



## E410-16 DATA SHEET

**Pinnacle Alloys E410-16**

AWS CLASS E410-16

**CODE AND SPECIFICATION DATA:**

AWS A5.4 ASME SFA 5.4; UNS W41010

**DESCRIPTION:**

Pinnacle Alloys E410-16 has a nominal composition (wt.-%) of 12 Cr that is an air-hardening steel. Preheat and postheat treatments are required to achieve welds of adequate ductility for many engineering purposes. Pinnacle Alloys E410-16 welds alloys of similar compositions and is also used for the surfacing of carbon steels to resist abrasion, erosion, and corrosion.

**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:**

	<b>AWS Spec</b>	<b>Weld Metal Analysis (%)</b>
Carbon (C)	0.12	0.08
Chromium (Cr)	11.0-13.5	12.7
Copper (Cu)	0.75	0.09
Manganese (Mn)	1.00	0.80
Molybdenum (Mo)	0.75	0.07
Nickel (Ni)	0.70	0.40
Phosphorus (P)	0.04	0.02
Silicon (Si)	0.90	0.32
Sulfur (S)	0.03	0.001

NOTE: Single values are maximums.

SOWESCO, LLC

[www.pinnaclealloys.com](http://www.pinnaclealloys.com)9384 Wallisville Road • Houston, Texas 77013 • **1-800-856-9353** • (713) 688-9353 • Fax (713) 688-6985  
2602 S. 50th Avenue • Phoenix, Arizona 85043 • **1-866-442-9353** • (602) 442-9353 • Fax (602) 442-9354



**AN ISO 9001:2015 COMPANY**  
**CERTIFICATE NO.: C755336**

**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>PWHT*</b>
Ultimate Tensile Strength	75,000 psi (520 MPa)	118,000 psi (810 MPa)
Percent Elongation in 2"	20%	22%

\*Reflects post-weld heat treatment for 1 hour at 1350°F-1400°F; furnace cool at a rate not to exceed 200°F per hour to 600°F; air cool to ambient.

**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.