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E7024 DATA SHEET

Pinnacle Alloys E7024
AWS CLASS E7024, E7024-1
CODE AND SPECIFICATION DATA:
AWS A5.1 ASME SFA 5.1, F-1, A-1

DESCRIPTION:
Pinnacle Alloys E7024 is an excellent high-speed electrode for fillet welds. It is exceptionally fast when used down hand in properly designed weld joints or in horizontal fillet welds where equal leg fillets are desired. The arc force of Pinnacle Alloys E7024 minimizes slag entrapment and the slag is self-removing in most applications. Pinnacle Alloys E7024 is an excellent choice for earthmoving equipment, railroad cars, mining machinery, structurals, plate fabrication, shipbuilding, and mobile trailers.

FEATURES:
- High deposition
- Uses drag welding technique
- Self-removing slag
- Meets E7024-1 specifications

BENEFITS:
- Faster travel speed
- Easy to use
- Easy clean up
- Can be used wherever an E7024 or E7024-1 is called for

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

DIAMETERS: 1/8”, 5/32”, 3/16”, 7/32”, 1/4”

STORAGE & RECONDITIONING: After opening, store at 60°F to 100°F and below 50% relative humidity or in a holding oven at 100°F to 120°F. Reconditioning should be for one hour at 250°F to 300°F.

RECOMMENDED WELDING TECHNIQUES:

Arc Length	- Short arc or drag technique
Flat	- Use faster speed of travel; angle electrodes 30° from 90°
Vertical Up	- Not recommended
Vertical Down	- Not recommended
Overhead	- Not recommended

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TYPICAL DEPOSIT COMPOSITION:

	Weld Metal Analysis (%)	AWS Spec (max)
Carbon (C)	0.06	0.15
Chromium (Cr)	0.05	0.20
Manganese (Mn)	0.77	1.25
Molybdenum (Mo)	0.01	0.30
Nickel (Ni)	0.07	0.30
Phosphorous (P)	0.008	0.035
Silicon (Si)	0.37	0.90
Sulfur (S)	0.019	0.035
Vanadium (V)	0.03	0.08

TYPICAL MECHANICAL PROPERTIES:

	As Welded	AWS Spec (min)
Ultimate Tensile Strength	79,000 psi (545 MPa)	70,000 psi (483 MPa)
Yield Strength	71,000 psi (487 MPa)	58,000 psi (400 MPa)
Percent Elongation in 2”	26%	22%
Reduction of Area	20% to 40%	Not required
CVN @ 0°F	50 ft•lb$_f$ (68 Joules)	20 ft•lb$_f$ (27 Joules)

TYPICAL WELDING PARAMETERS:

Diameter	Type of Power	Amperage	Deposition Rate (lbs/hr)	Deposition Efficiency %	Amperage Range	Volts Range
1/8”	**AC or DCEN**	**140**	**3.42**	**65.8**	130-150	26-27
5/32”	**AC or DCEN**	**200**	**4.94**	**68.2**	180-225	26-28
3/16”	**AC or DCEN**	**240**	**6.06**	**69.3**	200-280	26-28
7/32”	**AC or DCEN**	**280**	**7.35**	**69.0**	250-320	
1/4”	**AC or DCEN**	**330**	**8.83**	**69.1**	300-360	

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 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.