



E6010 DATA SHEET

Pinnacle Alloys E6010

AWS CLASS E6010

CODE AND SPECIFICATION DATA:

AWS A5.1 ASME SFA 5.1; UNS W06010

DESCRIPTION:

Pinnacle Alloys E6010 electrodes are characterized by a deeply penetrating, forceful, spray type arc and readily removable, thin, friable slag which may not seem to completely cover the weld bead. Fillet welds usually have a relatively flat weld face and have a rather coarse, unevenly spaced ripple. The coverings are high in cellulose, usually exceeding 30% by weight. These electrodes are recommended for all positions, particularly on multiple pass applications in the vertical and overhead welding positions and where welds of good soundness are required. Pinnacle Alloys E6010 is frequently selected for joining pipe and generally are capable of welding in the vertical position with either uphill or downhill progression. The majority of applications for these electrodes are in joining carbon steel. However, they have been used to advantage on galvanized steel and on some low-alloy steels. Typical applications include shipbuilding, buildings, bridges, storage tanks, piping, and pressure vessel fittings. It can be used to weld the following API 5L steels: Grade A, B, X-42, X-46, X-52, X-56, and for the root pass on material up to X-80.

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP)

DIAMETERS: 3/32", 1/8", 5/32"

STORAGE & RECONDITIONING: After opening, store dry at room temperature and keep away from heat source. Reconditioning is not recommended.

WELDING POSITIONS: All positions





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TYPICAL DEPOSIT COMPOSITION:

	AWS Spec	Weld Metal Analysis (%)
Carbon (C)	0.20	0.15
Chromium (Cr)	0.20	0.04
Manganese (Mn)	1.20	0.52
Molybdenum (Mo)	0.30	0.003
Nickel (Ni)	0.30	0.06
Phosphorus (P)	N.S.	0.01
Silicon (Si)	1.00	0.40
Sulfur (S)	N.S.	0.015
Vanadium (V)	0.08	0.01

*N.S. means Not Specified.
 NOTE: Single values are maximums.

TYPICAL MECHANICAL PROPERTIES:

Hermetically Sealed Cans (50#)	AWS Spec (min)	As Welded
Ultimate Tensile Strength	60,000 psi (430 MPa)	84,000 psi (576 MPa)
Yield Strength	48,000 psi (330 MPa)	70,000 psi (479 MPa)
Percent Elongation in 2"	22%	26%
Reduction of Area	Not required	58%
CVN @ -20°F (-30°C)	20 ft•lb _f (27 Joules)	37 ft•lb _f (50 Joules)

Plastic Packaging (5# & 10#)	AWS Spec (min)	As Welded
Ultimate Tensile Strength	60,000 psi (430 MPa)	72,500 psi (500 MPa)
Yield Strength	48,000 psi (330 MPa)	60,900 psi (420 MPa)
Percent Elongation in 2"	22%	29%
CVN @ -32°F (0°C)	Not required	44 ft•lb _f (60 Joules)
CVN @ -20°F (-30°C)	20 ft•lb _f (27 Joules)	30 ft•lb _f (40 Joules)

TYPICAL WELDING PARAMETERS:

Diameter	Type of Current	Amperage	Deposition Rate (lbs/hr)	Amperage Range	Voltage Range
3/32"	DCEP	55	1.30	40-70	26-28
1/8"	DCEP	100	1.62	80-120	26-27
5/32"	DCEP	140	1.98	110-160	26-29

NOTE: Optimum conditions are in boldface type. For out of position welding, decrease amperage by 15%. These values were calculated using optimum parameters and DCEP polarity. Allowance made for 2" stub loss. Maintaining a proper welding procedure, including pre-heat and interpass temperatures, may be critical depending on the type and thickness of steel being welded.



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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.

www.pinnaclealloys.com

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