

Exaton 309/309L

309/309L is suitable for joining stainless Cr-Ni steels of the 309 type, Cr-steels and dissimilar steels e.g. austenitic stainless steel to carbon or low-alloyed steels for service up to 320°C (610°F). It is used for MIG/MAG welding. Widely used as barrier layer between carbon/low alloy steel and different stainless grades in cladding operations.

Classifications Wire Electrode	SFA/AWS A5.9 : ER309L EN ISO 14343-A : G 23 12 L
Approvals	CE EN 13479

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

Alloy Type	Austenitic (with approx. 9 % ferrite) 24 % Cr - 13 % Ni - Low C
Shielding Gas	M12, M13 (EN ISO 14175)

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
As Welded	20 °C (68 °F)	160 J (118 ft-lb)
As Welded	-60 °C (-76 °F)	130 J (96 ft-lb)
As Welded	-110 °C (-166 °F)	90 J (67 ft-lb)

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	V	Cu
0.01	1.67	0.40	0.016	0.018	13.5	23.6	0.01	0.03	0.04

Typical Weld Metal Analysis %

N	Nb	Co	FN WRC-92
0.08	0.01	0.03	12

Typical Wire Composition %

C	Mn	Si	S	P	Ni	Cr	Mo	Cu	N
<0.02	1.8	0.4	0.01	0.01	13.5	23.5	<0.1	<0.1	0.08

Typical Wire Composition %

FN WRC-92
10

Recommended Welding Parameters

Wire Diameter	Current	Voltage	Wire Feed Speed
0.8 mm (0.030 in.)	40-120 A	15-19 V	4.0-8.0 m/min (157-315 in./min)
1.0 mm (0.040 in.)	60-220 A	15-28 V	4.0-12.0 m/min (157-472 in./min)
1.2 mm (0.047 in.)	150-260 A	24-29 V	3.0-10.0 m/min (118-394 in./min)
1.6 mm (1/16 in.)	230-350 A	25-30 V	3.0-5.0 m/min (118-197 in./min)