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PREMIER 347-AP DATA SHEET

PREMIER 347-AP

AWS CLASS E347T1-1, E347T1-4

CODE AND SPECIFICATION DATA:

AWS A5.22 ASME SFA 5.22

DESCRIPTION:

PREMIER 347-AP is a gas-shielded, flux cored, all position stainless steel electrode with a nominal weld metal composition of 19.5% chromium, 10% nickel, and 0.5% niobium. The niobium forms a stable carbide which reduces chromium carbide precipitation and makes weld metal more resistant to intergranular corrosion. PREMIER 347-AP is utilized in the welding of furnace parts, pressure vessels, chemical tanks, and automotive parts. It is also used to weld Types 321, 347, and 348 stainless steels.

CHARACTERISTICS:

- Flat, well-washed beads achieved with minimal weaving.
- Excellent slag peeling minimizes cleanup
- Very low spatter.
- Outstanding all position performance.

SHIELDING GAS: 100% CO₂, 75-80% Ar/ balance CO₂, 40-55 cfh

DIAMETERS: .045", 1/16"

WELDING POSITIONS: All positions

TYPICAL CHEMICAL COMPOSITION (CO₂):

Carbon (C)	0.044
Chromium (Cr)	19.35
Manganese (Mn)	1.55
Molybdenum (Mo)	0.07
Nickel (Ni)	9.65
Niobium (Nb)	0.537
Phosphorous (P)	0.02
Silicon (Si)	0.61
Sulfur (S)	0.006

Ferrite Number (WRC, 1992) – 10.0

TYPICAL MECHANICAL PROPERTIES (CO₂):

Ultimate Tensile Strength (psi)	88,470 psi (610 MPa)
Percent Elongation	35.0%
CVN (ft•lbs) @ -4°F (-20°C)	38 ft•lbs (52 Joules)
CVN (ft•lbs) @ -76°F (-60°C)	32 ft•lbs (44 Joules)



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TYPICAL CHEMICAL COMPOSITION (Ar + 20% CO₂):

Carbon (C)	0.048
Chromium (Cr)	19.30
Manganese (Mn)	1.57
Molybdenum (Mo)	0.07
Nickel (Ni)	9.70
Niobium (Nb)	0.537
Phosphorous (P)	0.02
Silicon (Si)	0.68
Sulfur (S)	0.006

Ferrite Number (WRC, 1992) – 9.8

TYPICAL MECHANICAL PROPERTIES (Ar + 20% CO₂):

Ultimate Tensile Strength (psi)	92,830 psi (640 MPa)
Percent Elongation	37.0%
CVN (ft•lbs) @ -4°F (-20°C)	37 ft•lbs (50 Joules)
CVN (ft•lbs) @ -76°F (-60°C)	33 ft•lbs (45 Joules)

TYPICAL WELDING PARAMETERS (CO₂):

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

Note: Optimum conditions are in boldface type. Reduce by 2 volts when using 75-80% Ar/ balance CO₂.

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. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for the use in the field. The manufacturer disclaims any warranty of merchantability of fitness for any particular purpose with respect to its products.

CAUTION: Consumers should be thoroughly familiar with the safety precautions on the warning label posted in each shipment and in the American National Standards A49.1, "Safety in Welding and Cutting," published by the American Welding Society, 550 NW LeJune Road, Miami, FL 33126: OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210.

Pinnacle Alloys MSDS sheet may be obtained at www.pinnaclealloys.com.