

SelectAlloy 316L-AP

Description:

SelectAlloy 316L-AP is a gas shielded, flux cored, stainless steel electrode designed to weld in all positions. It has a nominal weld metal composition of 19% Cr, 12.5% Ni, 2.5% Mo and a maximum carbon content of 0.04%. The presence of molybdenum improves resistance to pitting and provides increased creep resistance at elevated temperatures. The low carbon content minimizes carbide precipitation and makes it more resistant to intergranular corrosion. SelectAlloy 316L-AP is designed for use with 100% carbon dioxide or a blend of 75-80% argon/balance carbon dioxide. Shielding gas mixtures with more than 75-80% Argon are not recommended.

Classifications & Approvals:

- E316LT1-1, E316LT1-4 per AWS A5.22 (Also meets E316T1-1, E316T1-4)
- ABS: E316LT1-1, E316LT1-4
- CWB: E316LT1-1, E316LT1-4

Characteristics:

SelectAlloy 316L-AP provides superb performance characteristics in all positions, using either 100% CO₂ or 75-80% Ar/balance CO₂ shielding gas. Flat, well washed beads can be achieved with minimal weaving. Spatter is very low and slag peeling is excellent, minimizing cleanup.

Applications:

SelectAlloy 316L-AP finds wide application in the pulp and paper industry, chemical and textile processing equipment, furnace parts and in parts exposed to marine environments. It is used to weld type 316 stainless and other similar alloys, such as ASTM A743 and A744, types CF-8M and CF-3M.

Typical Mechanical Properties:

Typical Wolding Parameters (COo)*.

Ultimate Tensile Strength (psi) Yield Strength (psi) Percent Elongation	<u>CO</u>₂ 82,000 59,000 41	<u>75% Ar/25% CO₂</u> 85,500 60,500 41				
Typical Weld Deposit Chemistry:						
	<u>CO2</u>	75% Ar/25% CO ₂				
Carbon (C)	0.04	0.04				
Chromium (Cr)	17.6	17.9				
Nickel (Ni)	11.6	11.6				
Manganese (Mn)	1.14	1.32				
Silicon (Si)	0.64	0.74				
Molybdenum (Mo)	2.36	2.30				
Ferrite Number (WRC, 1992)	4	4				

Typical Weiding Parameters (CO2).					
WFS (ipm)	Amperage	Voltage	CTWD	Dep. Rate (lbs/hr)	
200	120	25	5/8 – 3/4"	4.3	
335	170	27	5/8 – 3/4"	7.1	
440	200	29	5/8 – 3/4"	9.3	
780	290	35	5/8 – 3/4"	17.0	
150	150	24	3/4 – 1"	5.0	
235	210	28	3/4 – 1"	7.8	
345	270	31	3/4 – 1"	11.3	
500	350	34	3/4 – 1"	17.0	
	WFS (ipm) 200 335 440 780 150 235 345 500	WFS (ipm) Amperage 200 120 335 170 440 200 780 290 150 150 235 210 345 270 500 350	WFS (ipm) Amperage Voltage 200 120 25 335 170 27 440 200 29 780 290 35 150 150 24 235 210 28 345 270 31 500 350 34	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	

* Optimum conditions are in **boldface** type. Lower by 1-2 volts when using 75-80% Ar/balance CO₂.

Standard Diameters: **

1/16", 0.045"

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800.341.5215 www.select-arc.com Notice: The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. Thus the results are not guarantees for use in the field. The manufacturer disclaims any warranty of merchantability or fitness for any particular purpose with respect to its products.



Rev 1 (12/4/17)