

AWS E7018 H4R/E7018-1 H4R (E4818*)

Hobart® 718MC**DESCRIPTION:**

Hobart 718MC is designed to provide improved deposition rates, bead appearance and operator appeal over other electrodes of the same class when welding in low-temperature environments where low-temperature impacts are important. Ideal for the welding of enameling steels, free machining steels, and low, medium or high carbon steels, Hobart 718MC provides you with excellent moisture resistance, good out-of-position welding capabilities and X-ray quality weld deposit.

APPLICATIONS:

Barge offshore rigs and shipbuilding, boiler code applications, field erections and steel structure, petrochemical plants, power plants, railroad and locomotive construction, welding of enameling steels, free machining steels, low alloy structurals and low, medium or high carbon steels, weldments in low-temperature impacts are important.

FEATURES:

- Low moisture absorption
- Easy slag removal
- Low spatter in all positions
- Good wetting action
- Reliable starts and restarts
- Very stable arc

BENEFITS:

- Reduces worry of moisture pick-up and hydrogen cracking
- Eliminates going back to oven for "fresh" electrodes
- Reduces clean-up time
- Results in excellent weld bead appearance
- Enhances bead contour
- Provides better welds due to no porosity
- Easy to control

TYPICAL WELD METAL PROPERTIES (Chem Pad):**

Weld Metal Analysis		AWS Spec (max)
Carbon (C)	0.04	0.15
Manganese (Mn)	0.98	1.60
Silicon (Si)	0.61	0.75
Phosphorus (P)	0.011	0.035
Sulphur (S)	0.010	0.035
Nickel (Ni)	0.08	0.30
Chromium (Cr)	0.08	0.20
Molybdenum (Mo)	0.02	0.30
Vanadium (V)	0.01	0.08
Mn + Ni + Cr + Mo +	1.17	1.75

TYPICAL MECHANICAL PROPERTIES(AW):**

		AWS Spec (min)
Tensile Strength	77,700 psi (536 MPa)	70,000 psi
Yield Strength	62,100 psi (428 MPa)	58,000 psi
Elongation % in 2"	30%	22%
Reduction of Area	68%	not required

TYPICAL CHARPY-V-NOTCH IMPACT VALUES(AW):**

		AWS Spec (min)
Avg at -20°F (-29°C)	123 ft•lbs (167 Joules)	20 ft•lbs
Avg at -50°F (-45°C)	93 ft•lbs (126 Joules)	not required

TYPICAL DIFFUSABLE HYDROGEN: 3.0 4.0

AWS Spec

*Metric AWS classification

**The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and Hobart Brothers Company expressly disclaims any liability incurred from any reliance thereon. Typical data are those obtained when welded and tested in accordance with AWS A5.1 specification. Other tests and procedures may produce different results. No data is to be construed as a recommendation for any welding condition or technique not controlled by Hobart Brothers Company.

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Hobart® 718MC

TYPICAL CTOD VALUES** (Tested @ +14°F):

0.969 mm (.0381")
 0.294 mm (.0116")
 0.491 mm (.0193")

TYPE OF CURRENT: DCEP or AC

CONFORMANCES AND APPROVALS:

• AWS A5.1, E7018 H4R/E7018-1 H4R, ASME SFA 5.1, F-4, A-1 E7018 • ABS 3H5, 3Y • MIL-E-22200/10

RECOMMENDED WELDING PROCEDURES:

GENERAL: Electrode positive, work negative (DCEP) or AC.
ARC LENGTH: Very short arc (less than half the diameter of the electrode).
FLAT: Angle electrode 10°-15° from 90°.
VERTICAL-UP: Use weaving technique, but do not use oscillation or whipping motion
VERTICAL-DOWN: Not recommended.
OVERHEAD: Use slight weaving motion within the puddle.
STORAGE: 250°F to 350°F (to ensure a low hydrogen weld deposit, storage in an oven is recommended).
RECONDITIONING: If exposed to the atmosphere for extended periods, the electrode should be reconditioned at 500°F to 800°F for one to two hours.

RECOMMENDED OPERATING RANGES:

Diameter		Type of Power	Minimum Amps*	Optimum* Amps	Maximum Amps
Inches	mm				
3/32	2.4	DCEP or AC	70	90	110
1/8	3.2	DCEP or AC	90	140	165
5/32	4.0	DCEP or AC	125	180	220
3/16	4.8	DCEP or AC	160	230	300
1/4	6.4	DCEP or AC	270	325	380

*For out-of-position welding, reduce amperage shown by 15%.

TYPICAL DEPOSITION DATA (at optimum):

Diameter		Type of Power	Amps	Volts	Deposition Rate lbs/hr	Deposition* Efficiency%
Inches	mm					
3/32	2.4	DCEP	90	22.0	1.90	62.7
1/8	3.2	DCEP	140	26.5	2.89	73.1
5/32	4.0	DCEP	180	28.0	3.82	62.5
3/16	4.8	DCEP	230	28.5	5.40	69.2
1/4	6.4	DCEP	330	32.0	8.00	70.6

*Allowance made for 2" stub loss included.

AVAILABLE DIAMETERS AND PACKAGES:

Diameter		Length		10-Lb. Plastic Pak	50-Lb. Can
Inches	mm	Inches	mm		
3/32	2.4	14"	355	S115932-089	S115932-035
1/8	3.2	14"	355	S115944-089	S115944-035
5/32	4.0	14"	355	S115951-089	S115951-035
3/16	4.8	14"	355	—	S115958-035
7/32	5.6	18"	457	—	S115970-035
1/4	6.4	18"	457	—	S115981-035

Material Safety Data Sheets on any Hobart Brothers Company product may be obtained from Hobart Customer Service.

Because Hobart Brothers Company is constantly improving products, Hobart reserves the right to change design and/or specifications without notice.

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