

Exaton 309/309L-17



309/309L-17 is a high alloyed chromium-nickel covered electrode with rutile coating for welding of dissimilar joints between stainless steel and mild or low alloyed steels. It is also used to create buffer layers with a composition of 18%Cr/8%Ni before overlay alloys are deposited.

The electrode has excellent arc stability, low spatter and fast burn off rate with minimal stub loss. It is also characterized by improved moisture resistance, self peeling slag, high resistance to porosity and easy post weld finishing. It provides smooth uniform beads and works in any standard weld position.

Typical applications include welding of stainless steel to low alloyed steels, buffer layers on low alloy steels before overlays with 304 composition, welding of stainless steels of 23%Cr/12%Ni type, joining of ferritic/martensitic stainless steels of 12-18%Cr type.

Classifications	SFA/AWS A5.4 : E309L-17 EN ISO 3581-A : E 23 12 L R 3 2 Werkstoffnummer : 1.4332
Approvals	CE EN 13479

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

Welding Current	DC+, AC
Ferrite Content	FN 10-18
Alloy Type	Austenitic CrNi
Coating Type	Acid Rutile

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
ISO			
As Welded	480 MPa (70 ksi)	560 MPa (81 ksi)	35 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
ISO		
As Welded	20 °C (68 °F)	55 J (41 ft-lb)
As Welded	-20 °C (-4 °F)	45 J (33 ft-lb)

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	Cu	FN WRC-92
0.02	0.8	1	0.014	0.021	12.5	23	0.06	0.046	14

Deposition Data

Diameter	Current	Voltage	Number of electrodes/ kg weld metal	Burn-off Time/ Electrode	Deposition Efficiency %	Deposition Rate @ 90% I max
2.5 x 300.0 mm (0.098 x 11,8 in.)	45-90 A	28 V	85	38 sec	60 %	1.1 kg/h (2,4 lb/h)
3.2 x 350.0 mm (1/8 x 13,8 in.)	65-120 A	29 V	45	51 sec	60 %	1.6 kg/h (3,5 lb/h)
4.0 x 350.0 mm (5/32 x 13,8 in.)	85-180 A	31 V	29	51 sec	60 %	2.5 kg/h (5,5 lb/h)
5.0 x 350.0 mm (0.197 x 13,8 in.)	110-250 A	32 V	19	58 sec	60 %	3.3 kg/h (7,3 lb/h)