



10018-D2 XLM

AWS E10018-D2 H4R

Replaces: 020315

140-M, INDEX: 060116

DESCRIPTION:

Featuring good arc characteristics, crack resistance and ductility, **McKay 10018-D2 XLM** is outstanding for welding low alloy, high-strength steels and manganese-molybdenum steels requiring tensile strengths of at least 100,000 psi. Its specially formulated coating, designed to reduce moisture pick-up and minimize hydrogen cracking and starting porosity, makes it great for conditions of high heat and humidity. McKay 10018-D2 XLM is preferred by foundries where normalizing treatments are involved. Note: Actual certs are supplied with every shipment (one per master carton or pallet) at no charge.

APPLICATIONS:

Excellent for manganese-molybdenum castings, alloy forgings, structurals, and for pressure vessels in either as welded or stress relieved conditions.

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

TYPICAL WELD METAL PROPERTIES* (CHEM PAD):

Weld Metal Analysis		AWS Spec
Carbon (C)	0.05	0.15 max
Manganese (Mn)	1.85	1.65 to 2.00
Phosphorus (P)	0.025	0.03 max
Sulphur (S)	0.012	0.03 max
Silicon (Si)	0.45	0.80 max
Molybdenum (Mo)	0.35	0.25 to 0.45

TYPICAL MECHANICAL PROPERTIES*:

	Stressed Relieved -1 Hour at 1150°F	AWS Spec
Tensile Strength	112,000 psi (711 MPa)	100,000 psi, min
Yield Strength	97,000 psi (635 MPa)	87,000 psi, min
Elongation % in 2"	25%	16% min
Reduction of Area	69%	Not required

TYPICAL CHARPY V-NOTCH IMPACT VALUES* (AS WELDED):

Avg. at -60°F (-51°C)	24 ft•lbf (44 J)	20 ft•lbf
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CONFORMANCES AND APPROVALS:

- AWS Spec A5.5, Class E10018-D2 H4R • ASME SFA5.5, F-4, A-11, E10018-D2 H4R

*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 technique
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:

Inches	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
1/4		6.4	DCEP or AC	300	350	400

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

TYPICAL DEPOSITION DATA (AT OPTIMUM):

Inches	Diameter		Type of Power	Amps	Deposition Rate Lbs/hr
	Inches	mm			
3/32		2/4	DCEP	100	2.47
1/8		3.2	DCEP	135	2.80
5/32		4.0	DCEP	170	4.00
3/16		4.8	DCEP	250	5.55
1/4		6.4	DCEP	350	8.20

*Allowance made for 2" stub loss included.

AVAILABLE DIAMETERS AND PACKAGES:

Inches	Diameter		Length		50-lb. Can
	Inches	mm	Inches	mm	
3/32		2.4	14	355	S125732-Z35
1/8		3.2	14	355	S125744-Z35
5/32		4.0	14	355	S125751-Z35
3/16		4.8	14	355	S125758-Z35
1/4		6.4	18	457	S125781-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.