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ISO 9001:2015 REGISTERED
Certificate No.: 50040 & 50415

PREMIER 308LT-AP DATA SHEET

Pinnacle Alloys Premier 308LT-AP

AWS CLASS E308LT1-1, E308LT1-4

CODE AND SPECIFICATION DATA:

AWS A5.22 ASME SFA 5.22; UNS W30835

DESCRIPTION:

Pinnacle Alloys Premier E308LT1-1/4 has a nominal composition (wt.-%) of 19.5 Cr, 10 Ni, and a carbon content which is at the low end of the range, 0.04 max. Because of the low carbon content in this alloy, it is possible to obtain resistance to intergranular corrosion due to carbide precipitation without the use of stabilizers such as niobium or titanium. Pinnacle Alloys Premier E308LT1-1/4 finds wide application in the welding of components for the chemical, paper, textile, and pharmaceutical industries. It may be used to weld 301, 302, 304L, 308, and 308L stainless steels. Types 321 and 347 may also be welded as long as the service temperature does not exceed 500°F. It delivers superb performance characteristics in all positions, has little spatter, and easy-to-remove slag. Minimal weaving is required to achieve a flat, well-washed bead.

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP)

DIAMETERS: .035", .045", 1/16"

SHIELDING GAS: 100% CO₂, 75-80% Ar/ balance CO₂, 35-50 cfh

WELDING POSITIONS: All positions

1/16" is recommended for use in flat and horizontal positions only



FERRITE NUMBER AND PITTING RESISTANCE EQUIVALENT NUMBER:

To obtain Ferrite Numbers or PRE_N, please contact SOWESCO technical support at the number below.

SOWESCO, LLC www.pinnaclealloys.com
9384 Wallisville Road • Houston, Texas 77013 • 1-800-856-9353 • (713) 688-9353 • Fax (713) 688-6985
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TYPICAL DEPOSIT COMPOSITION (CO₂):

	AWS Spec	Weld Metal Analysis (%)
Carbon (C)	0.04	0.031
Chromium (Cr)	18.0-21.0	19.38
Copper (Cu)	0.75	0.091
Manganese (Mn)	0.5-2.5	1.42
Molybdenum (Mo)	0.75	0.096
Nickel (Ni)	9.0-11.0	10.56
Nitrogen (N)	N.S.*	0.018
Phosphorus (P)	0.04	0.023
Silicon (Si)	1.00	0.72
Sulfur (S)	0.03	0.007

*N.S. means Not Specified.

NOTE: Single values are maximums.

TYPICAL MECHANICAL PROPERTIES (CO₂):

	AWS Spec (min)	As Welded
Ultimate Tensile Strength	75,000 psi (520 MPa)	82,240 psi (567 MPa)
Percent Elongation in 2"	30%	48.4%
CVN @ -78°F (-60°C)	N.S.	27 ft•lb _f (36 Joules)
CVN @ -184°F (-120°C)	N.S.	25 ft•lb _f (34 Joules)

TYPICAL DEPOSIT COMPOSITION (Ar + 20% CO₂):

	AWS Spec	Weld Metal Analysis (%)
Carbon (C)	0.04	0.03
Chromium (Cr)	18.0-21.0	19.62
Copper (Cu)	0.75	0.081
Manganese (Mn)	0.5-2.5	1.53
Molybdenum (Mo)	0.75	0.093
Nickel (Ni)	9.0-11.0	10.57
Phosphorus (P)	0.04	0.024
Silicon (Si)	1.00	0.77
Sulfur (S)	0.03	0.006

NOTE: Single values are maximums.

TYPICAL MECHANICAL PROPERTIES (Ar + 20% CO₂):

	AWS Spec (min)	As Welded
Ultimate Tensile Strength	75,000 psi (520 MPa)	83,110 psi (573 MPa)
Percent Elongation in 2"	30%	48%
CVN @ -78°F (-60°C)	N.S.	28 ft•lb _f (38 Joules)
CVN @ -184°F (-120°C)	N.S.	27 ft•lb _f (36Joules)

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TYPICAL WELDING PARAMETERS:

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. Parameters reflect CO₂ shielding gas - reduce by 2 volts when using 75-80% Ar/ balance CO₂. Maintaining a proper welding procedure, including pre-heat and interpass temperatures, may be critical depending on the type and thickness of material being welded.

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, 8669 NW 36 Street, #130, 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 SDS sheets may be obtained on the website below.