OK Autrod NiCrMo-3

Bare corrosion and heat-resisting Ni-Cr-Mo rod for welding of high alloyed heat-resisting and corrosion resisting materials, 9%Ni-steels and similar steels with high notch toughness at low temperatures. The filler metal is also used for welding of dissimilar joints containing non- and low alloyed steel. The weld metal has good mechanical properties at high and low temperatures. Good resistance to pitting corrosion and stress corrosion cracking. The 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 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 (73 ksi)	780 MPa (113 ksi)	45 %
As welded+	380 MPa (55 ksi)	580 MPa (84 ksi)	48 %
Stress Relieved 15 hour(s) 550 °C (1022 °F)	490 MPa (71 ksi)	796 MPa (115 ksi)	40 %
SHT 0.5 hour(s) 1175 °C (2147 °F)	375 MPa (54 ksi)	765 MPa (111 ksi)	46 %
SHT+ 0.5 hour(s) 1175 °C (2147 °F)	270 MPa (39 ksi)	590 MPa (86 ksi)	46 %

Typical Charpy V-Notch Properties	
Testing Temperature	**Impact Value**
20 °C (68 °F)	130 J (96 ft-lb)
20 °C (68 °F)	140 J (103 ft-lb)
20 °C (68 °F)	185 J (136 ft-lb)
-105 °C (-157 °F)	120 J (88.5 ft-lb)
-105 °C (-157 °F)	170 J (125 ft-lb)
-196 °C (-321 °F)	110 J (81 ft-lb)
-196 °C (-321 °F)	120 J (88.5 ft-lb)
-196 °C (-321 °F)	150 J (111 ft-lb)

Typical Weld Metal Analysis %									
C	**Mn**	**Si**	**S**	**P**	**Ni**	**Cr**	**Mo**	**Al**	**Cu**
0.011	0.05	0.05	0.001	0.004	65	21.8	8.7	0.09	0.01

Typical Weld Metal Analysis %		
Ti	**Fe**	**Nb+Ta**
0.19	0.37	3.56

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

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Deposition Data				
Diameter	**Current**	**Voltage**	**Wire Feed Speed**	**Deposition Rate**
0.9 mm (0.035 in.)	80-190 A	20-27 V	5.0-16.0 m/min (197-630 in./min)	2.0-4.2 kg/h (4.4-9.3 lbs/h)
1.0 mm (0.040 in.)	100-200 A	21-27 V	6.0-13.0 m/min (236-512 in./min)	2.5-5.5 kg/h (5.5-12. lbs/h)
1.14 mm (0.045 in.)	130-240 A	22-28 V	6.0-12.0 m/min (236-472 in./min)	3.0-5.7 kg/h (6.6-12. lbs/h)
1.2 mm (0.047 in.)	160-280 A	24-30 V	6.0-10.0 m/min (236-394 in./min)	3.6-6.0 kg/h (7.9-13. lbs/h)
1.6 mm (1/16 in.)	200-350 A	25-32 V	4.0-8.0 m/min (157-315 in./min)	4.3-8.6 kg/h (9.5-19. lbs/h)