

9CrMoV-N MIG

TOP FEATURES

- Designed to weld equivalent "type 91" 9CrMo steels modified with small additions of niobium, vanadium and nitrogen for improved long term creep resistance
- Specifically designed for high integrity structural service at elevated temperature
- Non-copper coated solid wire

TYPICAL APPLICATIONS

- Power Plants
- Elevated Temperature Piping
- Turbine Castings
- Oil Refineries

CLASSIFICATION

AWS A5.28	ER90S-B91
EN ISO 21952-A	G CrMo91

SHIELDING GASES (ACC. EN ISO 14175)

M13	Mixed gas Ar+ 0.5-3% O ₂
M21	Mixed gas Ar+ 15-25% CO ₂

CHEMICAL COMPOSITION (WEIGHT %), TYPICAL, WIRE

	C	Mn*	Si	S	P	Cr	Ni*	Mo	Nb	V	N	Cu	Al
Min.	0.08	0.40	0.15			8.5	0.40	0.85	0.03	0.15	0.03		
Max.	0.13	0.80	0.50	0.010	0.010	9.5	0.80	1.10	0.08	0.25	0.07	0.10	0.04
Typical	0.10	0.45	0.35	0.004	0.008	9.2	0.45	1.0	0.05	0.2	0.05	0.03	<0.01

* Mn+Ni ≤ 1.0%, typical 0.9%.

For nickel below 0.4%, see 9CrMoV.

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

Properties after PWHT		Min.	Typical (760°C/2h)
Tensile strength	(MPa)	620	750
0.2% Proof strength	(MPa)	415	600
Elongation (%)	4d	17	20
	5d	17	19
Reduction of area (%)			
Impact ISO-V (J)	+20°C	*	
Hardness (HV)	(mid)		250

* Minimum impact required by ISO is 47 J.

PACKAGING AND AVAILABLE SIZES

Wire diameter (mm)	Packaging	Weight (kg)	Item number
1.0	SPOOL	12.5	M9CRMVN-10
1.2	SPOOL	15.0	M9CRMVN-12

TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application

Safety Data Sheets (SDS) are available here:



Subject to Change – The information is accurate to the best of our knowledge at the time of printing.
Please refer to www.lincolnelectric.eu for any updated information.