

OK Autrod NiCrMo-3

A continuous solid corrosion and heat-resisting Ni-Cr-Mo wire for welding of high alloyed heat-resisting and corrosion resisting materials, 9%Ni-steels and similar steels with high notch toughness at low temperatures. Also for joining of dissimilar metals of the types mentioned. The weld metal has very good mechanical properties at high and low temperatures. Good resistance to pitting and stress corrosion. This alloy is extensively required for weld cladding of valve components and pipe inner diameters in oil and gas applications.

Specifications

Classifications	SFA/AWS A5.14 : ERNiCrMo-3 EN ISO 18274 : S Ni 6625
Approvals	DNV-GL : 1.2 mm NAKS/HAKC : 1.0-1.2 mm VdTÜV : 12413

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

Alloy Type	Alloyed nickel (Ni + 22 % Cr + 9 % Mo - 3.5 % Nb)
Shielding Gas	I1, I3, M12 (EN ISO 14175)

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
As Welded	500 MPa	780 MPa	45 %
As Welded+	380 MPa	580 MPa	48 %
Stress Relieved 15 hour(s) 550 °C	490 MPa	796 MPa	40 %
0.5 hour(s) 1175 °C	375 MPa	765 MPa	46 %
0.5 hour(s) 1175 °C	270 MPa	590 MPa	46 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
As Welded	20 °C	130 J
As Welded	-105 °C	120 J
As Welded	-196 °C	110 J
Stress Relieved	20 °C	140 J
Stress Relieved	-196 °C	120 J
	20 °C	185 J
	-105 °C	170 J
	-196 °C	150 J

Typical Wire Composition %

C	Mn	Si	Ni	Cr	Mo	Fe	Nb+Ta
0.02	0.04	0.06	Bal	22.7	8.6	0.3	3.5

Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate
0.9 mm	80-190 A	20-27 V	5.0-16.0 m/min	2.0-4.2 kg/h
1.0 mm	100-200 A	21-27 V	6.0-13.0 m/min	2.5-5.5 kg/h
1.14 mm	130-240 A	22-28 V	6.0-12.0 m/min	3.0-5.7 kg/h
1.2 mm	160-280 A	24-30 V	6.0-10.0 m/min	3.6-6.0 kg/h
1.6 mm	200-350 A	25-32 V	4.0-8.0 m/min	4.3-8.6 kg/h