7018 XLM

AWS A5.1: E7018-1 H4R

WELDING POSITIONS:

FEATURES:

- Excellent starts and restarts
- Extra low moisture
- Stable arc
- Low spatter

BENEFITS:

- Great for tacking, increases productivity
- Prevents starting porosity
- Easy to control, operates well in all positions
- Easy clean-up

APPLICATIONS:

- Out-of-position tacking
- Field erections
- Low alloy structurals
- Offshore rigs
- Steel structures
- Power plants

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP) or AC

RECOMMENDED WELDING TECHNIQUES:

ARC LENGTH: Very short (less than 1/2 the diameter of the electrode)
FLAT: Angle electrode 10-15°F from 90°F
HORIZONTAL: Angle electrode slightly toward top plate
VERTICAL-UP: Use weaving technique
VERTICAL-DOWN: Not recommended
OVERHEAD: Use slight weaving motion within puddle

STORAGE: Oven controlled at 250°F to 300°F to ensure a low hydrogen weld deposit

RECONDITIONING: If electrode has been exposed to the atmosphere for an extended period of time, place in 250°F oven and slowly increase temperature to 600°F; bake at 600°F for 1 hour

TYPICAL WELD PROPERTIES* (Chem Pad):

Weld Metal Analysis (%)		AWS Spec (Max)
Carbon (C)	0.05	0.15
Manganese (Mn)	0.93	1.60
Phosphorus (P)	0.012	0.035
Sulphur (S)	0.009	0.035
Silicon (Si)	0.38	0.75
Chromium (Cr)	0.05	0.20
Vanadium (V)	0.01	0.08
Nickel (Ni)	0.04	0.30
Molybdenum (Mo)	0.01	0.30
Mn + Ni + Cr + Mo + V	1.04	1.75

TYPICAL DIFFUSIBLE HYDROGEN:

Hydrogen Equipment		AWS Spec
(GAS CHROMATOGRAPHY)	2.1 ml/100g	4.0 ml/100g

TYPICAL MECHANICAL PROPERTIES* (As Welded):

Mechanical Tests		AWS Spec
Tensile Strength	77,000 psi (529 MPa)	70,000 psi (MPa)
Yield Strength	64,000 psi (441 MPa)	58,000 psi (MPa)
Elongation % in 2" (50 mm)	32%	22%

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

CVN Temperatures		AWS Spec
Avg. at -50°F (-46°C)	86 ft•lbs (117 Joules)	20 ft•lbs (27 Joules)

*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and Hobart Brothers LLC expressly disclaims any liability incurred from any reliance thereon. Typical data are those obtained when welded and tested in accordance with the 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 LLC.

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Diameter Inches	(mm)	Type of Current	Amperage Range Min.	Max.	Optimum Parameters Amps	Volts	Deposition Rate* lbs/hr	(kg/hr)	Deposition Efficiency*
3/32	(2.4)	DCEP or AC	70	110	90	22.0	1.8	(0.82)	62.7%
1/8	(3.2)	DCEP or AC	90	160	130	26.5	2.6	(1.18)	73.1%
5/32	(4.0)	DCEP or AC	110	230	170	28.0	3.9	(1.77)	62.5%
3/16	(4.8)	DCEP or AC	190	300	250	28.5	5.2	(2.36)	69.2%

Reduce optimum amperage by 15% when welding out of position.
*Calculated using optimum parameters and DCEP polarity. Allowance made for 2" stub loss

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

Available Diameters and Packages:

Diameter Inches	(mm)	Length Inches	(mm)	10-Lb. Can	50-Lb. Can	50-Lb. Carton
Net Pallet Weight				**1260-Lb (571.5kg)**	**3000-Lb (1360.8kg)**	**3000-Lb (1360.8kg)**
3/32	(2.4)	14	(355)	S422032-033	S422032-035	S422032-031
1/8	(3.2)	14	(355)	S422044-033	S422044-035	S422044-031
5/32	(4.0)	14	(355)	S422051-033	S422051-035	S422051-031
3/16	(4.8)	14	(355)	S422058-033	S422058-035	S422058-031

Conformances and Approvals:

- **AWS A5.1,** Class E7018-1 H4R
- **ASME SFA5.1,** E7018-1 H4R
- **ABS,** E7018-1 H4R
- **CWB,** E4918-1-H4

Technical Questions? For technical support of Hobart Filler Metals products, contact the Applications Engineering department by phone toll-free at 1-800-532-2618 or by e-mail at Applications.Engineering@hobartbrothers.com

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, 8669 NW 36th St., Miami, FL 33166 (can also be downloaded online at www.aws.org); OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210

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

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

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HOBART FILLER METALS