

Atom Arc 7018

Atom Arc 7018 is an all-position low hydrogen moisture resistant electrode. The wider operating ranges and smooth weld metal transfer minimizes post weld clean up. 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:	ASME SFA 5.1, AWS A5.1: E7018 H4R
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, Railcars, Bridge Construction, Industrial and General Fabrication, Civil Construction, Ship/Barge Building, Mobile Equipment

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

Typical Tensile Properties

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

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
As Welded	-29 °C (-20 °F)	225 J (168 ft-lb)
Stress Relieved 8 hr 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	Efficiency (%)
2.4 mm (3/32 in.)	90 A	70-100 A	0.8 kg/h (1.7 lb/h)	66.3 %
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 %
4.0 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 %
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 %
5.6 mm (7/32 in.)	250 A	250-350 A	2.9 kg/h (6.5 lb/h)	75 %
5.6 mm (7/32 in.)	300 A	250-350 A	3.3 kg/h (7.2 lb/h)	74 %
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 %