

OK Autrod 347



OK Autrod 347 is suitable for joining stainless steels of the 18Cr/8Ni/Nb and 18Cr/8Ni/Ti types. Due to the strengthening effect of niobium, this grade is recommended if the weld metal will be exposed to temperatures above 400°C (750°F). It is used for joining and overlay welding with MIG/MAG, plasma and hot wire TIG and mechanized TIG.

Specifications	
Classifications	EN ISO 14343-A : G 19 9 Nb SFA/AWS A5.9 : ER347 EN 10088-1 : ~1.4550
Approvals	CE : EN 13479 UKCA : EN 13479 VdTÜV : 20080

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
As Welded 20 °C	470 MPa	650 MPa	35 %
As Welded+ 400 °C	380 MPa	500 MPa	26 %

Typical Charpy V-Notch Properties		
Condition	Testing Temperature	Impact Value
As Welded	20 °C	90 J
As Welded	-196 °C	30 J

Typical Weld Metal Analysis %									
C	Mn	Si	S	P	Ni	Cr	Mo	V	Al
0.06	1.5	0.4	0.012	0.016	9.2	19.2	0.1	0.06	0.003

Typical Weld Metal Analysis %					
Cu	N	Nb	Ti	Co	FN WRC-92
0.1	0.04	0.7	0.003	0.1	9

Typical Wire Composition %									
C	Mn	Si	S	P	Ni	Cr	Mo	V	Al
0.05	1.4	0.4	0.013	0.015	9.3	19.2	0.1	0.04	0.002

Typical Wire Composition %					
Cu	N	Nb	Ti	Co	FN WRC-92
0.1	0.05	0.7	0.003	0.1	7

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Deposition Data

Diameter	Current	Voltage	Efficiency (%)	Fusion time per electrode at 90% I max	Deposition Rate
2.5 x 350.0 mm	75-110 A	20 V	60 %	57 sec	0.9 kg/h
3.15 x 350.0 mm	110-150 A	24 V	67 %	74 sec	1.4 kg/h
4.0 x 450.0 mm	150-200 A	24 V	59 %	80 sec	1.7 kg/h
5.0 x 450.0 mm	190-275 A	23 V	66 %	80 sec	2.7 kg/h

Recommended Welding Parameters

Wire Diameter	Current	Voltage	Wire Feed Speed
1.2 mm	150-260 A	24-29 V	3.0-10.0 mm/min