

**E308-16/E308H-16 DATA SHEET****Pinnacle Alloys E308-16/E308H-16**

AWS CLASS E308-16, E308H-16

CODE AND SPECIFICATION DATA:

AWS A5.4 ASME SFA 5.4; UNS W36810

DESCRIPTION:

Pinnacle Alloys E308-16/E308H-16 has a nominal composition (wt.-%) of 19.5 Cr and 10 Ni. This electrode has a restricted carbon content of 0.04%-0.08%. This provides for higher tensile and creep strengths at elevated temperatures. These electrodes are used for welding Type 304H base metal as well as similar alloys in wrought or cast form, such as AISI grades 301, 302, 304, and 305. The weld metal ferrite content is normally targeted for 5 FN to minimize the effect of sigma embrittlement in high-temperature service. This wire features a smooth arc transfer with very little spatter and easy slag removal. Pinnacle Alloys E308-16/E308H-16 is particularly suited for welding food processing equipment and in petroleum and chemical processing plants.

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP) or AC**DIAMETERS:** 3/32", 1/8", 5/32", 3/16"**WELDING POSITIONS:** All positions

3/16" is recommended for use in flat and horizontal positions only

**TYPICAL DEPOSIT COMPOSITION:**

	AWS Spec	Weld Metal Analysis (%)
Carbon (C)	0.04-0.08	0.05
Chromium (Cr)	18.0-21.0	20.0
Copper (Cu)	0.75	0.07
Manganese (Mn)	0.5-2.5	1.00
Molybdenum (Mo)	0.75	0.12
Nickel (Ni)	9.0-11.0	9.50
Phosphorus (P)	0.04	0.02
Silicon (Si)	1.00	0.60
Sulfur (S)	0.03	0.006

NOTE: Single values are maximums.

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AN ISO 9001:2015 COMPANY
CERTIFICATE NO.: C755336

FERRITE NUMBER AND PITTING RESISTANCE EQUIVALENT NUMBER:

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

TYPICAL MECHANICAL PROPERTIES:

	AWS Spec (min)	As Welded
Ultimate Tensile Strength	80,000 psi (550 MPa)	88,000 psi (610 MPa)
Percent Elongation in 2"	30%	45%

TYPICAL WELDING PARAMETERS:

Diameter	Type of Current	Amperage Range		Voltage Range
		Flat	Out of Position	
3/32"	DCEP or AC	70-90	65-80	20-23
1/8"	DCEP or AC	80-110	75-95	21-24
5/32"	DCEP or AC	120-160	100-120	22-25
3/16"	DCEP or AC	170-190	Not recommended	23-26

NOTE: 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.