



8018-C2 XLM

AWS E8018-C2 H4 (Ni3)

REPLACES: 060118

140-G, INDEX: 060515

DESCRIPTION:

McKay 8018-C2 XLM is excellent for low temperature applications requiring tensile strengths greater than 80,000 psi. Featuring a special formulated coating designed to reduce moisture pick-up and help minimize hydrogen cracking and starting porosity, McKay 8018-C2 XLM is also an outstanding choice 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:

Used in shipbuilding, piping and gas storage tanks, as well as in the welding of AR and T-1 steels.

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

TYPICAL WELD METAL PROPERTIES* (CHEM PAD):

WELD METAL ANALYSIS		AWS Spec
Carbon (C)	0.06	0.12 max
Manganese (Mn)	0.85	1.25 max
Phosphorus (P)	0.01	0.03 max
Sulphur (S)	0.02	0.03 max
Silicon (Si)	0.40	0.80 max
Nickel (Ni)	3.30	3.00 to 3.75

TYPICAL MECHANICAL PROPERTIES*:

	Stressed Relieved -1 Hour at 1275°F	AWS Spec
Tensile Strength	90,000 psi (621 MPa)	80,000 psi, min
Yield Strength	73,000 psi (504 MPa)	67,000 psi, min
Elongation % in 2"	30%	19% min
Reduction of Area	72%	Not required

TYPICAL CHARPY V-NOTCH IMPACT VALUES*:

	Stressed Relieved -1 Hour at 1275°F	AWS Spec
Avg. at -100°F (-73°C)	40 ft•lbf (54 J)	20 ft•lbf

CONFORMANCES AND APPROVALS:

- AWS Spec A5.5, Class E8018-C2 H4 • ASME SFA5.5, F-4, A-10, E8018-C2 H4 • 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:

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, reduce amperage 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	2.47
1/8	3.2	DCEP	135	2.87
5/32	4.0	DCEP	170	3.84
3/16	4.8	DCEP	250	5.86
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		S125232-Z35
1/8	3.2	14	355	S125244-Z33	S125244-Z35
5/32	4.0	14	355	S125251-Z33	S125251-Z35
3/16	4.8	14	355		S125258-Z35
1/4	6.4	18	457		S125281-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.