



Pinnacle Alloys are products of SOWESCO

ISO 9001:2008 REGISTERED
Certificate No.: 50040 & 50415

E16-8-2-16 DATA SHEET

Pinnacle Alloys E16-8-2-16

AWS CLASS E16-8-2-16

CODE AND SPECIFICATION DATA:

AWS A5.4 ASME SFA 5.4; UNS W36810

DESCRIPTION:

Pinnacle Alloys E16-8-2-16 has a nominal composition (wt.-%) of 15.5 Cr, 8.5 Ni, 1.5 Mo. This electrode is utilized for welding Types 16-8-2, 316, and 347 stainless steels in high pressure, high temperature piping systems. The weld deposit usually has a Ferrite Number no higher than 5 FN. Pinnacle Alloys E16-8-2-16 features good hot ductility properties and offers relative freedom from weld and crater cracking even under high restraint conditions. The weld metal is usable in either the as-welded or solution-treated condition. These electrodes depend on a very carefully balanced chemical composition to develop their fullest properties. Pinnacle Alloys E16-8-2-16 is well suited for welding cat crackers and furnace parts as well as petrochemical and power generation industry components.

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)	0.10	0.05
Chromium (Cr)	14.6-16.5	15.5
Copper (Cu)	0.75	0.08
Manganese (Mn)	0.5-2.5	1.20
Molybdenum (Mo)	1.0-2.0	1.20
Nickel (Ni)	7.5-9.5	8.50
Phosphorus (P)	0.03	0.02
Silicon (Si)	0.60	0.46
Sulfur (S)	0.03	0.006

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 SOWESCO 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"	35%	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 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.