

OK Autrod 316L

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 316L has a good general corrosion resistance, particularly 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 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 SFA/AWS A5.9 : ER316L Werkstoffnummer : ~1.4430
Approvals	CE : EN 13479 UKCA : EN 13479

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

Alloy Type	Austenitic (with appr. 8 % ferrite) 19 % Cr - 12 % Ni - 3 % Mo - Low C
Shielding Gas	M12, M13 (EN ISO 14175)

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
0.5 hour(s) 1050 °C	350 MPa	590 MPa	42 %
As Welded	440 MPa	620 MPa	37 %
Tested at 350°C.			
As Welded	340 MPa	440 MPa	26 %
0.5 hour(s) 1050 °C	250 MPa	430 MPa	31 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
	20 °C	110 J
	-60 °C	90 J
	-196 °C	50 J
As Welded	20 °C	120 J
As Welded	-60 °C	95 J
As Welded	-196 °C	55 J

Typical Wire Composition %

C	Mn	Si	Ni	Cr	Mo	N	FN WRC-92
0.01	1.7	0.4	12.0	18.2	2.6	0.04	7

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	Cu	N
0.02	1.8	0.4	0.015	0.015	12	18.5	2.7	0.1	0.05

Typical Weld Metal Analysis %

FN WRC-92
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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

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Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate
0.9 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
1.14 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
1.6 mm	230-375 A	23-31 V	5.5-9.0 m/min	5.2-8.6 kg/h