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

## E70T-1C/9C DATA SHEET

### Pinnacle Alloys E70T-1C/9C

AWS CLASS E70T-1C, E70T-9C

#### CODE AND SPECIFICATION DATA:

AWS A5.20 ASME SFA 5.20; UNS W07601 & W07609

#### DESCRIPTION:

Pinnacle Alloys E70T-1C/9C is a carbon steel electrode designed for single and multipass welding of carbon and certain low alloy steels. It is used in the flat position and for horizontal fillet welds. The high level of deoxidation in this classification facilitate welding over light mill scale, rust, and other contaminants. Typical applications include the welding of structural carbon steels where high deposition rates and superior penetration characteristics are preferred. Typical base metal specifications for these steels are ASTM A 36, A 285-C, A 515-55, and A 516-70, which have UNS Numbers K02600, K02801, K02001, and K02700, respectively.

**DIAMETERS:** .045", .052", 1/16", 5/64", 3/32"

**WELDING POSITIONS:** Flat and horizontal fillets only



#### TYPICAL DEPOSIT COMPOSITION:

	AWS Spec	Weld Metal Analysis (%)
		100% CO <sub>2</sub>
Carbon (C)	0.12	0.06
Manganese (Mn)	1.75	1.56
Phosphorus (P)	0.03	0.006
Silicon (Si)	0.90	0.58
Sulfur (S)	0.03	0.01

NOTE: Single values are maximums.



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#### TYPICAL MECHANICAL PROPERTIES:

	AWS Spec (min)	As Welded
Ultimate Tensile Strength	70,000-95,000 psi (490-670 MPa)	88,600 psi (610 MPa)
Yield Strength	58,000 psi (390 MPa)	73,000 psi (505 MPa)
Percent Elongation in 2"	22%	24%
CVN @ -20°F (-30°C)	20 ft•lb <sub>f</sub> (27 Joules)	29 ft•lb <sub>f</sub> (39 Joules)
CVN @ 0°F (-20°C)	Not required	34 ft•lb <sub>f</sub> (46 Joules)

#### TYPICAL WELDING PARAMETERS:

Diameter	Position	Optimum			Amperage Range	Voltage Range
		Amperage	Voltage	WFS (ipm)		
.045"	Flat	250	28	450	130-300	21-32
.052"	Flat	275	28	400	150-375	20-32
1/16"	Flat	330	29	330	150-400	24-34
5/64"	Flat	390	29	250	280-430	26-33
3/32"	Flat	425	29	180	300-550	26-34

**NOTE:** Properties and parameters reflect CO<sub>2</sub> shielding gas. Maintaining a proper welding procedure, including pre-heat and interpass temperatures, may be critical depending on the type and thickness of steel 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.