OK Autrod 309Si

A continous solid corrosion resisting chromium-nickel wire for joining stainless steels to non-alloy or low alloy steels as well as welding of austenitic stainless alloys of 24% Cr, 13% Ni, high C types. OK Autrod 309Si has a good general corrosion resistance. The higher silicon content improves the welding properties, such as wetting. When used for joining dissimilar materials the corrosion resistance is of secondary importance.

Specifications	
Classifications	EN ISO 14343-A : G 22 12 H SFA/AWS A5.9 : ER309Si
Approvals	CE : EN 13479 UKCA : EN 13479

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

Alloy Type	Austenitic (with approx. 10 % ferrite) 23 % Cr - 13 % Ni - High Si
Shielding Gas	M12, M13 (EN ISO 14175)

Typical Tensile Properties			
Condition	**Yield Strength**	**Tensile Strength**	**Elongation**
EN ISO			
As Welded	470 MPa (68 ksi)	640 MPa (93 ksi)	33 %

Typical Charpy V-Notch Properties	
Testing Temperature	**Impact Value**
20 °C (68 °F)	100 J (74 ft-lb)
-60 °C (-76 °F)	80 J (59 ft-lb)
-110 °C (-166 °F)	60 J (44 ft-lb)

Typical Weld Metal Analysis %									
C	**Mn**	**Si**	**S**	**P**	**Ni**	**Cr**	**Mo**	**Al**	**Cu**
0.09	1.7	0.8	0.011	0.020	13	23	0	0	0

Typical Weld Metal Analysis %			
N	**Nb**	**Ti**	**FN WRC-92**
0	0	0	5

Typical Wire Composition %							
Mn	**Si**	**S**	**P**	**Ni**	**Cr**	**Mo**	**Cu**
1.7	0.9	0	0.020	12.7	23.5	0.2	0.15

Deposition Data				
Diameter	**Current**	**Voltage**	**Wire Feed Speed**	**Deposition Rate**
0.8 mm (0.030 in.)	50-140 A	16-22 V	3.4-11.0 m/min (134-433 in./min)	0.8-2.7 kg/h (1.8-6.0 lbs/h)
1.0 mm (0.040 in.)	80-190 A	16-24 V	2.9-8.4 m/min (114-331 in./min)	1.1-3.1 kg/h (2.4-6.8 lbs/h)
1.2 mm (0.047 in.)	180-280 A	20-28 V	4.9-8.5 m/min (193-335 in./min)	2.6-4.5 kg/h (5.7-9.9 lbs/h)
1.6 mm (1/16 in.)	230-350 A	24-28 V	3.2-5.5 m/min (126-217 in./min)	3.0-5.2 kg/h (6.6-11. lbs/h)