

Atom Arc T

Atom Arc T was developed for welding T-1 steel in all applications. Mechanical properties of the welded joints equal or exceed the properties of the base steel in either the as welded or stress relieved condition, thus giving 100% design joint efficiency. In addition, Atom Arc T electrodes are suitable for many other applications, particularly where high-strength welds with excellent low temperature impact properties are required.

Classifications:	AWS A5.5:E11018M H4R, ASME SFA 5.5
Approvals:	QPL-22200/1 MIL-11018-M, CWB CSA W48: E7618-M-H4, ABS AWS A5.5: E11018-M
Industry or Segmentation:	Industrial and General Fabrication, Railcars, Mobile Equipment, Bridge Construction, Civil Construction, Ship/Barge Building

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	725 MPa (105 ksi)	795 MPa (115 ksi)	62 %	23 %
Stress Relieved 1 hr 552 °C (1025 °F) Flat Position	705 MPa (102 ksi)	770 MPa (112 ksi)	63 %	23 %

Typical Charpy V-Notch Properties		
Condition	Testing Temperature	Impact Value
As Welded	-18 °C (0 °F)	75 J (55 ft-lb)
As Welded	-40 °C (-40 °F)	65 J (48 ft-lb)
As Welded	-51 °C (-60 °F)	60 J (44 ft-lb)
Stress Relieved 1 hr 552 °C (1025 °F)	-18 °C (0 °F)	68 J (50 ft-lb)
Stress Relieved 1 hr 552 °C (1025 °F)	-40 °C (-40 °F)	57 J (42 ft-lb)
Stress Relieved 1 hr 552 °C (1025 °F)	-51 °C (-60 °F)	34 J (25 ft-lb)

Typical Weld Metal Analysis %							
C	Mn	Si	S	P	Ni	Cr	Mo
0.48	1.48	0.30	0.01	0.012	1.95	0.24	0.38

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 %
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 %