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

PREMIER 70 DATA SHEET

Pinnacle Alloys Premier 70 (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 Premier 70 (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 ₂
Carbon (C)	0.12	0.46
Manganese (Mn)	1.75	1.65
Phosphorus (P)	0.03	0.011
Silicon (Si)	0.90	0.56
Sulfur (S)	0.03	0.013

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)	83,000 psi (575 MPa)
Yield Strength	58,000 psi (390 MPa)	76,000 psi (525 MPa)
Percent Elongation in 2"	22%	26.5%
CVN @ -20°F (-30°C)	20 ft•lb _f (27 Joules)	37 ft•lb _f (50 Joules)
CVN @ 0°F (-20°C)	Not required	50 ft•lb _f (68 Joules)

TYPICAL WELDING PARAMETERS:

Diameter	Position	Optimum			Amperage Range	Voltage Range
		Amperage	Voltage	WFS (ipm)		
.045"	Flat	250	30	~500	220-320	24-34
.052"	Flat	320	32	~500	280-370	30-38
1/16"	Flat	350	35	~350	280-420	30-40
5/64"	Flat	400	34	~300	330-470	31-38
3/32"	Flat	450	34	~200	380-520	31-38

NOTE: Properties and parameters reflect CO₂ 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.