

OK Tigrod 13.38

A non copper coated, low-alloyed, (9CrMoVN), rod for GTAW of high-temperature steels and steels for hot hydrogen service especially in oil refineries. Preferably used for 9 % Cr steels as e.g. P 91/T 91 steels.

The alloy is modified as regards limits of impurity elements and is extremely "clean". This to receive improved strength levels both at room temperature and at higher temperatures.

AWS have changed the classification for this product, earlier classification was A5.9 ER505.

Classifications Wire Electrode	SFA/AWS A5.28 : ER90S-B9 EN ISO 21952-A : W CrMo91 EN ISO 21952-B : W 62 9C1MV
Approvals	NAKS/HAKC 2.0MM VdTUV 07686

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

Alloy Type	Alloyed steel (9 % Cr - 1 % Mo - V - N) "9CrMoVN"
Shielding Gas	I1 (EN ISO 14175)

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
Ar (I1) EN			
Stress Relieved 2hr 760°C	690 MPa	785 MPa	20 %
Stress Relieved 2hr 760°C	420 MPa	450 MPa	22 %
Stress Relieved 2hr 760°C	500 MPa	560 MPa	16 %
Stress Relieved 2hr 760°C	510 MPa	580 MPa	14 %
Stress Relieved 4hr 735°C	670 MPa	760 MPa	20 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
Ar (I1) EN		
Stress Relieved 4hr 735°C	20 °C	210 J
Stress Relieved 4hr 735°C	0 °C	190 J
Stress Relieved 4hr 735°C	-20 °C	130 J
Stress Relieved 4hr 735°C	-40 °C	60 J
Stress Relieved 4hr 735°C	-60 °C	30 J
Stress Relieved 2hr 760°C	20 °C	200 J
Stress Relieved 2hr 760°C	0 °C	180 J
Stress Relieved 2hr 760°C	-20 °C	150 J
Stress Relieved 2hr 760°C	-40 °C	90 J
Stress Relieved 2hr 760°C	-60 °C	70 J

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	V	Cu
0.1	0.5	0.3	0.002	0.004	0.8	8.7	0.9	0.2	0.1

Typical Weld Metal Analysis %

N	Nb
0.04	0.06

Typical Wire Composition %

C	Mn	Si	Ni	Cr	Mo	V	N
0.1	0.5	0.3	0.5	8.7	0.9	0.20	0.05