

OK Autrod 318Si

A continuous solid corrosion resisting stabilized chromium-nickel-molybdenum wire for welding of Cr-Ni-Mo and Cr-Ni stabilized or non-stabilized steels. OK Autrod 318Si has a good general corrosion resistance. The alloy is stabilized with niobium to improve the resistance against intergranular corrosion of the weld metal. The higher silicon content improves the welding properties, such as wetting. Due to stabilization of niobium this alloy is recommended for service temperatures up to 400 °C.

Specifications

Classifications	EN ISO 14343-A : G 19 12 3 Nb Si SFA/AWS A5.9 : ER318 (mod) Werkstoffnummer : ~1.4576
Approvals	CE : EN 13479 DB : 43.039.14 UKCA : EN 13479 VdTÜV : 09735

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

Alloy Type	Austenitic (with approx. 7 % ferrite) 19% Cr - 12% Ni - 3 % Mo - Nb
Shielding Gas	M12, M13 (EN ISO 14175)

Tensile Properties

Testing Condition	Yield Strength	Tensile Strength	Elongation
As Welded	460 MPa	615 MPa	35 %
Tested at 400°C.			
As Welded	400 MPa	540 MPa	35 %

Charpy Testing

Testing Condition	Testing Temp	Impact Value
As Welded	20 °C	100 J
As Welded	-60 °C	70 J

Typical Wire Composition %

C	Mn	Si	Ni	Cr	Mo	Cu	Nb
0.05	1.7	0.8	11.9	18.8	2.60	0.10	0.50

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	Cu	N
0.05	1.3	0.7	0.01	0.02	11.6	18.6	2.5	0.12	0.05

Typical Weld Metal Analysis %

Nb	FN WRC-92
0.6	7

Deposition Data

Diameter	Amps	Volts	Wire Feed Speed	Deposition Rate
0.8 mm	55-160 A	15-24 V	4.0-17.0 m/min	1.0-4.1 kg/h
1.0 mm	80-240 A	15-28 V	4.0-16.0 m/min	1.5-6.0 kg/h
1.2 mm	100-300 A	15-29 V	3.0-14.0 m/min	1.6-7.5 kg/h