

Atom Arc 7018



Atom Arc 7018 is an all-position low hydrogen moisture resistant electrode with a deep, penetrating arc. This premium quality electrode meets a multitude of codes and welding specifications. Atom Arc 7018 was developed to weld carbon and low-alloy steels, including a variety of hardenable steels.

Classifications	AWS A5.1 : E7018 H4R ASME SFA 5.1
Approvals	ABS 3Y/AWS A5.1: E7018 CWB CSA W48 E4918 DNV 3Y(H10) LR 3m 3Ym(H10) MIL-E-22200/1 MIL-7018
Industry	Automotive Bridge Construction Civil Construction Industrial and General Fabrication Mobile Equipment Railcars Ship/Barge Building

Approvals are based on factory location. Please contact ESAB for more information.

Welding Current	AC or DC+
Coating Type	Low-hydrogen iron powder

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Reduction in Area	Elongation
Stress Relieved 8hr 621°C (1150°F)	395 MPa (57 ksi)	485 MPa (70 ksi)	77 %	33 %
As Welded	470 MPa (68 ksi)	540 MPa (78 ksi)	75 %	30 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
Stress Relieved 8hr 621°C (1150°F)	-29 °C (-20 °F)	260 J (193 ft-lb)

Typical Weld Metal Analysis %

C	Mn	Si	S	P
0.045	1.10	0.40	0.014	0.015

Deposition Data

Diameter	Optimal Amps	Current	Deposition Rate	Deposition Efficiency %
6.4 mm (1/4 in.)	300 A	300-400 A	3.5 kg/h (7.7 lb/h)	78 %
6.4 mm (1/4 in.)	350 A	300-400 A	3.9 kg/h (8.7 lb/h)	77 %
3.2 mm (1/8 in.)	120 A	90-160 A	1.2 kg/h (2.6 lb/h)	71.6 %
3.2 mm (1/8 in.)	140 A	90-160 A	1.2 kg/h (2.7 lb/h)	70.9 %
4.8 mm (3/16 in.)	200 A	200-300 A	2.2 kg/h (4.9 lb/h)	76.4 %
4.8 mm (3/16 in.)	250 A	200-300 A	2.4 kg/h (5.4 lb/h)	74.6 %
2.4 mm (3/32 in.)	90 A	70-100 A	0.8 kg/h (1.7 lb/h)	66.3 %
4.0 mm (5/32 in.)	140 A	130-220 A	1.4 kg/h (3.1 lb/h)	75 %
4.0 mm (5/32 in.)	170 A	130-220 A	1.7 kg/h (3.8 lb/h)	73.5 %
5.6 mm (7/32 in.)	250 A	250-350 A	2.9 kg/h (6.5 lb/h)	75 %



Atom Arc 7018

Deposition Data				
Diameter	Optimal Amps	Current	Deposition Rate	Deposition Efficiency %
5.6 mm (7/32 in.)	300 A	250-350 A	3.3 kg/h (7.2 lb/h)	74 %