Exaton Ni60 (GMAW)

Exaton Ni60 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. Exaton Ni60 can also be used for dissimilar joining of stainless steels to nickel alloys, for overlay welding with MIG/MAG, plasma and hot wire TIG and mechanized TIG. Applications for Exaton Ni60 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.

Specifications	
Classifications	SFA/AWS A5.14 : ERNiCrMo-3 EN ISO 18274 : S Ni 6625 (NiCr22Mo9Nb) Werkstoffnummer : 2.4831
Approvals	BV : ERNiCrMo-3 VdTÜV : 19478(GTAW) VdTÜV : 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)

Tensile_Properties			
Testing Condition	**Yield Strength**	**Tensile Strength**	**Elongation**
As Welded	500 MPa	760 MPa	47 %
PWHT 550 °C	360 MPa	590 MPa	49 %

Charpy Testing		
Testing Condition	**Testing Temp**	**Impact Value**
As Welded	20 °C	200 J
As Welded	-40 °C	170 J
As Welded	-196 °C	140 J

Typical Weld Metal Analysis %									
C	**Mn**	**Si**	**S**	**P**	**Ni**	**Cr**	**Mo**	**Al**	**Cu**
0.02	0.05	0.07	0.001	0.003	64	21.7	8.7	0.08	0.01

Typical Weld Metal Analysis %				
Nb	**Ti**	**Co**	**Fe**	**Nb+Ta**
3.35	0.2	0.01	1.48	3.36

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

Exaton Ni60 (GMAW)

Deposition Data				
Diameter	**Amps**	**Volts**	**Wire Feed Speed**	**Deposition Rate**
1.0 mm	100-200 A	21-27 V	6.0-13.0 m/min	2.5-5.5 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

Welding_Parameters			
Wire Diameter	**Amps**	**Volts**	**Wire Feed Speed**
0.8 mm	40-120 A	15-19 V	4.0-8.0 mm/min
1.0 mm	60-220 A	15-28 V	4.0-12.0 mm/min
1.2 mm	150-260 A	24-29 V	3.0-10.0 mm/min
1.6 mm	230-350 A	25-30 V	3.0-5.0 mm/min