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E11018-M DATA SHEET

Pinnacle Alloys E11018-M

AWS CLASS E11018-M H4R

CODE AND SPECIFICATION DATA:

AWS A5.5 ASME SFA 5.5, F-4, A-12

DESCRIPTION:

Pinnacle Alloys E11018-M is an outstanding electrode designed for use in Military applications which require weld joints with 100,000 psi minimum tensile strength. It provides excellent puddle control with good wetting action and tie in. Pinnacle Alloys E11018-M is an excellent choice for reinforcing steel and with high-tensile steels.

FEATURES:

- Good arc characteristics
- Good ductility
- Quick and easy slag removal
- Low moisture reabsorption
- Low smoke level
- Low hydrogen, less than 4 ml/100 g
- Low spatter level

BENEFITS:

- Stable, easy to control arc
- High impact resistance
- Reduces clean-up time
- Prevents starting porosity
- Welder safety and comfort
- Resistant to hydrogen-induced cracking
- Improves weld bead appearance, higher deposition

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

DIAMETERS: 3/32", 1/8", 5/32", 3/16", 1/4"

RECONDITIONING & STORAGE: If electrode has been exposed to the atmosphere for an extended period of time, recondition for one hour at 600°F. After opening, store in holding oven (250°F to 300°F) until used.

TYPICAL DIFFUSIBLE HYDROGEN BY GAS CHROMATOGRAPHY: 2.0 ml/100g

TYPICAL DEPOSIT COMPOSITION:

	Weld Metal Analysis (%)	AWS Spec
Carbon (C)	0.04	0.10 max
Chromium (Cr)	0.19	0.40 max
Manganese (Mn)	1.57	1.30-1.80
Molybdenum (Mo)	0.29	0.25-0.50
Nickel (Ni)	1.99	1.25-2.50
Phosphorous (P)	0.015	0.03 max
Silicon (Si)	0.34	0.60 max
Sulfur (S)	0.01	0.03 max
Vanadium (V)	0.01	0.05 max



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TYPICAL MECHANICAL PROPERTIES:

	As Welded	AWS Spec (min)
Ultimate Tensile Strength	116,000 psi (799 MPa)	110,000 psi
Yield Strength	107,000 psi (736 MPa)	98,000-110,000 psi
Percent Elongation in 2"	22%	20%
CVN @ -60°F	56 ft•lb _f (76 Joules)	20 ft•lb _f (27 Joules)

TYPICAL WELDING PARAMETERS:

Diameter	Type of Power	Amperage	Deposition Rate (lbs/hr)	Amperage Range
3/32"	DCEP or AC	100	2.0	75-115
1/8"	DCEP or AC	135	2.5	90-160
5/32"	DCEP or AC	175	3.9	130-220
3/16"	DCEP or AC	250	5.1	200-300
1/4"	DCEP or AC	300	7.8	300-400

NOTE: Optimum conditions are in boldface type. For out of position welding, decrease amperage by 15%. 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, 550 NW LeJune Road, 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 MSDS sheet may be obtained at www.pinnaclealloys.com.