



9018-B3L XLM

AWS E9018-B3L H4R

Replaces: 050720

140-K, INDEX: 060116

DESCRIPTION:

A lower carbon version of the McKay 9018-B3 XLM, **McKay 9018-B3L XLM** reduces crack sensitivity while providing outstanding notch toughness. Its specially formulated coating resists moisture pick-up, minimizing hydrogen cracking and starting porosity, and making it an excellent choice for conditions of high heat and humidity.

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

APPLICATIONS:

Used for welding 2 1/4% Cr, 1% Mo chrome-moly pipes as well as boiler work. Excellent for welding steels with tensile strengths greater than 90,000 psi.

Features	Benefits
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| <ul style="list-style-type: none"> • Lower carbon version of McKay 9018-B3 • Low hydrogen, less than 4 ml/100 g • Low moisture reabsorption • Excellent arc characteristics • Low spatter level • Quick and easy slag removal • Low smoke level | <ul style="list-style-type: none"> • More resistant to cracking • Resistant to hydrogen-induced cracking • Prevents starting porosity • Stable, easy to control arc • Improves weld bead appearance, higher deposition • Reduces clean-up time • Welder safety and comfort |
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TYPICAL WELD METAL PROPERTIES* (CHEM PAD):

Weld Metal Analysis		AWS Spec
Carbon (C)	0.04	0.05 max
Manganese (Mn)	0.80	0.90 max
Phosphorus (P)	0.01	0.03 max
Sulphur (S)	0.01	0.03 max
Silicon (Si)	0.53	0.80 max
Chromium (Cr)	2.31	2.00 to 2.50
Molybdenum (Mo)	0.99	0.90 to 1.20

TYPICAL MECHANICAL PROPERTIES*:

	Stress Relieved 1 Hour at 1275°F	AWS Spec
Tensile Strength	94,000 psi (649 MPa)	90,000 psi, min
Yield Strength	81,000 psi (559 MPa)	77,000 psi, min
Elongation % in 2"	24%	17% min
Reduction of Area	68.7%	Not required

TYPICAL CHARPY V-NOTCH IMPACT VALUES*:

	Stress Relieved 1 Hour at 1275°F	AWS Spec
Avg. at 0°F (-18°C)	60 ft-lbf (81 J)	Not required

CONFORMANCES AND APPROVALS:

- AWS Spec A5.5-81, Class E9018-B3L H4R • ASME SFA5.5, F-4, A-4, E9018-B3L 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 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
	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 by 15%.

TYPICAL DEPOSITION DATA (AT OPTIMUM):

Inches	Diameter	Type of Power	Amps	Deposition Rate
	mm			
3/32	2.4	DCEP	100	2.55
1/8	3.2	DCEP	135	2.83
5/32	4.0	DCEP	170	4.07
3/16	4.8	DCEP	250	5.77

AVAILABLE DIAMETERS AND PACKAGES:

Inches	Diameter	Length		10-lb Can	50-lb. Can
	mm	Inches	mm		
3/32	2.4	14	355	S125932-Z33	S125932-Z35
1/8	3.2	14	355	S125944-Z33	S125944-Z35
5/32	4.0	14	355	—	S125951-Z35
3/16	4.8	14	355	—	S125958-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.