

OK Autrod 308LSi

A continuous solid corrosion resisting chromium-nickel wire for welding of austenitic chromium nickel alloys of 18% Cr - 8% Ni-type. OK Autrod 308LSi has a good general corrosion resistance. The alloy has a low carbon content which makes this alloy 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 for pipes, tubes and boilers.

Specifications

Classifications

EN ISO 14343-A : G 19 9 L Si
SFA/AWS A5.9 : ER308LSi
Werkstoffnummer : ~1.4316

Approvals

BV : 308L SA BT (M12)
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CE : EN 13479
CWB : ER308LSi
DB : 43.039.01
DNV-GL : VL 308 L (M13)
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NAKS/HAKC : 0.8-1.2 mm
UKCA : EN 13479
VdTÜV : 04267

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

Alloy Type

Austenitic (with approx. 8 % ferrite) 19% Cr - 9% Ni - Low C - High Si

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
As Welded	420 MPa (61 ksi)	570 MPa (83 ksi)	36 %
Tested at 350°C.			
As Welded	370 MPa (54 ksi)	490 MPa (71 ksi)	

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
As Welded	20 °C (68 °F)	105 J (78 ft-lb)
As Welded	-60 °C (-76 °F)	70 J (52 ft-lb)
As Welded	-196 °C (-321 °F)	40 J (30 ft-lb)

Typical Wire Composition %

C	Mn	Si	S	P	Ni	Cr	Mo	Cu	N
0.01	1.8	0.8	0.012	0.013	10.0	20.0	0.1	0.10	0.06

Typical Wire Composition %

Nb	FN WRC-92
0.02	8

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	Cu	N
0.03	1.8	0.7	0.009	0.020	10.0	19.5	0.03	0.1	0.04

Typical Weld Metal Analysis %

Nb	FN WRC-92
0.01	6

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Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate
0.8 mm (0.030 in.)	55-160 A	15-24 V	4.0-17.0 mm/min (157-669 in./min)	1.0-4.1 kg/h (2.2-9.0 lbs/h)
0.9 mm (0.035 in.)	65-220 A	15-28 V	3.5-18.0 mm/min (138-709 in./min)	1.1-5.4 kg/h (2.4-11. lbs/h)
1.0 mm (0.040 in.)	80-240 A	15-28 V	4.0-16.0 mm/min (157-630 in./min)	1.5-6.0 kg/h (3.3-13. lbs/h)
1.2 mm (0.047 in.)	100-300 A	15-29 V	3.0-14.0 mm/min (118-551 in./min)	1.6-7.5 kg/h (3.5-16. lbs/h)
1.6 mm (1/16 in.)	230-375 A	23-29 V	5.5-9.0 mm/min (217-354 in./min)	5.2-8.6 kg/h (11.5-19. lbs/h)

Recommended Welding Parameters

Wire Diameter

1.14 mm (0.045 in.)

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