

# CHROMET® 2X

Low Alloy, Low Hydrogen ■ AWS E9018-B3

## KEY FEATURES

- Designed for prolonged elevated temperatures up to 600°C (1112°F)
- Refineries where corrosion resistance to sulphur bearing crude oil is at 250-450°C (482-842°F)
- Designed for all-position welding of 2.25% chromium, 1% molybdenum low alloy steels
- Trace elements are controlled to ensure low Bruscato (X-Factor < 15 ppm) and Wantanbe (J-Factor < 180 ppm) factors

## WELDING POSITIONS

All

## DIAMETERS / PACKAGING

Diameter mm (in)	4.1 kg (9 lb) Easy Open Can	4.6 kg (10 lb) Easy Open Can	5.7 kg (13 lb) Easy Open Can
2.5 (3/32)	CHROMET2X-25	CHROMET2X-32	CHROMET2X-40 CHROMET2X-50
3.2 (1/8)			
4.0 (5/32)			
5.0 (3/16)			

## CONFORMANCES

<b>AWS A5.5</b>	E9018-B3
<b>BS EN ISO 3580-A</b>	E CrMo1 B 3 2
<b>BS EN ISO 3580-B</b>	E 6216-2C1M
<b>BS 2493</b>	2CrMo B H
<b>DIN 8575</b>	ECrMo 2 B 2 6

## TYPICAL APPLICATIONS

- Petro-Chemical
- Power Plants
- Piping
- Turbine Casting
- Steam Chests
- Valve Bodies
- Boiler Superheaters

## MECHANICAL PROPERTIES<sup>(1)</sup> - As Required per AWS A5.5/A5.5M

	Yield Strength <sup>(2)</sup> MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft·lbf)		Hardness HV <sub>10</sub> <sup>(4)</sup> AW PWHT
				@ 20 °C (68 °F)	@ -30 °C (-22 °F)	
<b>Requirements - AWS E9018-B3</b>	540 min	630 min	17 min	47 <sup>(2)</sup> min	–	–
<b>Typical Performance</b>						
As-Welded						
1 hr @ 690 °C (1274 °F)	570	670	22	140	80	220 - 250
Stress-Relieved						
5 hr @ 690 °C (1274 °F)	560	660	27	170	140	195
5 hr @ 690 °C (1274 °F) + SC <sup>(7)</sup>	550	650	25	170	110	205

## DEPOSIT COMPOSITION<sup>(1)</sup> - As Required per AWS A5.5/A5.5M

	%C	%Mn <sup>(5)</sup>	%Si <sup>(5)</sup>	%S	%P	%Cr
<b>Requirements - AWS E9018-B3</b>	0.05 - 0.10	0.50 - 0.90	0.15 - 0.3	0.015 max	0.012 max	2.00 - 2.50
<b>Typical Results</b>	0.06	0.70	0.25	0.012	0.01	2.25
	%Mo	%Cu	%Sn	%As	%Sb	X-Factor <sup>(6)</sup>
<b>Requirements - AWS E9018-B3</b>	0.90 - 1.20	0.15 max	0.005 max	0.010 max	0.005 max	15 max
<b>Typical Results</b>	1.05	<0.05	0.002	0.003	<0.002	–

## TYPICAL OPERATING PROCEDURES

Polarity	Amperage mm (in)			
	2.5 (3/32)	3.2 (1/8)	4.0 (5/32)	5.0 (3/16)
DC+	70 - 110	80 - 140	100 - 180	140 - 240
AC	70 - 110	80 - 140	100 - 180	140 - 240

<sup>(1)</sup>Typical all weld metal. <sup>(2)</sup>Measured with 0.2% offset. <sup>(3)</sup>See test results disclaimer. <sup>(4)</sup>Industry specific data, not required by AWS. <sup>(5)</sup>Mn+Si < 1.10%. <sup>(6)</sup>X = (10P + 5Sb + 4Sn + As) / 100 (elements in ppm).

<sup>(7)</sup>SC = Step Cooling NOTE: Additional test data available upon request.

*Material Safety Data Sheets (MSDS) and Certificates of Conformance are available on our website at [www.lincolnelectric.com](http://www.lincolnelectric.com)*

#### 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.

#### CUSTOMER ASSISTANCE POLICY

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