

ULTRACORE® 70C

Mild Steel, Flat & Horizontal ▪ AWS E70T-1C-H8, E70T-9C-H8

KEY FEATURES

- High deposition in the flat and horizontal positions
- Low fume generation rates
- Designed for welding with 100% CO₂ shielding gas
- Premium arc performance and bead appearance
- ProTech® foil bag packaging

WELDING POSITIONS

Flat & Horizontal

SHIELDING GAS

100% CO₂
Flow Rate: 40-55 CFH

CONFORMANCES

AWS A5.20/A5.20M:	E70T-1C-H8, E70T-9C-H8
AWS A5.36/A5.36M:	E70T1-C1A2-CS1-H8
ASME SFA-A5.20:	E70T-1C-H8, E70T-9C-H8
ABS:	2YSA H10
CWB/CSA W48-06:	E492T-9 H8
EN ISO 17632-B:	T493T1-0CA-H10
FEMA 353	
AWS D1.8	

TYPICAL APPLICATIONS

- Structural fabrication
- Heavy equipment
- Shipbuilding

DIAMETERS / PACKAGING

Diameter in (mm)	50 lb (22.7 kg) Coil	500 lb (227 kg) Accu-Trak® Drum	500 lb (227 kg) Speed-Feed® Drum
1/16 (1.6)	ED032978	ED033064	
5/64 (2.0)	ED032977		ED033065
3/32 (2.4)	ED032941		ED033066

MECHANICAL PROPERTIES⁽¹⁾ – As Required per AWS A5.20/A5.20M & AWS A5.36/A5.36M

	Yield Strength ⁽²⁾ MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft•lbf)	
				@ -18°C (0°F)	@ -29°C (-20°F)
Requirements⁽⁴⁾					
AWS A5.20 E70T-1C-H8, E70T-9C-H8	400 (58) min	480-655 (70-95)	22 min	27 (20) min	27 (20) min
AWS A5.36 E70T1-C1A2-CS1-H8				-	
Typical Results⁽³⁾					
As-Welded with 100% CO ₂	485-520 (70-75)	555-590 (81-86)	28-30	47-72 (35-53)	28-47 (21-35)

⁽¹⁾Typical all weld metal. ⁽²⁾Measured with 0.2% offset. ⁽³⁾See test results disclaimer on next pg. ⁽⁴⁾As-Welded with 100% CO₂

DEPOSIT COMPOSITION⁽¹⁾ – As Required per AWS A5.20/A5.20M & AWS A5.36/A5.36M

	%C	%Mn	%Si	%S	%P	Diffusible Hydrogen (mL/100g weld deposit)
Requirements⁽⁴⁾						
AWS A5.20 E70T-1C-H8, E70T-9C-H8	0.12 max	1.75 max	0.90 max	0.03 max	0.03 max	8.0 max
AWS A5.36 E70T1-C1A2-CS1-H8				0.030 max	0.030 max	8 max
Typical Results⁽³⁾						
As-Welded with 100% CO ₂	0.04-0.05	1.46-1.59	0.54-0.59	≤ 0.01	≤ 0.01	5-8

TYPICAL OPERATING PROCEDURES – Flat & Horizontal

Diameter, Polarity Shielding Gas	CTWD ⁽²⁾ 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 (%)
1/16 in (1.6 mm), DC+ 100% CO ₂	25 (1)	3.2 (125)	23-27	170	2.4 (5.3)	2.1 (4.7)	84 - 89
		5.1 (200)	24-28	225	3.8 (8.4)	3.2 (7.1)	
		6.4 (250)	25-30	260	4.8 (10.5)	4.1 (9.0)	
		7.6 (300)	27-31	280	5.7 (12.6)	4.9 (10.8)	
		9.5 (375)	28-32	320	7.1 (15.7)	6.1 (13.5)	
5/64 in (2.0 mm), DC+ 100% CO ₂	25 (1)	3.2 (125)	23-27	230	3.8 (8.4)	3.2 (7.1)	84 - 88
		4.4 (175)	24-29	305	5.4 (11.8)	4.6 (10.1)	
		5.7 (225)	25-30	365	6.8 (15.0)	5.9 (13.0)	
		6.4 (250)	26-32	385	7.7 (16.9)	6.5 (14.3)	
		7.6 (300)	27-33	420	9.0 (19.8)	7.8 (17.2)	
3/32 in (2.4 mm), DC+ 100% CO ₂	25 (1)	3.2 (125)	26-33	350	5.4 (11.9)	4.7 (10.3)	87 - 89
		5.1 (200)	27-34	500	8.6 (19.0)	7.6 (16.7)	
	31 (1 1/4)	6.4 (250)	29-35	570	10.6 (23.3)	9.4 (20.8)	
		7.6 (300)	31-37	630	13.1 (28.8)	11.4 (25.1)	
		8.3 (325)	32-38	720	14.3 (31.5)	12.4 (27.2)	

⁽¹⁾Typical all weld metal. ⁽²⁾Measured with 0.2% offset. ⁽³⁾See test results disclaimer below. ⁽⁴⁾As-Welded with 100% CO₂. ⁽⁵⁾To estimate ESO, subtract 1/4 in (6.0 mm) from CTWD.

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

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