

AWS E7018 H4R/E7018-1 H4R

**Hobart® 718****DESCRIPTION:**

**Hobart 718** electrodes have been designed to provide weld metal with high toughness at very low temperatures (-50° F). It also has a specially formulated coating to resist moisture pick-up when the electrode is left out in the open air that will minimize cracking and porosity problems. In addition to the excellent physical characteristics, Hobart 718 is welder friendly, features very low spatter levels and is excellent for out-of-position welding. Hobart 718 is dual classified as an E7018 H4R and E7018-1 H4R electrode which indicates high toughness at low temperatures as well as very low diffusible hydrogen levels. AWS E7018 H4R classification allows maximum atmospheric exposure of nine (9) hours per AWS D1.1-2002 and four (4) hours per AWS D1.5-2002.

**APPLICATIONS:**

Alloy and high carbon castings, boiler and pressure vessels, low alloy structural plate - sheet and tubing, steel structure field erections, mining equipment, heavy equipment fabrication and repair, petrochemical and power plants, offshore drilling rigs, and general fabrication.

**FEATURES:**

- Excellent arc stability
- Excellent wetting
- Superior slag removal

**BENEFITS:**

- Easy to use for welders
- Easy weld tie-in's
- Easy bead clean-up

**TYPICAL WELD METAL PROPERTIES\* (Chem Pad):**

Weld Metal Analysis		AWS Spec (max)
Carbon (C)	0.06	0.15
Manganese (Mn)	0.98	1.60
Phosphorus (P)	0.011	0.035
Sulphur (S)	0.009	0.035
Silicon (Si)	0.61	0.75
Chromium (C)	0.07	0.20
Vanadium (V)	0.01	0.08
Nickel (Ni)	0.07	0.30
Molybdenum (Mo)	0.02	0.30
Mn + Ni + Cr + Mo +	1.15	1.75

**TYPICAL MECHANICAL PROPERTIES\* (AW):**

		AWS Spec
Tensile Strength	81,600 psi	70,000 psi
Yield Strength	66,000 psi	58,000 psi
Elongation % in 2"	29%	22%
Reduction of Area	65% to 70%	—

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

		AWS Spec
Avg at -20°F	140 ft•lbs	20 ft•lbs
Avg at -50°F	50 ft•lbs	20 ft•lbs

**AWS Spec****TYPICAL DIFFUSABLE HYDROGEN\*:** 3.0 ml

4.0 ml

**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
- ABS E7018-1

\*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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## RECOMMENDED WELDING PROCEDURES:

<b>GENERAL:</b>	Electrode positive, work negative (DCEP) or AC
<b>ARC LENGTH:</b>	Very short arc
<b>VERTICAL-UP:</b>	Use weaving technique, but do not use oscillation or whipping motion
<b>VERTICAL-DOWN:</b>	Generally not recommended
<b>OVERHEAD:</b>	Use slight weaving motion within the puddle
<b>STORAGE:</b>	250°F to 350°F (to ensure a low hydrogen weld deposit, storage in an oven is recommended).
<b>RECONDITIONING:</b>	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	Current Range-Amps*
Inches	mm		
3/32	2.4	DCEP or AC	70-110
1/8	3.2	DCEP or AC	100-150
5/32	4.0	DCEP or AC	140-220
3/16	4.8	DCEP or AC	210-280
1/4	6.4	DCEP or AC	290-390

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

## TYPICAL DEPOSITION DATA:

Diameter		Amps	Volts	Type of Power	Deposition Rate lbs/hr	Deposition* Efficiency%
Inches	mm					
3/32	2.4	80	25.0	DCEP	1.65	57.6
1/8	3.2	120	26.5	DCEP	2.85	73.1
5/32	4.0	170	28.0	DCEP	3.89	62.6
3/16	4.8	230	28.5	DCEP	5.55	69.2
1/4	6.4	325	32.0	DCEP	8.50	70.6

\*Allowance made for 2" stub loss included.

## AVAILABLE DIAMETERS AND PACKAGES:

Diameter		Length	10-Lb Can	50-Lb Can
Inches	mm			
3/32	2.4	14"	S115532-033	S115532-035
1/8	3.2	14"	S115544-033	S115544-035
5/32	4.0	14"	S115551-033	S115551-035
3/16	4.8	14"	—	S115558-035
1/4	6.4	18"	—	S115581-035

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

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