ULTRACORE® HD-C

Mild Steel, All Position ▪ AWS E71T-9C-H8, E71T1-C1A2-CS1-H8

BUY AMERICA

KEY FEATURES

- High deposition rates, increase weld deposition exceeding 10 lbs/hr out-of-position
- Fast freezing slag for a flat bead shape and increased productivity in all positions, including vertical up
- Operators can set the machine on a single setting and weld in all positions
- Little or no pre-weld clean up required, weld over light rust, mill scale, and primer

WELDING POSITIONS

All

CONFORMANCES

AWS 5.20/A5.20M:	E71T-1C-H8, E71T-9C-H8
AWS A5.36:	E71T1-C1A2-CS1-H8
ABS:	3YSA H10
Lloyd's Register:	3YS H10
DNV:	III YMS H10
CWB/CSA W48-06:	E491T-9-H8
EN ISO 17632-B	T493T1-1CA-H10

TYPICAL APPLICATIONS

- Shipbuilding
- General fabrication

SHIELDING GAS

100% CO_2
Flow Rate: 40 - 50 CFH

DIAMETERS / PACKAGING

Diameter in (mm)	15 lb (6.8 kg) Plastic Spool 60 lb (27.2 kg) Master Carton	33 lb (15 kg) Spool**	50 lb (22.7 kg) Fiber Spool	50 lb (22.7 kg) Coil	500 lb (227 kg) Accu-Trak® Drum
0.045 (1.1)	ED033756	ED033755	ED033757		
0.052 (1.3)	ED033759	ED033758	ED033760		ED034376
1/16 (1.6)	ED033762	ED033761	ED033763	ED036529*	ED033785

**Buy America Product **Spool may be plastic or fiber.*

MECHANICAL PROPERTIES[1]

	Yield Strength[2] MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft•lbf) @ -18°C (0°F)	Charpy V-Notch J (ft•lbf) @ -29°C (-20°F)
Requirements					
AWS E71T-1C-H8	400 (58) min	480-660 (70-95)	22 min	27 (20) min	Not Specified
AWS E71T-9C-H8				Not Specified	27 (20) min
Test Results[3] - As-Welded with 100% CO_2	540-560 (78-81)	590-610 (86-89)	27	37-111 (27-82)	31-85 (23-63)

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

DEPOSIT COMPOSITION[1]

	%C	%Mn	%Si
Requirements - AWS E71T-1C-H8, E71T-9C-H8	0.12 max	1.75 max	0.90 max
Test Results[3] - As-Welded with 100% CO_2	0.04-0.05	1.36-1.46	0.38-0.42
	%S	**%P**	**Diffusible Hydrogen (mL/100g weld deposit)**
Requirements - AWS E71T-1C-H8, E71T-9C-H8	0.03 max	0.03 max	8 max
Test Results[3] - As-Welded with 100% CO_2	0.01	0.01	4-6

TYPICAL OPERATING PROCEDURES

Diameter, Polarity Shielding Gas	CTWD[4] 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+ 100% CO_2	19 - 25 (3/4 - 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)	22-25 23-28 24-30 25-31 27-32 28-33 27-33 28-33 30-35	145 185 215 235 255 280 300 315 335	1.8 (3.9) 2.5 (5.6) 3.1 (6.8) 3.6 (7.9) 4.1 (9.0) 4.6 (10.1) 5.1 (11.3) 5.6 (12.4) 6.1 (13.5)	1.5 (3.4) 2.2 (4.8) 2.6 (5.8) 3.1 (6.8) 3.5 (7.8) 4.0 (8.8) 4.4 (9.8) 4.9 (10.8) 5.3 (11.7)	85 - 87
0.052 in (1.3 mm), DC+ 100% CO_2	19 - 25 (3/4 - 1)	3.8 (150) 5.1 (200) 6.4 (250) 7.6 (300) 8.9 (350) 9.5 (375) 10.8 (425) 12.1 (475) 12.7 (500)	22-25 23-26 23-27 24-29 26-30 27-30 28-32 29-33 30-34	155 190 225 265 285 310 325 345 360	2.1 (4.7) 2.9 (6.3) 3.5 (7.8) 4.3 (9.4) 5.0 (11.0) 5.3 (11.7) 6.0 (13.3) 6.8 (14.9) 7.1 (15.6)	1.7 (3.8) 2.4 (5.2) 2.9 (6.5) 3.6 (7.9) 4.2 (9.2) 4.5 (9.9) 5.1 (11.2) 5.7 (12.6) 6.0 (13.3)	81 - 85
1/16 in (1.6 mm), DC+ 100% CO_2	19 - 25 (3/4 - 1)	3.8 (150) 4.4 (175) 5.1 (200) 5.7 (225) 6.4 (250) 7.6 (300) 8.3 (325) 8.9 (350) 10.2 (400)	21-26 22-27 22-27 23-28 24-29 25-30 25-30 26-30 27-31	195 245 260 290 310 330 365 390 405	2.9 (6.4) 3.4 (7.5) 3.9 (8.5) 4.4 (9.6) 4.8 (10.6) 5.8 (12.7) 6.3 (13.8) 6.7 (14.8) 7.7 (16.9)	2.4 (5.3) 2.9 (6.3) 3.3 (7.2) 3.7 (8.1) 4.1 (9.1) 4.9 (10.9) 5.4 (11.9) 5.8 (12.8) 6.7 (14.7)	84 - 87

[1]Typical all weld metal. [2]Measured with 0.2% offset. [3]See test results disclaimer [4]As-Welded with 100% CO_2 [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

Publication c.3.12.5 | Issue Date 09/16

THE LINCOLN ELECTRIC COMPANY
22801 St. Clair Avenue ▪ Cleveland, OH ▪ 44117-1199 ▪ U.S.A.
Phone: +1.216.481.8100 ▪ www.lincolnelectric.com