OUTERSHIELD® MC715-H

Mild Steel ▪ AWS E70C-6MH4

KEY FEATURES

- Low spatter and excellent arc stability
- Excellent bead shape and profile
- Superior mechanical properties including low temperature impacts down to -40°C (-40°F)
- Low H4 diffusible hydrogen levels

CONFORMANCES

AWS A5.18: E70C-6M H4
EN ISO 17632-A: T 46 4 M M 2 H5
CWB: E491T-15-M21A4-CS1-H4 (E491C-6MH-H4)
DNV: IV Y40H5
GL: 4Y40H5S
BV: SA3,3YMHH
RINA: 4YSH5

WELDING POSITIONS

All

TYPICAL APPLICATIONS

- Robotics/Hard Automation
- Structural Fabrication
- Shipbuilding
- Automotive
- Pressure Vessels
- General Fabrication

SHIELDING GAS

75-80% Argon / Balance CO_2
Flow Rate: 35-55 CFH

DIAMETERS / PACKAGING

Diameter in (mm)	33 lb (15 kg) Plastic Spool	450 lb (204 kg) Accu-Trak® Drum
0.047 (1.2)	ED0900429	ED0900492
0.055 (1.4)	ED0900408	ED0900491
1/16 (1.6)	ED0900470	ED0941932

MECHANICAL PROPERTIES[1]

	Yield Strength[2] MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft▪lbs) @ -30°C (-22°F)	Charpy V-Notch J (ft▪lbs) @ -40°C (-40°F)
Requirements AWS E70C-6M-H4	400 (58) min	480 (70) min	22 min	27 (20) min	Not Specified
Test Results[3] As-Welded with 75-80% Ar / balance CO_2	480 (70)	580 (84)	27	120 (89)	110 (81)

DEPOSIT COMPOSITION[1]

	%C	%Mn	%Si	%P	%S	%Cu
Requirements - AWS A5.18: E70C-6M H4	0.12 max	1.75 max	0.90 max	0.03 max	0.03 max	0.50 max
Typical Results[3] As-Welded with 75-80% Ar / balance CO_2	0.04	1.50	0.40	0.02	0.01	0.04

	%Ni	%Cr	%Mo	%V	Diffusible Hydrogen (mL/100g weld deposit)
Requirements - AWS A5.18: E70C-6M H4	0.50 max	0.20 max	0.30 max	0.08 max	4
Typical Results[3] As-Welded with 75-80% Ar / balance CO_2	0.03	0.04	0.01	0.01	3

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

TYPICAL OPERATING PROCEDURES

Diameter, Polarity Shielding Gas	CTWD[4] mm (in)	Wire Feed Speed m/min (in/min)	Voltage[5] (Volts)	Approx. Current (Amps)	Melt-Off Rate kg/hr (lbs/hr)	Deposition Rate kg/hr (lbs/hr)	Efficiency (%)
0.047 in (1.2 mm), DC+, 75-90% Argon/Balance CO_2	15-20 (5/8-3/4)	2.3 (91) 3.2 (126) 4.0 (157) 6.4 (252) 9.4 (370) 14.2 (559)	15 16 17 28-30 31-34 35-38	100 120 150 180 275 340	1.2 (2.6) 1.5 (3.3) 2.1 (4.6) 3.0 (6.6) 5.3 (11.7) 7.5 (16.5)	1.1 (2.4) 1.4 (3.1) 1.9 (4.2) 2.7 (6.0) 4.8 (10.6) 6.8 (15.0)	91
0.055 in (1.4 mm), DC+, 75-90% Argon/Balance CO_2	15-20 (5/8-3/4)	2.1 (83) 2.6 (102) 2.8 (110) 4.5 (177) 8.9 (350) 14.0 (551)	14.5 15 15.5 27-29 29-32 32-34	105 125 135 170 270 355	1.3 (2.9) 1.6 (3.5) 1.8 (4.0) 2.7 (5.9) 5.5 (12.1) 8.9 (19.6)	1.2 (2.6) 1.5 (3.3) 1.6 (3.5) 2.5 (5.5) 5.0 (11.0) 8.1 (17.9)	
1/16 in (1.6 mm), DC+, 75-90% Argon/Balance CO_2	18-25 (3/4- 1)	1.8 (71) 2.1 (83) 2.3 (91) 3.8 (150) 6.4 (252) 8.9 (350) 11.5 (453)	15 16 18 25-26 29-32 34-37 36-38	145 160 170 235 325 400 460	1.6(3.5) 1.9 (4.2) 2.1 (4.1) 3.2 (7.0) 5.5 (12.1) 7.7 (17.0) 10.0 (22.0)	1.5 (3.3) 1.7 (3.7) 1.9 (4.2) 2.9 (6.4) 5.0 (11.0) 7.0 (15.4) 9.1 (20.0)	

[4]To estimate ESO, subtract 3/16 in (4.8 mm) from CTWD. [5]For greater percentage of CO_2 shielding gas, increase voltage by 1-2 volts.

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

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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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