

Atom Arc 10018

Atom Arc 10018 electrodes are used primarily for applications which require weld joints of at least 100 ksi (690 MPa) tensile strength, good ductility and crack resistance. Good notch toughness at temperatures as low as -60°F (-51°C) is possible with this electrode. Atom Arc 10018 can be used to weld HY-80 and T-1 steel.

Specifications	
Classifications	ASME SFA 5.5 : E10018M H4R AWS A5.5 : E10018M H4R
Approvals	ABS : E10018-M1 (H4)
Industry	Ship/Barge Building Railcars Mobile Equipment Bridge Construction Industrial and General Fabrication

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

Welding Current	AC, DC+
Diffusible Hydrogen	< 4.0 ml/100g
Alloy Type	Low alloyed (1.7% Ni - 0.3% Mo)

Typical Tensile Properties			
Condition	Yield Strength	Tensile Strength	Elongation
As Welded	685 MPa (99 ksi)	745 MPa (108 ksi)	24 %

Typical Charpy V-Notch Properties		
Condition	Testing Temperature	Impact Value
As Welded	-40 °C (-40 °F)	62 J (46 ft-lb)
As Welded	-50 °C (-58 °F)	38 J (28 ft-lb)

Typical Weld Metal Analysis %									
C	Mn	Si	S	P	Ni	Cr	Mo	V	Cu
0.051	1.46	0.31	0.011	0.013	1.72	0.25	0.27	0.010	0.105

Typical Weld Metal Analysis %	
Nb	
0.004	

Deposition Data					
Diameter	Current	Voltage	Deposition Efficiency (%)	Burn-off Time /Electrode	Deposition Rate @ 90% I max
3.2 x 356.0 mm (1/8 x 14.0 in.)	90-160 A	23.9 V	72.23 %	70 sec	1.36 kg/h (3.0 lbs/h)
4.0 x 356.0 mm (5/32 x 14.0 in.)	130-220 A	24.3 V	72.06 %	75 sec	1.89 kg/h (4.2 lbs/h)
4.8 x 356.0 mm (3/16 x 14.0 in.)	200-300 A	24.3 V	71.04 %	74 sec	2.53 kg/h (5.6 lbs/h)