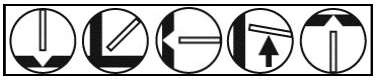
Hobart® 718MC

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

WELDING POSITIONS:



FEATURES:	BENEFITS:
• Low moisture absorption	• Reduces worry of moisture pick-up and hydrogen cracking
• Easy slag removal	• Eliminates going back to oven for “fresh” electrodes
• Low spatter in all positions	• Reduces clean-up time
• Good wetting action	• Results in excellent weld bead appearance
• Reliable starts and restarts	• Enhances bead contour
• Very stable arc	• Provides better welds due to no porosity
	• Easy to control

APPLICATIONS:

- Offshore rigs
- Steel structures
- Weldments
- Railroad and locomotive construction
- Shipbuilding
- Petrochemical plants
- Free machining steels
- Boiler code applications
- Power plates
- Low alloy structures
- Field erections
- Enameling steels
- Low, medium, high carbon steels

TYPE OF CURRENT: Direct Current Electrode Positive (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° 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° to 800°F for one to two hours

TYPICAL WELD METAL CHEMISTRY* (Chem Pad):

Weld Metal Analysis (%)		AWS Spec (max)
Carbon (C)	0.04	0.15
Manganese (Mn)	0.92	1.60
Silicon (Si)	0.25	0.75
Phosphorus (P)	0.011	0.035
Sulphur (S)	0.016	0.035
Nickel (Ni)	0.07	0.30
Chromium (Cr)	0.06	0.20
Molybdenum (Mo)	<0.01	0.30
Vanadium (V)	<0.01	0.08
Mn + Ni + Cr + Mo +	1.06	1.75

Note: AWS specification single values are maximums.

TYPICAL CHARPY V-NOTCH IMPACT VALUES* (As Welded):

		AWS Spec (min)
Avg. @-20°F (-29°C)	123 ft•lbs (167 Joules)	20 ft•lbs (27 Joules)
Avg. @-50°F (-45°C)	106 ft•lbs (144 Joules)	20 ft•lbs (27 Joules)

TYPICAL DIFFUSIBLE HYDROGEN:

Hydrogen Equipment		AWS Spec
(GAS CHROMATOGRAPHY)	1.4 ml/100g	4.0 ml/100g

TYPICAL CTOD VALUES (Tested @ +14°F):

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

TYPICAL MECHANICAL PROPERTIES* (As Welded):

Mechanical Tests		AWS Spec (min)
Tensile Strength	80,000 psi (550 MPa)	70,000 psi (483 MPa)
Yield Strength	69,000 psi (478 MPa)	58,000 psi (400 MPa)
Elongation % in 2” (50 mm)	28%	22%
Reduction of Area	68%	Not required

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Diameter Inches	(mm)	Type of Current	Minimum Amps	Optimum Amps	Maximum Amps
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%.

Diameter Inches	(mm)	Type of Current	Amps	Volts	Deposition Rate lbs/hr	(kg/hr)	Deposition Efficiency %
3/32	(2.4)	DCEP or AC	90	22.0	1.90	(0.9)	62.7
1/8	(3.2)	DCEP or AC	140	26.5	2.89	(1.3)	73.1
5/32	(4.0)	DCEP or AC	180	28.0	3.82	(1.7)	62.5
3/16	(4.8)	DCEP or AC	230	28.5	5.40	(2.5)	69.2
1/4	(6.4)	DCEP or AC	325	32.0	8.00	(3.6)	70.6

- **Maintaining a proper welding procedure - including pre-heat and interpass temperatures - may be critical depending on the type and thickness of steel being welded.**

STANDARD DIAMETERS AND PACKAGES: For a complete list of diameters and packaging, please contact Hobart Brothers at (800) 424-1543, or (937) 332-5188 for International Customer Service.

Diameter Inches	(mm)	10-lb. (4.5kg) Plastic Pak	50-lb. (22.7kg) Can
3/32	(2.4)	S115932-089	S115932-035
1/8	(3.2)	S115944-089	S115944-035
5/32	(4.0)	S115951-089	S115951-035
3/16	(4.8)	—	S115958-035
7/32	(5.6)	—	S115970-035
1/4	(6.4)	—	S115981-035

CONFORMANCES AND APPROVALS:

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

CAUTION:
Consumers should be thoroughly familiar with the safety precautions on the warning label posted in each shipment and in the American National Standard Z49.1, "Safety in Welding and Cutting," published by the American Welding Society, 550 NW LeJune Road, Miami, FL 33126; OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210

Material Safety Data Sheets on any Hobart Brothers Company product may be obtained from Hobart Customer Service or at www.hobartbrothers.com.

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

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