

Atom Arc 9018

Atom Arc 9018 electrodes are used for attachment welds on T-1, HY-80 and HY-90 steels and other high tensile, quenched and tempered steels.

Classifications:	AWS A5.5:E9018M H4R, ASME SFA 5.5
Approvals:	QPL-22200/1 MIL-9018-M, ABS 3Y, LR 3Ym(H15)
Industry or Segmentation:	Bridge Construction, Ship/Barge Building, Mobile Equipment, Industrial and General Fabrication, Railcars, Civil Construction

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	580 MPa (84 ksi)	655 MPa (95 ksi)	69 %	28 %
Stress Relieved 24 hr 593 °C (1100 °F)	470 MPa (68 ksi)	635 MPa (92 ksi)	72 %	27 %

Typical Charpy V-Notch Properties		
Condition	Testing Temperature	Impact Value
As Welded	-51 °C (-60 °F)	81 J (60 ft-lb)
Stress Relieved 24 hr 593 °C (1100 °F)	-51 °C (-60 °F)	92 J (66 ft-lb)

Typical Weld Metal Analysis %						
C	Mn	Si	S	P	Ni	Mo
0.043	1.00	0.26	0.01	0.012	1.60	0.29

Deposition Data				
Diameter	Optimal Amps	Amps	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.)	170 A	130-220 A	1.7 kg/h (3.8 lb/h)	73.5 %
4.0 mm (5/32 in.)	140 A	130-220 A	1.1 kg/h (3.1 lb/h)	75 %
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 %