

## Exaton 24.13.LNb

Exaton 24.13.LNb 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 in one layer. Typical applications is cladding of shells and inlets of hydrocrackers, which has a service temperature of 600-650°C. It is used for MIG/MAG welding as well as for plasma welding and overlay welding using hot wire TIG and mechanized TIG.

### Specifications

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

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

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

### Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
As Welded	500 MPa	670 MPa	29 %

### Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
As Welded	20 °C	130 J
As Welded	-60 °C	100 J
As Welded	-196 °C	15 J

### 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	15-28 V	4.0-12.0 mm/min
150-260 A	1.2 mm	24-29 V	3.0-10.0 mm/min