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E7018-AC DATA SHEET

Pinnacle Alloys E7018-AC
AWS CLASS E7018 H8
CODE AND SPECIFICATION DATA:
AWS A5.1 ASME SFA 5.1, F-4, A-1

DESCRIPTION:
Pinnacle Alloys E7018-AC is designed for AC power sources and works exceptionally well on utility welders. When looking for excellence in skip or tack welds, this is the product. Pinnacle Alloys E7018-AC is an excellent choice for low/medium/high carbon steels, skip or tack welds, high strength-low alloy steels, farms, shops, and hobbyists.

FEATURES:
- Self-removing slag
- Flat bead contour
- Good wetting action
- Reliable starts and restarts
- Very stable arc
- Excellent restriking characteristics

BENEFITS:
- Allows more arc time; Reduces clean up time
- Results in excellent weld bead appearance
- Prevents cold laps or undercutting
- Provides better welds due to no porosity
- Easy to control; Minimal spatter; smooth & quiet
- Reduces frustration caused by electrode sticking; ideal for beginning welders and hobbyists, job shops, and farms; great for tack or skip welds

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

DIAMETERS: 3/32”, 1/8”, 5/32”

STORAGE & RECONDITIONING: After opening, store at 220°F to 350°F. If the electrode has been exposed to the atmosphere for extended periods of time, it should be reconditioned for one hour at 575°F.

RECOMMENDED WELDING TECHNIQUES:

Arc Length	- Very short (less than half the diameter of the electrode)
Flat	- Angle electrode 10-15° from 90°
Vertical Up	- Use weaving technique
Vertical Down	- Not recommended
Overhead	- Use slight weaving motion within the puddle

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TYPICAL DEPOSIT COMPOSITION:

	Weld Metal Analysis (%)	AWS Spec (max)
Carbon (C)	0.05	0.15
Chromium (Cr)	0.06	0.20
Manganese (Mn)	0.75	1.60
Molybdenum (Mo)	0.01	0.30
Nickel (Ni)	0.08	0.30
Phosphorous (P)	0.01	0.035
Silicon (Si)	0.33	0.75
Sulfur (S)	0.02	0.035
Vanadium (V)	0.02	0.03
Mn + Ni + Cr + Mo + V	0.92	1.75

TYPICAL MECHANICAL PROPERTIES:

	As Welded	AWS Spec (min)
Ultimate Tensile Strength	88,000 psi (607 MPa)	70,000 psi (483 MPa)
Yield Strength	77,000 psi (532 MPa)	58,000 psi (400 MPa)
Percent Elongation in 2”	30%	22%
CVN @ -20°F	30 ft•lb$_f$ (41 Joules)	20 ft•lb$_f$ (27 Joules)

TYPICAL WELDING PARAMETERS:

Diameter	Type of Power	Amperage	Volts	Deposition Rate (lbs/hr)	Deposition Efficiency %	Amperage Range
3/32”	DCEP, **AC**, or DCEN	**90**	**22**	**2.03**	**62**	70-110
1/8”	DCEP, **AC**, or DCEN	**130**	**25**	**2.58**	**65**	90-165
5/32”	DCEP, **AC**, or DCEN	**170**	**27**	**3.19**	**65**	125-220

NOTE: Optimum conditions are in boldface type. For out of position welding, decrease amperage by 15%. Allowance made for 2” stub loss included. 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 CRF 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.