

Exaton NiCrMo-3

NiCrMo-3 welding wire is suitable for joining nickel-chromium-molybdenum nickel alloys and chromiumnickel-molybdenum steels with very high corrosion resistance in oxidizing, aqueous and high temperature environments such as 6Mo-steels, UNS N06625 (2.4856) and corresponding grades. It is also suitable for joining stainless steels and nickel alloys for high-temperature service.

NiCrMo-3 can also be used for dissimilar joining of stainless steels to nickel alloys, for overlay welding and it is used for MIG/MAG welding.

Applications for NiCrMo-3 are found in cryogenics, components subject to high temperature service up to 980°C (1800°F) such as aircraft ducting, engine exhaust systems, power boilers and recovery boilers and a diversity of seawater applications. The combination of strength and corrosion resistance over a wide range of temperatures is utilized in reaction vessels, line pipe distillation columns and heat exchangers.

Classifications Wire Electrode	SFA/AWS A5.14 : ENiCrMo-3 EN ISO 18274 : S Ni 6625 (NiCr22Mo9Nb) Werkstoffnummer : 2.4831
Approvals	BV Ni 6625 CE EN 13479 VdTUV 19483

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 Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
As Welded	20 °C (68 °F)	200 J (148 ft-lb)
As Welded	-40 °C (-40 °F)	170 J (126 ft-lb)
As Welded	-196 °C (-321 °F)	140 J (104 ft-lb)

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	Al	Cu
0.023	0.05	0.1	0.001	0.003	64	21.5	8.9	0.05	0.01

Typical Weld Metal Analysis %

Nb	Ti	Co	Fe	Nb+Ta
3.34	0.2	0.01	1.69	3.35

Typical Wire Composition %

C	Mn	Si	S	P	Ni	Cr	Mo	Al	Cu
0.02	0.02	0.06	0.002	0.002	65.0	22	9	0.08	0.02

Typical Wire Composition %

N	Nb	Ti	Co	Fe	Nb+Ta
0.02	3.4	0.2	0.01	0.3	3.5

Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate
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. lb/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. lb/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. lb/h)

Recommended Welding Parameters

Wire Diameter	Current	Voltage	Wire Feed Speed
0.8 mm (0.030 in.)	40-120 A	15-19 V	4.0-8.0 m/min (157-315 in./min)

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Recommended Welding Parameters

Wire Diameter	Current	Voltage	Wire Feed Speed
1.0 mm (0.040 in.)	60-220 A	15-28 V	4.0-12.0 m/min (157-472 in./min)
1.2 mm (0.047 in.)	150-260 A	24-29 V	3.0-10.0 m/min (118-394 in./min)
1.6 mm (1/16 in.)	230-350 A	25-30 V	3.0-5.0 m/min (118-197 in./min)