

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.

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 NAKS/HAKC : 1.2MM VdTÜV : 09735

Alloy Type	Austenitic (with approx. 7 % ferrite) 19% Cr - 12% Ni - 3 % Mo - Nb
-------------------	---------------------------------------------------------------------

Typical Tensile Properties

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

Typical Charpy V-Notch Properties

Condition	Testing Temperature	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	Nb
0.04	1.3	0.8	0.010	0.015	12	19	2.8	0.1	0.7

Deposition Data

Diameter	Current	Voltage	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