

CHROMET 2X

MMA (SMAW)

2¼Cr-1Mo MMA ELECTRODE FOR TEMPER EMBRITTLEMENT RESISTANCE

PRODUCT DESCRIPTION

MMA electrode – 2¼Cr-1Mo deposit which meets specific requirements for improved temper embrittlement resistance after prolonged service at 400-600°C. Relevant trace elements (P, Sn, As, Sb) are controlled to ensure low Bruscato (X) and Watanabe (J) factors.

Basic flux, metal powder type coatings on low carbon high purity core wire. Recovery is approximately 115% with respect to the core wire and 65% with respect to the whole electrode. Moisture resistant coating gives very low weld metal hydrogen levels.

CLASSIFICATIONS

AWS A5.5M	E9018-B3 H4
ISO 3580-A	E CrMo2 B 3 2 H5
ISO 3580-B	E 6216-2C1M

ASME IX QUALIFICATION

QW432	F-No 4
QW442	A-No 4

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	Mo	Cu	Sn	As	Sb
Min.	0.05	0.50	0.15	--	--	2.00	0.90	--	--	--	--
Max.	0.10	0.90	0.30	0.015	0.012	2.50	1.20	0.15	0.005	0.010	0.005
Typical	0.06	0.7	0.25	0.012	0.010	2.25	1.05	< 0.05	0.002	0.003	< 0.002

* Mn+Si < 1.10%

Bruscato factor (X) : $10P + 5Sb + 4Sn + As$ (ppm) = 15 max
100

Watanabe factor (J) : $(Mn+Si) \times (P + Sn) \times 10^4 = 180$ max

ALL-WELD MECHANICAL PROPERTIES

Properties after PWHT:	Min.	Typical		
		690°C/1h	690°C/5h	690°C/5h + SC
Tensile strength [MPa]	630	670	660	650
0.2% proof strength [MPa]	540	570	560	550
Elongation [%] 4d	17	22	27	25
5d	18	19	24	20
Reduction of area %	--	65	70	65
Impact ISO-V(J) +20°C	47 ^(b)	140	170	170
-30°C	--	80	140	110
Hardness [HV]	--	220-250	195	205

^(b) ISO & PWHT 690°C/1h.

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)	Length (mm)	Item number	No of pieces		Weight (kg)	
				can	box	can	box
METAL CAN	2.5	350	CHROMET2X-25	207	621	4.5	13.5
	3.2	350	CHROMET2X-32	128	384	4.6	13.8
	4.0	450	CHROMET2X-40	85	255	5.7	17.1
	5.0	450	CHROMET2X-50	51	153	5.5	16.5

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	F	OES (mg/m³)
15	5	<0.1	1	<0.2	18	5

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.