

SelectAlloy 317L-AP

Description:

SelectAlloy 317L-AP is a gas-shielded, flux cored, stainless steel electrode designed to weld in all positions. It has a nominal weld metal composition of 19.5% Cr, 13% Ni, 3.5% Mo and a maximum carbon content of 0.04%. The higher level 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 317L-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:

- E317LT1-1, E317LT1-4 per AWS A5.22 (Also meets E317T1-1, E317T1-4 per AWS A5.22)

Characteristics:

SelectAlloy 317L-AP provides superb performance characteristics in all positions, using either CO₂ or Argon + 20-25% 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 317L-AP contains a higher content of molybdenum than 316L-AP which gives it better resistance to pitting corrosion. It provides excellent resistance to solutions of sulfuric acid and sulfur bearing gases. It is used to weld type 316 and 317 stainless. **SelectAlloy 317L-AP** finds application in the pulp and paper industry, food and pharmaceutical equipment.

Typical Mechanical Properties (CO₂)*:

Ultimate Tensile Strength (psi)	90,000
Yield Strength (psi)	69,000
Percent Elongation	34

*Strength levels will be slightly higher w/Ar+20-25% CO₂

Typical Weld Deposit Chemistry (CO₂):

Shielding Gas	C	Cr	Ni	N	Mn	Si	Mo
100CO ₂	0.03	18.90	12.50	0.05	0.85	0.75	3.30
Ferrite Number (WRC, 1992) - 8							

Typical Welding Parameters (CO₂)*:

Diameter	WFS (ipm)	Amperage	Voltage	ESO (in.)	Dep. Rate (lbs/hr)
.035"	300	110	25	5/8-3/4	3.3
.035"	500	150	26	5/8-3/4	5.4
.035"	600	165	27	5/8-3/4	6.3
.035"	700	175	28	5/8-3/4	7.7
.045"	250	130	24	5/8-3/4	5.4
.045"	300	160	26	5/8-3/4	6.3
.045"	425	200	28	5/8-3/4	9.2
.045"	780	270	34	5/8-3/4	16.2
1/16"	150	170	25	3/4-1	5.4
1/16"	195	215	27	3/4-1	7.0
1/16"	240	250	28	3/4-1	8.6
1/16"	320	305	29	3/4-1	11.5

* Optimum conditions are in **boldface type**. Lower by 2 volts when using Ar+20-25% CO₂.

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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.