

CHROMET 1X

MMA (SAW)

1¼Cr-½Mo ALLOYED MMA ELECTRODE FOR TEMPER EMBRITTLEMENT RESISTANCE

PRODUCT DESCRIPTION

MMA electrode – 1¼Cr-½Mo deposit which meets specific requirements for improved temper embrittlement resistance with 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 metal hydrogen levels.

CLASSIFICATIONS

AWS A5.5M	E8018-B2 H4
ISO 3580-A	E CrMo1 B 3 2 H5
ISO 3580-B	E 5516-1CM

ASME IX QUALIFICATION

QW432	F-No 4
QW442	A-No 3

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
Min.	0.05	0.50	0.15	--	--	1.00	0.45	--	--	--
Max.	0.10	0.90	0.30	0.015	0.012	1.40	0.65	0.15	0.005	0.010
Typical	0.06	0.70	0.25	0.012	0.009	1.25	0.55	<0.05	0.002	0.003

* Mn+Si < 1.10%

Bruscato factor (X) : $10P + 55b + 4Sn + As$ (ppm)/100 = 15 MaxWatanabe factor (J) : $(Mn+Si)(P+Sn) \times 10^4 = 180$ max

ALL-WELD MECHANICAL PROPERTIES

Properties after PWHT:	Min.	Typical		
		690°C/1h	690°C/5h	690°C/5h + SC*
Tensile strength (MPa)	550	610	610	595
0.2% proof strength (MPa)	460	525	515	490
Elongation (%) 4d	19	25	29	29
5d	20	21	25	25
Reduction of area %	--	70	70	70
Impact ISO-V(J) +20°C	47 ⁽¹⁾	160	200	200
-30°C	--	100	160	140
Hardness (HV)	--	200-210	220	190

* [SC = step cooled]

⁽¹⁾ ISO minimum average

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

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

PACKAGING DATA

	Diameter (mm)	Length (mm)	Item number	No of pieces		Weight (kg)	
				can	carton	can	carton
METAL CAN	2.5	350	CHROMET1X-25-1	-	-	3,9	11,7
	3.2	350	CHROMET1X-32-1	-	-	4,1	12,3
	4.0	450	CHROMET1X-40-1	-	-	5,5	16,5
	5.0	450	CHROMET1X-50-1	-	-	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

FUME DATA (WT % TYPICAL)

Fe	Mn	Cr	Ni	Cu	F	OES (mg/m³)
15	5	< 0.5	< 0.1	< 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.