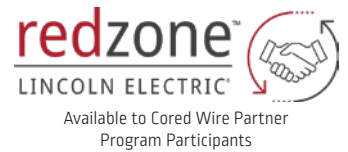


LINCOLN® 71

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



KEY FEATURES

- Dual classified for use with either 100% CO₂ or 75% Argon/25% CO₂ shielding gases
- Versatile design delivers stable, consistent performance in all weld positions for both single- and multi-pass applications.
- Industrial-Grade, Moisture-Resistant Vacuum Foil Packaging
- Compliant With 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
- AWS D1.8:** 0.045, 0.052, 1/16 in.

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)	ED038162
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 AWS A5.20 E71T-9C-H8, E71T-9M-H8	400 [58] min	480-655 [70-95]	22 min	Not Specified 27 [20] min
Typical Results⁽³⁾ As-Welded with 100% CO ₂ As-Welded with 75% Ar/25% CO ₂	545 [79] 579 [84]	621 [90] 656 [95]	28 24	94 [127] 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 AWS A5.20 E71T-9C-H8, E71T-9M-H8	0.12 max	0.75 max	0.90 max	0.03 max	0.030 max	8.0 max
Typical Results⁽⁵⁾ As-Welded with 100% CO ₂ As-Welded with 75% Ar/25% CO ₂	0.06 0.06	1.19 1.46	0.31 0.44	0.01 0.01	0.01 0.01	2.5 3.2

(1) Typical all weld metal. (2) Measured with 0.2% offset. (3) See test results disclaimer.

(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 E50, subtract 1/4 in (6.0 mm) from CTWD.

TYPICAL OPERATING PROCEDURES

Diameter, Polarity, Shielding Gas ^(a)	CTWD ^(b) mm (in)	Wire Feed Speed m/min (in/min)	Voltage (Volts)	Approx. Current (Amps)	Melt-Off Rate kg/hr (lb/hr)	Deposition Rate kg/hr (lb/hr)	Efficiency (%)
0.045 in (1.1 mm), DC+ 75% Ar/25% CO ₂	25 (1)	4.4 (175)	20-25	135	1.8 (4.0)	1.6 (3.5)	86 - 88
		6.4 (250)	21-26	150	2.6 (5.7)	2.3 (5.0)	
		7.6 (300)	22-27	165	3.1 (6.8)	2.7 (6.0)	
		8.9 (350)	23-28	190	3.6 (8.0)	3.2 (7.0)	
		10.2 (400)	24-29	205	4.1 (9.1)	3.6 (8.0)	
		11.4 (450)	25-30	225	4.7 (10.3)	4.1 (9.0)	
		12.7 (500)	26-31	245	5.2 (11.4)	4.5 (10.0)	
		14.0 (550)	27-32	265	5.7 (12.5)	5.0 (10.9)	
0.052 in (1.3 mm), DC+ 75% Ar/25% CO ₂	25 (1)	4.0 (160)	24.5	185	2.4 (5.3)	2.1 (4.7)	88-90
		5.0 (200)	25	210	3.0 (6.6)	2.7 (5.9)	
		6.0 (235)	26	240	3.7(8.2)	3.2 (7.1)	
		7.0 (275)	28	270	4.3(9.5)	3.8(8.4)	
		8.0 (315)	30	300	4.9(10.8)	4.4 (9.7)	
		9.0 (355)	31	310	5.5(12.1)	4.9(10.8)	
		10.0 (395)	34	350	6.0(13.2)	5.4(12.0)	
		11.0 (435)	36	370	6.7(14.8)	6.0(13.1)	
1/16 in (1.6 mm), DC+ 75% Ar/25% CO ₂	25 (1)	3.2 (125)	20-25	195	2.4 (5.3)	2.1 (4.6)	86 - 88
		4.4 (250)	21-26	215	3.3 (7.4)	2.9 (6.4)	
		5.1 (300)	22-27	235	3.8 (8.4)	3.3 (7.3)	
		5.7 (350)	23-28	265	4.3 (9.5)	3.7 (8.2)	
		6.4 (400)	24-29	285	4.8 (10.5)	4.2 (9.2)	
		7.6 (450)	25-31	315	5.7 (12.6)	5.0 (11.0)	
		8.3 (500)	25-32	335	6.2 (13.7)	5.4 (11.9)	
		8.9 (550)	26-33	365	6.7 (14.7)	5.8 (12.8)	
10.2 (600)	28-35	405	7.6 (16.8)	6.6 (14.6)			

[1] Typical all weld metal. [2] Measured with 0.2% offset. [3] See test results disclaimer.

[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 E50, 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.

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