



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

## E310-16 DATA SHEET

### Pinnacle Alloys E310-16

AWS CLASS E310-16

#### CODE AND SPECIFICATION DATA:

AWS A5.4 ASME SFA 5.4; UNS W31010

#### DESCRIPTION:

Pinnacle Alloys E310-16 has a nominal composition (wt.-%) of 26.5 Cr and 21 Ni. This electrode is used to weld stainless steel of similar composition in cast and wrought form. It may also be used for surfacing low alloy steels where 310 deposit is required. Pinnacle Alloys E310-16's exceptional resistance to oxidation and high temperature toughness make this electrode well suited for welding in 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)	0.08-0.20	0.12
Chromium (Cr)	25.0-28.0	26.0
Copper (Cu)	0.75	0.09
Manganese (Mn)	1.0-2.5	2.00
Molybdenum (Mo)	0.75	0.11
Nickel (Ni)	20.0-22.5	21.0
Phosphorus (P)	0.03	0.02
Silicon (Si)	0.75	0.44
Sulfur (S)	0.03	0.008

NOTE: Single values are maximums.

[www.pinnaclealloys.com](http://www.pinnaclealloys.com)

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**FERRITE NUMBER AND PITTING RESISTANCE EQUIVALENT NUMBER:**

To obtain Ferrite Numbers or PRE<sub>N</sub>, please contact SOWESCO technical support at the number below.

**TYPICAL MECHANICAL PROPERTIES:**

	<b>AWS Spec (min)</b>	<b>As Welded</b>
Ultimate Tensile Strength	80,000 psi (550 MPa)	82,000 psi (565 MPa)
Percent Elongation in 2"	30%	38%

**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.