



Pinnacle Alloys are products of SOWESCO

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

## E308HT1-1/4 DATA SHEET

### Pinnacle Alloys E308HT1-1/4

AWS CLASS E308HT1-1, E308HT1-4, E308T1-1, E308T1-4

#### CODE AND SPECIFICATION DATA:

AWS A5.22 ASME SFA 5.22; UNS W30831

#### DESCRIPTION:

Pinnacle Alloys E308HT1-1/4 has a nominal composition (wt.-%) of 19.5 Cr, 10 Ni, and has a carbon content which is in the high end of the range, 0.04 to 0.08. Carbon content in this range provides higher tensile and creep strength at elevated temperatures. These electrodes are used primarily for welding Type 304H base metal. Pinnacle Alloys E308HT1-1/4 is utilized in the welding of components for the petrochemical industry. It delivers superb performance characteristics in all positions, has little spatter, and easy-to-remove slag. Minimal weaving is required to achieve a flat, well-washed bead.

**TYPE OF CURRENT:** Direct Current Electrode Positive (DCEP)

**DIAMETERS:** .035", .045", 1/16"

**SHIELDING GAS:** 100% CO<sub>2</sub>, 75-80% Ar/ balance CO<sub>2</sub>, 35-50 cfh

**WELDING POSITIONS:** All positions  
1/16" is recommended for use in flat and horizontal positions only



#### TYPICAL DEPOSIT COMPOSITION:

	AWS Spec	Weld Metal Analysis (%)
Carbon (C)	0.04-0.08	0.07
Chromium (Cr)	18.0-21.0	19.37
Copper (Cu)	0.75	0.19
Manganese (Mn)	0.5-2.5	1.09
Molybdenum (Mo)	0.75	0.12
Nickel (Ni)	9.0-11.0	10.02
Nitrogen (N)	N.S.*	0.05
Phosphorus (P)	0.04	0.02
Silicon (Si)	1.00	0.51
Sulfur (S)	0.03	0.009

\*N.S. means Not Specified.

NOTE: Single values are maximums.

SOWESCO, LLC

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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:

	AWS Spec (min)	As Welded
Ultimate Tensile Strength	80,000 psi (550 MPa)	87,000 psi (600 MPa)
Yield Strength	Not required	64,500 psi (440 MPa)
Percent Elongation in 2"	30%	42%

#### TYPICAL WELDING PARAMETERS:

Diameter	WFS (ipm)	Amperage	Volts	ESO (in.)	Deposition Rate (lbs/hr)
.035"	300	110	25	5/8-3/4"	3.3
	<b>500</b>	<b>150</b>	<b>26</b>	<b>5/8-3/4"</b>	<b>5.4</b>
	<b>600</b>	<b>165</b>	<b>27</b>	<b>5/8-3/4"</b>	<b>6.3</b>
	700	175	28	5/8-3/4"	7.7
.045"	250	130	24	5/8-3/4"	5.4
	<b>300</b>	<b>160</b>	<b>26</b>	<b>5/8-3/4"</b>	<b>6.3</b>
	<b>425</b>	<b>200</b>	<b>28</b>	<b>5/8-3/4"</b>	<b>9.2</b>
	780	270	34	5/8-3/4"	16.2
1/16"	150	170	25	3/4-1"	5.4
	<b>195</b>	<b>215</b>	<b>27</b>	<b>3/4-1"</b>	<b>7.0</b>
	<b>240</b>	<b>250</b>	<b>28</b>	<b>3/4-1"</b>	<b>8.6</b>
	320	305	29	3/4-1"	11.5

**Note:** Optimum conditions are in boldface type. Parameters reflect CO<sub>2</sub> shielding gas - reduce by 2 volts when using 75-80% Ar/ balance CO<sub>2</sub>. 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.

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