



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

E6011 DATA SHEET

Pinnacle Alloys E6011

AWS CLASS E6011

CODE AND SPECIFICATION DATA:

AWS A5.1 ASME SFA 5.1; UNS W06011

DESCRIPTION:

Pinnacle Alloys E6011 electrodes are designed to be used with AC current and duplicate the usability characteristics and mechanical properties of the E6010 classifications. Although also usable with DCEP, a decrease in joint penetration will be noted when compared to the E6010 electrodes. These 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. Pinnacle Alloys E6011 is a cellulosic electrode with penetrating characteristics designed to handle coated steels. This electrode is an excellent choice for shipbuilding and structural work, general purpose fabrication, galvanized steel work, and rail cars.

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP) or AC

DIAMETERS: 3/32", 1/8", 5/32", 3/16"

STORAGE & RECONDITIONING: After opening, store dry at room temperature (humidity above 50% should be avoided). At no time should this electrode be stored in an oven above 130°F. Reconditioning is not recommended.

WELDING POSITIONS: All positions

3/16" is recommended for use in flat and horizontal positions only





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TYPICAL DEPOSIT COMPOSITION:

	AWS Spec	Weld Metal Analysis (%)
Carbon (C)	0.20	0.12
Chromium (Cr)	0.20	0.04
Manganese (Mn)	1.20	0.71
Molybdenum (Mo)	0.30	0.01
Nickel (Ni)	0.30	0.06
Phosphorus (P)	N.S.	0.009
Silicon (Si)	1.00	0.29
Sulfur (S)	N.S.	0.009
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)	82,000 psi (565 MPa)
Yield Strength	48,000 psi (330 MPa)	69,000 psi (478 MPa)
Percent Elongation in 2"	22%	26%
CVN @ -20°F (-30°C)	20 ft•lb _f (27 Joules)	38 ft•lb _f (52 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)	59,500 psi (410 MPa)
Percent Elongation in 2"	22%	24%
CVN @ -4°F (-20°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"	AC or DCEP	60	1.60	60-80	24-26
1/8"	AC or DCEP	100	2.60	80-125	23-26
5/32"	AC or DCEP	140	3.30	130-160	24-26
3/16"	AC or DCEP	180	3.90	160-190	24-26

NOTE: Optimum conditions are in boldface type. For out of position welding, decrease amperage by 15%. These values were calculated using optimum parameters and AC 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.

www.pinnaclealloys.com
9384 Wallisville Road • Houston, Texas 77013 • 1-800-856-9353 • (713) 688-9353 • Fax (713) 688-6985
2602 S. 50th Avenue • Phoenix, Arizona 85043 • 1-866-442-9353 • (602) 442-9353 • Fax (602) 442-9354



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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.