LINCOLN® 71

Mild Steel, All Positions · AWS E71T-1C-H8, E71T-9C-H8, E71T-1M-H8, E71T-9M-H8

redzone LINCOLN ELECTRIC

Available to Cored Wire Partner Program Participants

KEY FEATURES

- Dual classifed for use with either 100% CO2 or 75% Argon/25% CO2 shielding gases
- Versatile design for consistent performance across all positions and for single & multiple pass procedures
- Industrial grade, moisture resistant vacuum foil bag packaging
- Meets AWS D1.8 seismic lot waiver requirements

SHIELDING GAS

- 100% CO2
- 75%-85% Argon / Balance CO2
- Flow Rate: 40 - 50 CFH

CONFORMANCES

AWS A5.20: E71T-1C-H8, E71T-1M-H8, E71T-9C-H8, E71T-9M-H8

CWB/CSA W48: E491T-9 H8, E491T-9M H8

AWS D1.8: 0.45"

TYPICAL APPLICATIONS

- General Fabrication
- Structural Fabrication
- Construction

WELDING POSITIONS

All

DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) Spool (Vacuum Sealed Foil Bag)
0.045 (1.1)	ED037801
0.052 (1.3)	*Coming Soon*
1/16 (1.6)	ED037802

MECHANICAL PROPERTIES[1]

	Yield Strength[2] MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch ft-lbf (J) -20°F (-29°C)
Requirements -				
AWS A5.20 E71T-1C-H8, E71T-1M-H8	400 (58) min	480-655 (70-95)	22 min	Not Specified
AWS A5.20 E71T-9C-H8, E71T-9M-H8				27 (20) min
Typical Results[3]				
As-Welded with 100% CO2	545 (79)	621 (90)	28	94 (127)
As-Welded with 75% Ar/25% CO2	579 (84)	656 (95)	24	97 (132)

DEPOSIT COMPOSITION[1]

	%C	%Mn	%Si	%S	%P	Diffusible Hydrogen (mL/100g weld deposit)
Requirements [4]						
AWS A5.20 E71T-1C-H8, E71T-1M-H8	0.12 max	0.75 max	0.90 max	0.03 max	0.030 max	8.0 max
AWS A5.20 E71T-9C-H8, E71T-9M-H8						
Typical Results[3]						
As-Welded with 100% CO2	0.06	1.19	0.31	0.01	0.01	2.5
As-Welded with 75% Ar/25% CO2	0.06	1.46	0.44	0.01	0.01	3.2

(1)Typical all weld metal. (2)Measured with 0.2% offset. (3)See test results dislaimer.
(4) As-Welded with 100% CO2 & As-Welded 75% Argon / 25% CO2. (5) When welding under CO2, increase voltage by 1 Volt. (6) To estimate ESO, subtract 1/4 in (6.0 mm) from CTWD.

TYPICAL OPERATING PROCEDURES

Diameter, Polarity, Shielding Gas [5]	CTWD [6] mm (in)	Wire Feed Speed in/min (m/min)	Voltage (Volts)	Approx. Current (Amps)	Melt-Off Rate lb/hr (kg/hr)	Deposition Rate lb/hr (kg/hr)	Efficiency (%)
0.045 in. (1.1 mm), DC+ 75% Ar/25% CO2	25 (1)	4.4 (175) 6.4 (250) 7.6 (300) 8.9 (350) 10.2 (400) 11.4 (450) 12.7 (500) 14.0 (550) 15.2 (600)	20-25 21-26 22-27 23-28 24-29 25-30 26-31 27-32 27-33	135 150 165 190 205 225 245 265 285	1.8 (4.0) 2.6 (5.7) 3.1 (6.8) 3.6 (8.0) 4.1 (9.1) 4.7 (10.3) 5.2 (11.4) 5.7 (12.5) 6.2 (13.7)	1.6 (3.5) 2.3 (5.0) 2.7 (6.0) 3.2 (7.0) 3.6 (8.0) 4.1 (9.0) 4.5 (10.0) 5.0 (10.9) 5.4 (11.9)	86 - 88
1/16 in. (1.6 mm), DC+ 75% Ar/25% CO2	25 (1)	3.2 (125) 4.4 (250) 5.1 (300) 5.7 (350) 6.4 (400) 7.6 (450) 8.3 (500) 8.9 (550) 10.2 (600)	20-25 21-26 22-27 23-28 24-29 25-31 25-32 26-33 28-35	195 215 235 265 285 315 335 365 405	2.4 (5.3) 3.3 (7.4) 3.8 (8.4) 4.3 (9.5) 4.8 (10.5) 5.7 (12.6) 6.2 (13.7) 6.7 (14.7) 7.6 (16.8)	2.1 (4.6) 2.9 (6.4) 3.3 (7.3) 3.7 (8.2) 4.2 (9.2) 5.0 (11.0) 5.4 (11.9) 5.8 (12.8) 6.6 (14.6)	86 - 88

(1)Typical all weld metal. (2)Measured with 0.2% offset. (3)See test results dislaimer.
(4) As-Welded with 100% CO2 & As-Welded 75% Argon / 25% CO2. (5) When welding under CO2, increase voltage by 1 Volt. (6) To estimate ESO, subtract 1/4 in (6.0 mm) from CTWD.

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

The business of Lincoln Electric is manufacturing and selling high quality welding equipment, automated welding systems, consumables, and cutting equipment. Our challenge is to meet the needs of our customers, who are experts in their fields, and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or technical information about their use of our products. Our employees respond to inquiries to the best of their ability based on information and specifications 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, or to provide engineering advice in relation to a specific situation. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or communications. Moreover, the provision of such information or technical information does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or technical information, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose or any other equivalent or similar warranty is specifically disclaimed.

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Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.

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