



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

E308-16/E308L-16 DATA SHEET

Pinnacle Alloys E308-16/E308L-16

AWS CLASS E308-16, E308L-16

CODE AND SPECIFICATION DATA:

AWS A5.4 ASME SFA 5.4; UNS W30810 (308) & UNS W30813 (308L)

DESCRIPTION:

Pinnacle Alloys E308-16/E308L-16 has a nominal composition (wt.-%) of 19.5 Cr and 10 Ni. With a maximum 0.04% carbon content, this electrode reduces the possibility of intergranular carbide precipitation and increases the resistance to intergranular corrosion. This electrode is used for welding similar materials such as AISI grades 301, 302, 304, and 305. Pinnacle Alloys E308-16/E308L-16's characteristics make this electrode the smart choice for general structural welding, as well as for food, pharmaceutical, and brewery equipment applications.

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 | 0.03 |
| Chromium (Cr) | 18.0-21.0 | 20.0 |
| Copper (Cu) | 0.75 | 0.04 |
| Manganese (Mn) | 0.5-2.5 | 1.00 |
| Molybdenum (Mo) | 0.75 | 0.12 |
| Nickel (Ni) | 9.0-11.0 | 10.0 |
| Phosphorus (P) | 0.04 | 0.02 |
| Silicon (Si) | 1.00 | 0.53 |
| Sulfur (S) | 0.03 | 0.004 |

NOTE: Single values are maximums.

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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) | 85,000 psi (590 MPa) |
| Percent Elongation in 2" | 30% | 42% |

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 CRF 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.