



Pinnacle Alloys are products of SOWESCO

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

## E310T1-1/4 DATA SHEET

### Pinnacle Alloys E310T1-1/4

AWS CLASS E310T1-1, E310T1-4

#### CODE AND SPECIFICATION DATA:

AWS A5.22 ASME SFA 5.22; UNS W31031

#### DESCRIPTION:

Pinnacle Alloys E310T1-1/4 has a nominal composition (wt.-%) of 26.5 Cr, 21 Ni. These electrodes are most often used to weld base metal of similar compositions. As the deposit is fully austenitic, it is susceptible to hot cracking. This tendency can be reduced by reducing joint restraint and by using narrow stringer beads.

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

**DIAMETERS:** .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)	0.20	0.10
Chromium (Cr)	25.0-28.0	25.35
Copper (Cu)	0.75	0.15
Manganese (Mn)	1.0-2.5	1.40
Molybdenum (Mo)	0.75	0.10
Nickel (Ni)	20.0-22.5	22.5
Nitrogen (N)	N.S.*	0.035
Phosphorus (P)	0.03	0.01
Silicon (Si)	1.00	0.50
Sulfur (S)	0.03	0.01

\*N.S. means Not Specified.

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NOTE: Single values are maximums.

#### 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 WELDING PARAMETERS:

Diameter	WFS (ipm)	Amperage	Volts	ESO (in.)	Deposition Rate (lbs/hr)
.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>
	425	200	27	5/8-3/4"	9.2
1/16"	150	170	25	3/4-1"	5.4
	<b>195</b>	<b>210</b>	<b>26</b>	<b>3/4-1"</b>	<b>7.0</b>
	<b>240</b>	<b>250</b>	<b>27</b>	<b>3/4-1"</b>	<b>8.6</b>
	320	300	28	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.