



# 8018-B2L XLM

**AWS E8018-B2L H4R**

Replaces: 050719

140-C, INDEX: 060116

## DESCRIPTION:

**McKay 8018-B2L XLM** is excellent for welding steels with tensile strengths of 80,000 psi or more, including 1 1/4% Cr, 1/2% Mo and 1/2% Cr, 1/2% Mo steels with increased notch toughness. Its specially formulated coating is designed to reduce moisture pick-up and thus help keep hydrogen cracking and starting porosity to a minimum, making it ideal for welding in conditions of high heat or humidity.

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

## APPLICATIONS:

Excellent in the fabrication and maintenance boilers and associated piping, and for welding.

Features	Benefits
<ul style="list-style-type: none"> <li>• Lower carbon than McKay 8018-B2</li> <li>• Low moisture reabsorption</li> <li>• Excellent arc characteristics</li> <li>• Low spatter level</li> <li>• Low smoke level</li> <li>• Quick and easy slag removal</li> <li>• Low hydrogen, less than 4 ml/100 g</li> </ul>	<ul style="list-style-type: none"> <li>• More resistant to cracking</li> <li>• Prevents starting porosity</li> <li>• Stable, easy to control arc</li> <li>• Improves weld bead appearance, higher deposition</li> <li>• Welder safety and comfort</li> <li>• Reduces clean-up time</li> <li>• Resistant to hydrogen-induced cracking</li> </ul>

## 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)	0.012	0.03 max
Sulphur (S)	0.012	0.03 max
Silicon (Si)	0.50	0.80 max
Chromium (Cr)	1.25	1.00 to 1.50
Molybdenum (Mo)	0.50	0.40 to 0.65

## TYPICAL MECHANICAL PROPERTIES\*:

	Stressed Relieved -1 Hour at 1275°F	AWS Spec
Tensile Strength	82,000 psi (566 MPa)	80,000 psi, min
Yield Strength	68,000 psi (469 MPa)	67,000 psi, min
Elongation % in 2"	28%	19% min
Reduction of Area	72.6%	Not required

## TYPICAL CHARPY V-NOTCH IMPACT VALUES\*:

	Stressed Relieved -1 Hour at 1275°F	AWS Spec
Avg. at -0°F (-18°C)	45 ft•lbf (61 J)	Not required

## CONFORMANCES AND APPROVALS:

- AWS Spec A5.5, Class E8018-B2L H4R
- ASME SFA5.5, F-4, A-3, E8018-B2L 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:

<b>GENERAL:</b>	DCEP (electrode positive, work negative) or AC
<b>ARC LENGTH:</b>	Very short (less than half the diameter of the electrode)
<b>FLAT:</b>	Angle electrode 10-15° from 90°
<b>VERTICAL-UP:</b>	Use weaving technique
<b>VERTICAL DOWN:</b>	Not recommended
<b>OVERHEAD:</b>	Use slight whipping motion within the puddle
<b>STORAGE:</b>	After opening, store in holding oven (250°F to 300°F) until used to ensure low hydrogen weld deposit
<b>RECONDITIONING:</b>	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
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):

Diameter		Type of Power	Amps	Deposition Rate Lbs/hr
Inches	mm			
3/32	2.4	DCEP	100	2.51
1/8	3.2	DCEP	135	3.66
5/32	4.0	DCEP	170	4.06
3/16	4.8	DCEP	250	5.88
1/4	6.4	DCEP	350	8.20

## AVAILABLE DIAMETERS AND PACKAGES:

Diameter		Length		10-lb. Can	50-lb. Can
Inches	mm	Inches	mm		
3/32	2.4	14	355	S126132-Z33	S126132-Z35
1/8	3.2	14	355	S126144-Z33	S126144-Z35
5/32	4.0	14	355	S126151-Z33	S126151-Z35
3/16	4.8	14	355	—	S126158-Z35
1/4	6.4	18	457	—	S126181-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.