ULTRACORE® 360™ C71

Mild Steel, All Position ▪ AWS E71T-1C-JH4, E71T1-C1A2-CS1-H4

KEY FEATURES

- Seamless design protects the flux core from environmental exposure helping to maintain low diffusible hydrogen and extend shelf life
- Copper coating offers superior feedability and extended contact tip life
- Low spatter and fume levels for less post-weld clean up and a better work environment
- Low H4 diffusible hydrogen levels minimize the risk of hydrogen induced cracking
- Premium arc performance and bead appearance

CONFORMANCES

AWS A5.20:	E71T-1C-JH4
AWS A5.36:	E71T1-C1A2-CS1-H4
EN ISO 17632-A:	T46 3 P C 1 H5

TYPICAL APPLICATIONS

- Offshore
- Shipbuilding
- Structural
- Oil & Gas

WELDING POSITIONS

All

SHIELDING GAS

100% CO_2
Flow rate: 28-38 CFH

DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) Fiber Spool
0.045 (1.2)	W000403771
0.052 (1.3)	W000403772
1/16 (1.6)	W000403773

MECHANICAL PROPERTIES[1]

	Yield Strength[2] MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft•lbf) @ -29°C (-20°F)	Charpy V-Notch J (ft•lbf) @ -40°C (-40°F)
Requirements					
AWS A5.20: E71T-1C-JH4	400 (58) min	490-660 (70-95)	22 min	-	27 (20) min
AWS A5.36: E71T1-C1A2-CS1-H4	400 (58) min	490-660 (70-95)	22 min	27 (20) min	-
Typical Results[3]					
As-Welded with 100% CO_2	480-520 (70-76)	560-620 (81-90)	24-28	50-80 (36-59)	30-60 (22-45)

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

DEPOSIT COMPOSITION[1]

	%C	%Mn	%Si	%S
Requirements AWS A5.20: E71T-1C-JH4	0.12 max	1.75 max	0.90 max	0.03 max
AWS A5.36: E71T1-C1A2-CS1-H4	0.12 max	1.75 max	0.90 max	0.030 max
Typical Results[3] As-Welded with 100% CO_2	0.04-0.07	1.20-1.50	0.30-0.50	< 0.015
	%P	**%Cu**	**%B**	**Diffusible Hydrogen (mL/100g weld deposit)**
Requirements AWS A5.20: E71T-1C-JH4	0.03 max.	0.35 max.	Not Specified	4.0 max.
AWS A5.36: E71T1-C1A2-CS1-H4	0.030 max.	0.35 max.	Not Specified	4 max.
Typical Results[3] As-Welded with 100% CO_2	< 0.015	0.10-0.20	0.002-0.006	2-4

TYPICAL OPERATING PROCEDURES

Diameter, Polarity Shielding Gas	CTWD[5] 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 (1.2 mm), DC+ 100% CO_2	15-20 (3/4)	6.0 (236) 7.5 (295) 9.0 (354) 10.5 (413) 11.5 (453) 13.0 (512) 15.0 (590)	21-23 23-24 24-26 26-28 27-29 28-30 28-31	160 190 220 250 260 270 290	2.5 (5.5) 3.1 (6.9) 3.8 (8.3) 4.4 (9.7) 4.8 (10.6) 5.4 (12.0) 6.3 (13.8)	2.2 (4.8) 2.7 (6.0) 3.3 (7.3) 3.9 (8.6) 4.3 (9.4) 4.8 (10.7) 5.6 (12.3)	85-88
0.052 in (1.3 mm), DC+ 100% CO_2	15-20 (3/4)	5.0 (197) 6.0 (236) 8.0 (315) 9.0 (354) 10.0 (394) 12.5 (492)	21-22 23-24 26-27 27-29 27-29 29-30	210 240 280 300 320 350	2.7 (6.1) 3.3 (7.3) 4.4 (9.7) 4.9 (10.9) 5.5 (12.1) 6.9 (15.1)	2.4 (5.3) 2.9 (6.3) 3.9 (8.5) 4.4 (9.7) 4.9 (10.8) 6.1 (13.5)	85-88
1/16 in (1.6 mm), DC+ 100% CO_2	15-20 (3/4)	3.1 (122) 5.0 (197) 6.5 (256) 7.5 (295) 9.0 (354)	21-22 23-26 26-28 27-29 28-30	190 280 350 370 400	2.4 (5.3) 3.9 (8.6) 5.1 (11.2) 5.9 (12.9) 7.0 (15.5)	2.1 (4.6) 3.4 (7.6) 4.5 (10.0) 5.2 (11.5) 6.3 (13.8)	85-88

[1]Typical all weld metal. [3]See test results disclaimer [4]In order to meet the requirements of the G group, the undiluted weld metal shall have not less than the minimum specified for one or more of the elements listed.
[5]To estimate ESO, subtract 1/4 in (6.0 mm) from CTWD. NOTE: This product contains micro-alloying elements. Additional information available upon request

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.

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