

CHROMET 9-B9

MMA (SMAW)

MMA ELECTRODE WITH LOW Ni CONTENT

PRODUCT DESCRIPTION

MMA electrode – Basic metal powder type made on high purity steel core wire manufactured to the requirements of AWS A5.5 E9015-B9 and ISO 3580-B.

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

Moisture resistant coatings giving very low weld metal hydrogen levels.

CLASSIFICATIONS

AWS A5.5M	E9015-B91 H4
ISO 3580-B	E 6216-9C1MV H5

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	Al
Min.	0.08	0.40	--	--	--	8.0	0.20	0.85	0.03	0.15	0.03	--	--
Max.	0.12	0.75	0.30	0.01	0.01	10.0	0.40	1.20	0.07	0.25	0.07	0.25	0.04
Typical	0.1	0.6	0.25	0.008	0.008	9	0.3	1	0.04	0.2	0.05	0.05	0.01

* Mn + Ni ≤ 1.0%. Nickel is below 0.4% (as parent material) although AWS allows up to 0.8%Ni. See Chromet 9MV-N or Chromet 9MVN+ for variant with 0.4–0.7%Ni conforming to ISO specification.

ALL-WELD MECHANICAL PROPERTIES

Properties after PWHT	Min. *	Typical (760°C/2h)			
		20°C	550°C	600°C	650°C
Tensile strength (MPa)	620	710	>450	>375	>285
0.2% proof strength (MPa)	530	590	>360	>255	>175
Elongation (%) 4d	17	22	--	--	--
5d	17	20	>15	>17	>21
Reduction of area %	--	63	>68	>75	>80
Impact ISO-V(I) +20°C	--	75	--	--	--
Lateral expansion +20°C	--	1.10	--	--	--
Hardness (HV)	--	240	--	--	--

* 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	100	130	170	240

PACKAGING DATA

	Diameter (mm)	Length (mm)	Item number	No of pieces		Weight (kg)	
				can	carton	can	carton
METAL CAN	2.5	350	CH9B9-25-1	205	615	4.3	12.9
	3.2	350	CH9B9-32-1	117	351	4.1	12.3
	4.0	450	CH9B9-40-1	80	240	5.4	16.2
	5.0	450	CH9B9-50-1	48	144	5.2	15.6

Redrying : 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.

FUME DATA (WT % TYPICAL)

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

All information in this data sheet is accurate to the best of our knowledge at the time of printing. Please refer to www.specialalloys.eu for any updated information.