

OK Autrod 347Si

OK Autrod 347Si is an austenitic stainless steel filler material for welding of stainless steel alloys of 18Cr/8Ni/Nb and 18Cr/8Ni/Ti types where good general corrosion resistance is required. 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 the niobium content the alloy is recommended for use at higher temperatures.

Specifications

Classifications

EN ISO 14343-A : G 19 9 Nb Si
SFA/AWS A5.9 : ER347Si
Werkstoffnummer : ~1.4550

Approvals

CE : EN 13479
DB : 43.039.13
NAKS/HAKC : 1.0-1.6 mm
UKCA : EN 13479
VdTUV : 09734

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

Alloy Type

Austenitic (with approx. 8 % ferrite) 19% Cr - 9% Ni - Nb

Shielding Gas

M12, M13 (EN ISO 14175)

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
EN M13			
As Welded	440 MPa (64 ksi)	640 MPa (93 ksi)	37 %
EN M13 Tested at 400°C.			
As Welded	340 MPa (49 ksi)	460 MPa (67 ksi)	26 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
EN M13		
As Welded	-60 °C (-76 °F)	70 J (52 ft-lb)
As Welded	20 °C (68 °F)	100 J (74 ft-lb)

Typical Wire Composition %

C	Mn	Si	Ni	Cr	Mo	Cu	Nb
0.04	1.7	0.7	9.8	19	0.1	0.10	0.60

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	Cu	Nb
0.04	1.7	0.7	0.010	0.005	9.8	19	0.1	0.1	0.6

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 m/min (157-669 in./min)	1.0-4.1 kg/h (2.2-9.0 lbs/h)
1.0 mm (0.040 in.)	80-240 A	15-28 V	3.5-18.0 m/min (138-709 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 m/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	23-31 V	5.5-9.0 m/min (217-354 in./min)	5.2-8.6 kg/h (11.5-19. lbs/h)