

Exaton Ni71



Exaton Ni71 is a covered electrode with basic coating and a normal metal recovery for welding of NiCrFe alloys such as Alloy 600, 800 and 800H. 9%Ni steels as well as nickel-alloyed steels for cryogenic temperature use. It is also used for dissimilar joints such as stainless steel and NiCu alloys to carbon steel and nickel alloys. Exaton Ni71 is characterised by little spatter and very good slag removal.

Typical applications are found in constructions to be used at lower temperatures e.g. 3.5%, 5% and 9% Ni steels are used as well as austenitic Cr-Ni stainless steel, especially if the weld metal is to be thermoformed or stress relieved.

The alloy can be used in air up to 1200°C (2150°F), in sulphur dioxide atmospheres up to 800°C (1470°F) and in ammonia at the highest process temperature. This alloy is used for surfacing or joining where there are strict requirements on stress corrosion resistance and for high temperature service.

The microstructure is fully austenitic.

Classifications	SFA/AWS A5.11 : ENiCrFe-3 EN ISO 14172 : E Ni 6182 (NiCr15Fe6Mn)
Approvals	CE

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

Welding Current	DC+
Alloy Type	Ni based Cr alloy
Coating Type	Basic

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
AWS			
PWHT 16hr 610°C	400 MPa	635 MPa	50 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
AWS		
PWHT 16hr 610°C	20 °C	100 J
PWHT 16hr 610°C	-196 °C	60 J

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	Al	Cu
<=0.03	5.7	0.3	<=0.010	<=0.015	67	16	0.005	0.009	0

Typical Weld Metal Analysis %

Nb	Ti	Fe	Others tot
2.2	0.08	<=10	<0.50

Deposition Data

Diameter	Current	Number of electrodes/ kg weld metal	Fusion time per electrode at 90% I max	Deposition Efficiency %	Deposition Rate @ 90% I max
2.5 x 300.0 mm	50-70 A	87	58 sec	0.65 %	0.7 kg/h
3.2 x 350.0 mm	65-105 A	46	68 sec	0.61 %	1.14 kg/h
4.0 x 350.0 mm	75-150 A	-	-	-	0.0 kg/h
5.0 x 350.0 mm	120-170 A	-	-	-	0.0 kg/h