



7018-A1 XLM

AWS E7018-A1 H4R

Replaces: 0050719

140-A, INDEX: 060116

DESCRIPTION:

McKay 7018-A1 XLM is outstanding for welding 1/2% molybdenum steels and other low-alloy steels. It is specially formulated to resist moisture pick-up and to keep hydrogen cracking and starting porosity to a minimum. McKay 7018-A1 XLM is ideal for welding in conditions of high heat and humidity.

Note: Actual certs are supplied with every shipment (one per master carton or pallet) at no charge.

APPLICATIONS:

Excellent for the construction and maintenance of boilers as well as for piping, tubing and high pressure vessels.

Features	Benefits
<ul style="list-style-type: none"> • Low hydrogen, less than 4 ml/100g • Low moisture pick-up • Excellent arc characteristics • Low spatter level • Quick and easy slag removal 	<ul style="list-style-type: none"> • Resistant to hydrogen-induced cracking • Prevents starting porosity • Stable, easy to control arc • Improves weld bead appearance, higher deposition • Reduces clean-up time

TYPICAL WELD METAL PROPERTIES* (CHEM PAD):

Weld Metal Analysis		AWS Spec
Carbon (C)	0.04	0.12 max
Manganese (Mn)	0.81	0.90 max
Phosphorus (P)	0.014	0.03 max
Sulphur (S)	0.011	0.03max
Silicon (Si)	0.29	0.03 max
Molybdenum (Mo)	0.55	0.40 to 0.65

TYPICAL MECHANICAL PROPERTIES*:

	Stressed Relieved -1 Hour at 1150°F	AWS Spec
Tensile Strength	87,000 psi	70,000 psi, min
Yield Strength	76,000 psi	57,000 psi, min
Elongation % in 2"	28%	25% min
Reduction of Area	68.9%	Not required

TYPICAL CHARPY V-NOTCH IMPACT VALUES*:

	Stressed Relieved -1 Hour at 1150°F	AWS Spec
Avg. at -20°F (-29°C)	67 ft·lbf (95 J)	not required

CONFORMANCES AND APPROVALS:

- AWS Spec A5.5, Class E7018-A1 H4R • ASME SFA5.5, F-4, A-2, Class E7018-A1 H4R • ABS

*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and McKay expressly disclaims any liability incurred from any reliance thereon. Typical data are obtained when welded and tested in accordance with AWS A5.5 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 McKay.



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RECOMMENDED WELDING PROCEDURES:

GENERAL: DCEP (electrode positive, work negative) or AC
ARC LENGTH: Very short (less than half the diameter of the electrode)
FLAT: Angle electrode 10-15° from 90°
VERTICAL-UP: Use weaving techniques
VERTICAL DOWN: Not recommended
OVERHEAD: Use slight whipping motion within the puddle
STORAGE: After opening, store in holding oven (250°F to 300°F) until used to ensure 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 one (1) hour.

RECOMMENDED OPERATING PARAMETERS:

Diameter		Type of Power	Minimum Amps	Optimum* Amps	Maximum Amps
Inches	mm				
3/32	2.4	DCEP or AC	70	100	110
1/8	3.2	DCEP or AC	90	135	160
5/32	4.0	DCEP or AC	130	170	220
3/16	4.8	DCEP or AC	200	250	300

*For out of position welding, reduce amperages shown by 15%>

TYPICAL DEPOSITION DATA (AT OPTIMUM):

Diameter		Type of Power	Amps	Deposition Rate Lbs/hr
Inches	mm			
3/32	2.4	DCEP	110	2.65
1/8	3.2	DCEP	135	2.90
5/32	4.0	DCEP	170	4.16
3/16	4.8	DCEP	250	6.03

AVAILABLE DIAMETERS AND PACKAGES:

Diameter		Length		10-lb. Can	50-lb Can
Inches	mm	Inches	mm		
3/32	2.4	14	355	S125032-Z33	S125032-Z35
1/8	3.2	14	355	S125044-Z33	S125044-Z35
5/32	4.0	14	355	S125051-Z33	S125051-Z35
3/16	4.8	14	355	—	S125058-Z35

Material Safety Data Sheets on any McKay product may be obtained from McKay Customer Service.

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