

# 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% CO<sub>2</sub>  
 100% CO<sub>2</sub>  
 Flow Rate: 40-50 CFH

## CONFORMANCES

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

## TYPICAL APPLICATIONS

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

## DIAMETERS / PACKAGING

Diameter mm (in)	15 kg (33 lb) Spool
1.2 (0.045)	CORM1-12N

## MECHANICAL PROPERTIES<sup>(1)</sup>

	Yield Strength <sup>(2)</sup> ksi (MPa)	Tensile Strength ksi (MPa)	Elongation %	Charpy V-Notch J (ft-lbf) @20°C (68°F)	Hardness HV
<b>Requirements</b> AWS E81T1-B2C-H4	68 (470) min	80-100 (550-690) min	19 min	-	-
<b>Typical Results<sup>(3)</sup></b> after 1 hour stress relief at 1275° F (691° C)	80 (550)	94 (650)	24	30	220

## DEPOSIT COMPOSITION<sup>(1)</sup>

	%C	%Mn	%Si	%S
<b>Requirements</b> AWS E81T1-B2C-H4	0.05-0.12	1.25 max	0.80 max	0.030 max
<b>Typical Results<sup>(3)</sup></b>	0.06	1.0	0.3	0.01
	%P	%Cr	%Mo	%Cu
<b>Requirements</b> AWS E81T1-B2C-H4	0.030 max	1.00-1.50	0.40-0.65	0.3 max
<b>Typical Results<sup>(3)</sup></b>	0.01	1.3	0.5	0.05

## TYPICAL OPERATING PROCEDURES

Diameter, Polarity mm (in)	Voltage <sup>(4)</sup> (Volts)	Amperage (Amps)	Typical	CTWD mm (in)
1.2 (0.045) DC+	24-30	160-260	190A /25V	15-25 (5/8-1)

<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> Settings are for 80%Ar/20%CO<sub>2</sub> shielding gas. Increase voltage 1-2V for 100% CO<sub>2</sub>

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

FUMES AND GASES can be hazardous to your health.

- Fumes from the normal use of this product contain significant quantities of potentially hazardous compounds. See consumable product label/insert.
- Keep your head out of the fumes.
- Use enough ventilation and local exhaust to keep fumes and gases from your breathing zone and the general area.
- An approved respirator should be used unless exposure assessments are below applicable exposure limits.

#### 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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