self-releasing slag that peels easily to ensure that clean up time is minimized.
- Applications for this alloy type include welding in the pulp and paper industry, chemical and textile processing equipment, furnace parts and in parts exposed to marine environments. Alloy types for welding include 316 stainless and similar alloys, such as A743 and A744 as well as CF-3M and CF-8M.

CONFORMANCES

AWS A5.22

E316LT1-1

E316LT1-4

E316T1-1

E316T1-4

ASME SFA 5.22

E316LT1-1

E316LT1-4

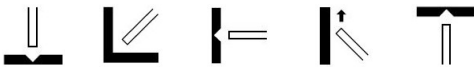
E316T1-1

E316T1-4

DIAMETERS [in (mm)]

0.035 (0.9), 0.045 (1.2), 0.052 (1.3), 1/16 (1.6)

POSITIONS



SHIELDING GAS

75-80% Ar + Balance CO₂, 100% CO₂

Flow Rate: 40 - 50 CFH

POLARITY

Direct Current Electrode Positive (DCEP)

TYPICAL WELD DEPOSIT CHEMISTRY (WT%)

Shielding Gas	Bi	C	Cr	Cu	Mn	Mo	Ni	P	S	Si	WRC-1992 Ferrite
100%CO ₂	>0.002	0.04	18.60	0.33	1.25	2.32	11.60	0.03	0.01	0.70	7
75%Ar / 25%CO ₂	>0.002	0.04	18.70	0.30	1.31	2.35	11.80	0.02	0.01	0.75	7

TYPICAL MECHANICAL PROPERTIES

Shielding Gas	Tensile Strength ksi (MPa)	Yield Strength ksi (MPa)	Elongation (%)	Weld Condition	PWHT Temp
100%CO ₂	82 (566)	59 (407)	40	As-Welded	-
75%Ar / 25%CO ₂	86 (593)	61 (421)	40	As-Welded	-



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RECOMMENDED WELDING PARAMETERS **

Diameter in (mm)	Shielding Gas	Position	WFS* in/min (m/min)	Amps	Volts	CTWD* in (mm)
0.035 (0.9 mm)	75% Ar/25% CO2	All Positions	325 (8.3)	110	23	1/2 (13)
		All Positions	400 (10.2)	120	24.5	1/2 (13)
		All Positions	470 (11.9)	130	26	1/2 (13)
		Flat & Horizontal	565 (14.4)	145	27.5	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	660 (16.8)	160	29	1/2 - 5/8 (13 - 16)
0.045 (1.2 mm)	75% Ar/25% CO2	All Positions	215 (5.5)	130	23	1/2 - 5/8 (13 - 16)
		All Positions	260 (6.6)	145	24.5	1/2 - 5/8 (13 - 16)
		All Positions	310 (7.9)	160	26	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	385 (9.8)	180	27.5	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	450 (11.4)	200	29	5/8 - 3/4 (16 - 19)
0.052 (1.3 mm)	75% Ar/25% CO2	All-Position	185 (4.7)	160	23	5/8 - 3/4 (16 - 19)
		All-Position	235 (6.0)	195	24.5	5/8 - 3/4 (16 - 19)
		All-Position	280 (7.1)	210	26	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	340 (8.6)	225	27.5	3/4 - 1 (19 - 25)
		Flat & Horizontal	395 (10.0)	245	29	3/4 - 1 (19 - 25)
1/16 (1.6 mm)	75% Ar/25% CO2	All Positions	135 (3.4)	160	23	5/8 - 3/4 (16 - 19)
		All Positions	190 (4.8)	195	24.5	5/8 - 3/4 (16 - 19)
		All Positions	225 (5.7)	210	26	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	255 (6.5)	225	27.5	3/4 - 1 (19 - 25)
		Flat & Horizontal	290 (7.4)	245	29	3/4 - 1 (19 - 25)

* WFS = Wire Feed Speed, CTWD = Contact Tip To Work Distance

**The parameters listed are recommended starting points of operation and the ranges for amperage, wfs, and voltage could be extended based on fitness for application. For products with "all-position" capability, as determined and listed in classification, the position recommendation can be determined based on operator skill and material thickness and isn't limited to the listing.

Parameters were established in 75% Ar/25% CO2. Raise by 1-1.5 volts when using 100% CO2.

APPROVALS

Agency	Approval	Shielding Gas	Diameter(s) in (mm)
ABS	E316LT1-1	C1 (100%CO2)	0.045 (1.2) - 1/16 (1.6)
	E316LT1-4	M21 (75%Ar / 25%CO2)	0.045 (1.2) - 1/16 (1.6)
CWB CSA W48-23	E316LT1-1	M21 (75%Ar / 25%CO2)	0.035 (0.9) - 1/16 (1.6)
	E316LT1-4	M21 (75%Ar / 25%CO2)	0.035 (0.9) - 1/16 (1.6)
	E316T1-4	M21 (75%Ar / 25%CO2)	0.035 (0.9) - 1/16 (1.6)
	E316T1-1	M21 (75%Ar / 25%CO2)	0.035 (0.9) - 1/16 (1.6)
	VL 316 L	C1 (100%CO2)	0.035 (0.9) - 1/16 (1.6)

PACKAGING (lbs [kgs])

33 (15) Spools, 60 (27.2) Coils, 500 (226.8) Round Drum, 800 (362.9) Hex Drum, 900 (408.2) Hex Drum

*Some packaging options may not be available depending on diameter and product. Special package options may be available upon request.



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STORAGE AND HANDLING

All products should be stored in original packaging, in dry conditions and handled with care. For more information refer to our website.



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