

CHROMET 9MV-N

MMA ELECTRODE TO AWS/BS EN WITH HIGH NI TO MAXIMISE TOUGHNESS

PRODUCT DESCRIPTION

MMA electrode – Basic metal powder type made on high purity steel core wire with Ni addition and lower Nb for improved toughness, conforming to BS EN ISO 3580-A.

Recovery is approx 120% with respect to core wire, 65% with respect to whole electrode.

Moisture resistant coatings giving very low weld metal hydrogen levels.

SPECIFICATIONS

AWS A5.5M	E9015-B91
BS EN ISO 3580-A	E CrMo91 B 3 2 H5
APPROVALS	TÜV

ASME IX QUALIFICATION

QW422	P-No 15E group 1
QW432	F-No 4
QW442	A-No 5

WELDING POSITIONS (ISO/ASME)



PA/1G



PB/2F



PC/2G



PF/3Gu



PE/4G

CHEMICAL COMPOSITION (WELD METAL WT %)

	C	Mn*	Si	S	P	Cr	Ni**	Mo	Nb	V	N	Cu
min.	0.08	0.50	--	--	--	8.0	0.4	0.85	0.04	0.15	0.03	--
max.	0.12	1.20	0.30	0.01	0.01	10.0	0.8	1.2	0.07	0.25	0.07	0.25
Typical	0.1	0.6	0.25	0.008	0.01	9.0	0.7	1.0	0.05	0.2	0.05	0.05

* Mn+Ni < 1.5

** *** Low Ni and low Ni+Mn variant is available, Chromet 9-B9.

ALL-WELD MECHANICAL PROPERTIES

PWHT 760°C/2h	Min. ⁰⁰	Typical	550°C	600°C	650°C
Tensile strength (MPa)	620	770	>450	>375	>285
0.2% proof strength (MPa)	530	640	>360	>255	>175
Elongation (%) 4d	17	22	--	--	--
5d	17	19	>15	>17	>21
Reduction of area %	--	60	>68	>75	>80
Impact ISO-V(J) +20°C	47	65	--	--	--
Lateral expansion +20°C	--	1.00	--	--	--
Hardness (HV) after PWHT	--	250	--	--	--
as-welded	--	450	--	--	--

⁰⁰ Minimum strength for parent material is lower than AWS requirement shown.

OPERATING PARAMETERS, DC + ve or AC (OCV: 70V Min)

Diameter (mm)	2.5	3.2	4.0	5.0
min. A	70	80	100	140
max. A	110	140	180	240

PACKAGING DATA

Diameter (mm)	2.5	3.2	4.0	5.0
Length (mm)	350	350	450	450
kg/carton	14.1	13.5	17.4	16.5
Pieces/carton	702	408	234	150

STORAGE

3 hermetically sealed ring-pull metal tins per carton, with unlimited shelf life. Direct use from tin will give hydrogen <5ml/100g weld metal during 8h working shift.

For electrodes that have been exposed:

Redry 250 – 300°C/1-2h to ensure H₂ <10ml/100g, 300 – 350°C/1-2h to ensure H₂ <5ml/100g. Maximum 420°C, 3 cycles, 10h total.

Storage of redried electrodes at 100 – 200°C in holding oven, or 50 – 150°C in heated quivers: no limit, but maximum 6 weeks recommended.

FUME DATA

Fume composition (wt %)

Fe	Mn	Ni	Cr	Cu	Pb	F	OES (mg/m ³)
15	5	<0.1	<3	<0.1	<0.1	18	1.7