

OK Autrod 316LSi

A continuous solid corrosion resisting chromium-nickel-molybdenum wire for welding of austenitic stainless alloys of 18% Cr - 8% Ni and 18% Cr - 10% Ni - 3% Mo types. OK Autrod 316LSi has a good general corrosion resistance, in particular the alloy has very good resistance against corrosion in acid and chlorinated environments. The alloy has a low carbon content which makes it particularly recommended where there is a risk of intergranular corrosion. The higher silicon content improves the welding properties, such as wetting. The alloy is widely used in the chemical and food processing industries as well as in ship building and various types of architectural structures.

Specifications

Classifications

EN ISO 14343-A : G 19 12 3 L Si
SFA/AWS A5.9 : ER316LSi
Werkstoffnummer : ~1.4430

Approvals

ABS : ER316LSi
CE : EN 13479
CWB : ER316LSi
DB : 43.039.05
DNV-GL : VL 316 L (M13)
DNV-GL : VL 316 L (M13)
UKCA : EN 13479
VdTÜV : 04268
NAKS/HAKC : 0.8-1.2 mm

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

Alloy Type

Austenitic (with approx. 8 % ferrite) 19% Cr - 12% Ni - 3% Mo - Low C - High Si

Shielding Gas

M12, M13 (EN ISO 14175)

Tensile Properties

Testing Condition	Yield Strength	Tensile Strength	Elongation
As Welded	400 MPa	560 MPa	37 %
Tested at 350°C.			
As Welded	340 MPa	440 MPa	26 %

Charpy Testing

Testing Condition	Testing Temp	Impact Value
As Welded	20 °C	120 J
As Welded	-60 °C	95 J
As Welded	-110 °C	70 J
As Welded	-196 °C	45 J

Typical Wire Composition %

C	Mn	Si	Ni	Cr	Mo	Cu
0.01	1.8	0.9	12.2	18.4	2.60	0.12

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	Cu
0.02	1.8	0.8	0.015	0.015	12	18.5	2.7	0.1

Deposition Data

Diameter	Amps	Volts	Wire Feed Speed	Deposition Rate
0.8 mm	55-160 A	12-24 V	4.0-17.0 m/min	1.0-4.1 kg/h
0.9 mm	65-220 A	15-28 V	3.5-18.0 m/min	1.1-5.4 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

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Deposition Data

Diameter	Amps	Volts	Wire Feed Speed	Deposition Rate
1.6 mm	230-375 A	23-31 V	5.5-9.0 m/min	5.2-8.6 kg/h

Welding Parameters

Wire Diameter

0.6 mm

1.14 mm