

CORMET™ 1

Low Alloy, All Position ▪ AWS E81T1-B2C-H4/M-H4

KEY FEATURES

- Designed for strength and resistance to corrosion
- Cr-Mo Alloyed steel for elevated temperature service to aid creep resistance

WELDING POSITIONS

All

SHIELDING GAS

80% Argon / 20% CO₂
Flow Rate: 40-50 CFH

CONFORMANCES

AWS A5.29M E81T1-B2C-H4/M-H4

TYPICAL APPLICATIONS

- Piping
- Chemical & Petrochemical Industry
- Steam Generating Power Plant
- Pressure Vessels

DIAMETERS / PACKAGING

Diameter mm (in)	15 kg (33.1 lb) Spool	5 kg (11 lb) MIDI Spool
1.2 (.045)	CORM1-12	CM1MD-12
1.6 (1/16)	CM1-16	

MECHANICAL PROPERTIES⁽¹⁾

	Yield Strength ⁽²⁾ MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf) @20°C (68°F)	Hardness HV
Requirements AWS E81T1-B2C-H4	470 min	550 min	19 min	-	-
Typical Results⁽³⁾ As-Welded	550	650	24	>40	220

DEPOSIT COMPOSITION⁽¹⁾

	%C	%Mn	%Si	%S
Requirements AWS E81T1-B2C-H4	0.05-0.12	1.25 max	0.80 max	0.030 max
Typical Results⁽³⁾	0.06	0.8	0.3	0.01
	%P	%Cr	%Mo	%Cu
Requirements AWS E81T1-B2C-H4	0.030 max	1.00-1.50	0.40-0.65	0.3 max
Typical Results⁽³⁾	0.01	1.3	0.5	0.05

TYPICAL OPERATING PROCEDURES

Diameter mm (in)	Polarity	Amp-Volt Range	Typical	Stickout mm (in)
1.2 (0.045)	DC+	160-260A / 24-30V	190A / 25V	15-25 (5/8-1)
1.6 (1/16)	DC+	220-350A / 26-32V	260A / 28V	15-25 (5/8-1)

⁽¹⁾ Typical all weld metal ⁽²⁾ Measured with 0.2% offset ⁽³⁾ See test results disclaimer ⁽⁴⁾ Preferred polarity is listed first.

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.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

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