



AN ISO 9001:2015 COMPANY
CERTIFICATE NO.: C755336

E70C-6M DATA SHEET

Pinnacle Alloys E70C-6M / Premier 70C-6M

AWS CLASS E70C-6M

CODE AND SPECIFICATION DATA:

AWS A5.18 ASME SFA 5.18; UNS W07706

DESCRIPTION:

Pinnacle Alloys E70C-6M is a metal cored electrode intended for both single pass and multipass applications. These electrodes are characterized by spray arc and excellent bead wash characteristics. They are intended to be used with 75-80% Ar/ balance CO₂ shielding gas. 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: .035", .045", .052", 1/16", 5/64"

WELDING POSITIONS: All positions



TYPICAL DEPOSIT COMPOSITION:

	AWS Spec	Weld Metal Analysis (%)
Carbon (C)	0.12	0.042
Chromium (Cr)	0.20	0.04
Copper (Cu)	0.50	0.04
Manganese (Mn)	1.75	1.53
Molybdenum (Mo)	0.30	0.01
Nickel (Ni)	0.50	0.03
Phosphorus (P)	0.03	0.012
Silicon (Si)	0.90	0.64
Sulfur (S)	0.03	0.008
Vanadium (V)	0.08	0.010

NOTE: Single values are maximums.



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TYPICAL MECHANICAL PROPERTIES:

	AWS Spec (min)	As Welded
Ultimate Tensile Strength	70,000 psi (480 MPa)	78,300 psi (540 MPa)
Yield Strength	58,000 psi (400 MPa)	68,500 psi (475 MPa)
Percent Elongation in 2"	22%	25.5%
CVN @ -20°F (-30°C)	20 ft•lb _f (27 Joules)	37 ft•lb _f (52 Joules)
CVN @ -4°F (-20°C)	Not required	52 ft•lb _f (72 Joules)

TYPICAL WELDING PARAMETERS:

Diameter	Amperage	Voltage	Deposition Rate (lbs/hr)	Deposition Efficiency Range
.045"	200	24	5.95	90-92
	250	28	8.82	93-95
	300	30	11.90	95-96
	350	33	15.87	95-96
1/16"	350	32	13.23	93-95
	400	34	15.43	94-96
	450	36	17.85	95-96

NOTE: These values were calculated using optimum parameters, flat position, and DCEP polarity. 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.