

Exaton 309LNb

309LNb is a niobium-stabilized overalloyed filler metal suitable for overlay welding of carbon and low alloy steels, where a type 347 of overlay is required. It is used for MIG/MAG welding.

Specifications

Classifications	EN ISO 14343-A : G/W/P 23 12 Nb SFA/AWS A5.9 : ER309L (mod)
Approvals	CE : EN 13479 UKCA : EN 13479

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

Alloy Type	Austenitic (with approx. 15 % ferrite) 24 % Cr - 13 % Ni - Low C - Nb
Shielding Gas	M12, M13 (EN ISO 14175)

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
As Welded	500 MPa (73 ksi)	670 MPa (97 ksi)	29 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
As Welded	20 °C (68 °F)	130 J (96 ft-lb)
As Welded	-60 °C (-76 °F)	100 J (74 ft-lb)
As Welded	-196 °C (-321 °F)	15 J (11 ft-lb)

Typical Wire Composition %

C	Mn	Si	S	P	Ni	Cr	Mo	Cu	N
0.01	2.1	0.3	0.001	0.013	12.5	24	0.02	0.01	0.05

Typical Wire Composition %

Nb	Ti	Co
0.8	0.005	0.02

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	Cu	N
0.02	2.2	0.2	0.001	0.012	12.5	23.2	0.01	0.01	0.07

Typical Weld Metal Analysis %

Nb	Co	FN deLong
0.8	0.02	13

Recommended Welding Parameters

Current	Wire Diameter	Voltage	Wire Feed Speed
60-220 A	1.0 mm (0.040 in.)	15-28 V	4.0-12.0 mm/min (157-472 in./min)
150-260 A	1.2 mm (0.047 in.)	24-29 V	3.0-10.0 mm/min (118-394 in./min)