

CARBON-MOLYBDENUM (C-Mo) ELECTRODES

Atom Arc 7018-Mo

AWS Class E7018-A1

AC-DCEP (Electrode Positive)

Electrode Imprint Marking: 7018-A1

Code and Specification Data:

AWS A5.5, ASME SFA 5.5

ABS: AWS A5.5

Military - MIL-E-0022200/7, MIL-7018-A1

Description:

Atom Arc 7018-Mo electrodes are recommended for welding low-alloy, high tensile steels of 50 ksi (345 MPa) minimum yield strength, and also the 0.50% Molybdenum steels. They are used in the fabrication and erection of boilers, pressure piping and tubing, and other pressure vessel applications.

Typical Mechanical Properties

(Tested according to MIL-E-0022200/7)

	As Welded	Stress Relieved	
		1 hr.	8 hrs.
		@1150°F (621°C)	@1150°F (621°C)
Yield Strength, psi (MPa)	75,000 (517)	74,300 (512)	73,300 (506)
Tensile Strength, psi (MPa)	87,000 (600)	86,100 (594)	84,700 (584)
% Elongation in 2" (51 mm)	30	30	30
% Reduction in Area	72	72	74

Typical Charpy V-Notch Impact Properties

Testing Temp.	As Welded ft.-lbs. (J)	Stress Relieved	
		1 hr.	8 hrs.
		@1150°F (621°C) ft.-lbs. (J)	@1150°F (621°C) ft.-lbs. (J)
72°F (22°C)	98 (133)	98 (133)	104 (141)
0°F (-18°C)	70 (95)	68 (92)	64 (87)
-20°F (-29°C)	68 (92)	52 (71)	47 (64)

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Typical Undiluted Weld Metal Analysis (%)

C	Mn	Si	P	S	Mo
0.04	0.75	0.42	0.017	0.014	0.53

Preheat:

Preheat should be used on hardenable steels to prevent the formation of a hard heat-affected zone. Preheat may also be required in welding heavy sections.

Standard Diameters and Packages

3/32" (2.4 mm) x 10 & 50# (4.5 & 22.7 kg) TSC

1/8" (3.2 mm) x 10 & 50# (4.5 & 22.7 kg) TSC

5/32" (4.0 mm) x 10 & 50# (4.5 & 22.7 kg) TSC

3/16" (4.8 mm) x 50# (22.7 kg) TSC

7/32" (5.6 mm) x 50# (22.7 kg) TSC

1/4" (6.4 mm) x 50# (22.7 kg) TSC

TSC = Tear Strip Can