SelectAlloy 316L-AP_LNG

Stainless Steel / Gas Shielded / Flux Cored

PRODUCT DATA SHEET

FEATURES

- Specially formulated to produce good weld metal toughness via strict weld metal chemical composition control.
- Resulting deposited ferrite is consistently between 3-7 FN when measured either by predictive methods or using magnetic induction methods.
- 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 with minimal weaving in 75-80% Ar/balance CO2 shielding gas.
- Smooth arc transfer produces minimal spatter.
- Applications for this alloy type include fabrication or repair of cryogenic components of similar composition that require weld metal toughness to maintained at temperatures of -320ºF (-196ºC).

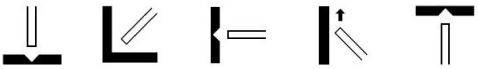
CONFORMANCES

AWS A5.22	E316LT1-4
	E316LT1-4J

DIAMETERS (in [mm])

0.045 (1.2), 1/16 (1.6)

POSITIONS



SHIELDING GAS

75-80% Ar + balance CO2
Flow Rate: 40 - 50 CFM

POLARITY

Direct Current Electrode Positive (DCEP)

TYPICAL WELD DEPOSIT CHEMISTRY (WT%)

Shielding Gas	C	Cr	Cu	Mn	Mo	Ni	P	S	Si	WRC-1992 Ferrite
75%Ar / 25%CO2	0.02	18.6	0.16	0.84	2.39	13.3	0.02	0.01	0.54	4

Bismuth is not intentionally added and levels are not known to be greater than 0.002 (WT%)

TYPICAL MECHANICAL PROPERTIES

Shielding Gas	Tensile Strength ksi (MPa)	Yield Strength ksi (MPa)	Elongation (%)	Weld Condition	PWHT Temp	CVN @ -320°F (-196°C) ft-lb (J)	Lateral Expansion
75%Ar / 25%CO2	84 (579)	60 (414)	37	As-Welded	-	27 (37)	20 (mils)

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RECOMMENDED WELDING PARAMETERS

Diameter in (mm)	Shielding Gas	Position	WFS* in/min (m/min)	Amps	Volts	CTWD* in (mm)
0.045 (1.2 mm)	75% Ar/25% CO2	All-Position	215 (5.5)	130	23	1/2 - 5/8 (13 - 16)
		All-Position	260 (6.6)	145	24.5	1/2 - 5/8 (13 - 16)
		All-Position	310 (7.9)	160	26	1/2 - 5/8 (13 - 16)
		Flat & Horizontal	420 (10.7)	180	27.5	5/8 - 3/4 (16 - 19)
		Flat & Horizontal	450 (11.4)	200	29	5/8 - 3/4 (16 - 19)
1/16 (1.6 mm)	75% Ar/25% CO2	All-Position	135 (3.4)	160	23	5/8 - 3/4 (16 - 19)
		All-Position	190 (4.8)	195	24.5	5/8 - 3/4 (16 - 19)
		All-Position	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*

APPROVALS

Agency	Approval	Shielding Gas	Diameter(s) in (mm)
ABS	E316LT1-4J	M21 (75%Ar / 25%CO2)	0.045 (1.2)

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.*

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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