

CHROMET® 1X

Low Alloy, Low Hydrogen ■ AWS E8018-B2

KEY FEATURES

- Designed for prolonged elevated temperatures up to 550°C (1022°F)
- Refineries where corrosion resistance to sulphur bearing crude oil is at 250-450°C (482-842°F)
- Designed for welding 1.25% chromium, 0.50% Molybdenum 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)	4.2 kg (9.3 lb) Easy Open Can	5.0 kg (11 lb) Easy Open Can	5.6 kg (12.3 lb) Easy Open Can
2.5 (3/32)	CHROMET1X-25	CHROMET1X-32	ED033564, CHROMET1X-40* CHROMET1X-50
3.2 (1/8)			
4.0 (5/32)			
5.0 (3/16)			

* The Metrode part number will be replacing the current EDO numbers after the inventory has been depleted.

MECHANICAL PROPERTIES⁽¹⁾ - As Required per AWS A5.5/A5.5M

	Yield Strength ⁽²⁾ MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf)		Hardness HV ₁₀ ⁽⁴⁾ @ PWHT
				@ 20°C (68°F)	@ -30°C (-22°F)	
Requirements - AWS E8018-B2	460	550 (80) min	19	47	-	-
Typical Performance As-Welded						
1 hr @ 690°C (1274°F)	525	610	25	160	100	300
Stress-Relieved						
5 hr @ 690°C (1274°F)	515	610	29	200	160	220
5 hr @ 690°C (1274°F) + SC ⁽⁷⁾	490	595	29	200	140	190

DEPOSIT COMPOSITION⁽¹⁾ - As Required per AWS A5.5/A5.5M

	%C	%Mn ⁽⁵⁾	%Si ⁽⁵⁾	%S	%P	%Cr
Requirements - AWS E8018-B2	0.05 - 0.1	0.5 - 0.9	0.15 - 0.3	0.015 max	0.012 max	1.00 - 1.40
Typical Results	0.06	0.70	0.25	0.012	0.009	1.25
	%Mo	%Cu	%Sn	%As	%Sb	X-Factor ⁽⁶⁾
Requirements - AWS E8018-B2	0.45 - 0.65	0.15 max	0.005 max	0.01 max	0.005 max	15 max.
Typical Results	0.55	<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

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

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

CONFORMANCES

AWS A5.5	E8018-B2 H4
BS EN ISO 3580-A	E CrMo1 B
BS EN ISO 3580-B	E 5516-1CM
BS 2493	1CrMo B H
DIN 8575	ECrMo 1 B 2 6

TYPICAL APPLICATIONS

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

Material Safety Data Sheets (MSDS) and Certificates of Conformance are available on our website at 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

The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

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