

AWS E8018-C3 H4

HOBALLOY® 8018C3**DESCRIPTION:**

HOBALLOY 8018C3 is an outstanding electrode that is designed for 80,000 tensile strength applications and also 1% nickel applications. This electrode provides excellent puddle control with good wetting action and tie in. The electrode offers good arc characteristics and easy slag removal. The HOBALLOY 8018C3 will provide notch toughness of 20 ft•lbs. at -40°F. The coating is specially formulated to resist conditions of high heat and humidity. The electrode offers resistance to moisture reabsorption, helps prevent hydrogen cracking and aids in eliminating starting porosity. Definitely a preferred electrode with high operator appeal.

APPLICATIONS:

HOBALLOY 8018C3 is designed for use on 80,000 tensile steels of both commercial and military applications.

FEATURES:

- Excellent arc characteristics
- Low spatter level
- Quick and easy slag removal
- Low moisture reabsorption
- Low smoke level
- Low hydrogen, less than 4 ml/100 g

BENEFITS:

- Stable, easy to control arc
- Improves weld bead appearance, higher deposition
- Reduces clean-up time
- Prevents starting porosity
- Welder safety and comfort
- Resistant to hydrogen-induced cracking

TYPICAL WELD METAL PROPERTIES*(Chem Pad):

Weld Metal Analysis		AWS Spec
Carbon (C)	0.05	0.12 max
Manganese (Mn)	1.03	0.40 - 1.25
Phosphorus (P)	0.012	0.03 max
Sulphur (S)	0.009	0.03 max
Silicon (Si)	0.26	0.80 max
Chromium (Cr)	0.07	0.15 max
Vanadium (V)	0.02	0.05 max
Nickel (Ni)	0.96	0.80 - 1.10
Molybdenum (Mo)	0.10	0.35 max

TYPICAL MECHANICAL PROPERTIES*(AW):

		AWS Spec
Tensile Strength	82,000 psi (566 MPa)	80,000 psi
Yield Strength	70,000 psi (485 MPa)	68,000 - 80,000 psi
Elongation % in 2"	28%	24% min

TYPICAL CHARPY V-NOTCH IMPACT VALUES*(AW):

		AWS Spec
Avg. at -40°F	95 ft•lbs	20 ft•lbs

DIFFUSIBLE HYDROGEN: 2.2 ml/100 gr

CONFORMANCES AND APPROVALS:

- AWS A5.5, E8018-C3 H4, ASME SFA 5.5, F-4, A-10, E8018-C3 H4
- ABS
- MIL-E-22200/1 (1/8" and 5/32" diameters)

*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and Hobart Brothers Company expressly disclaims any liability incurred from any reliance thereon. Typical data are those 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 Hobart Brothers Company.

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RECOMMENDED WELDING PROCEDURES:

GENERAL:	Electrode positive, work negative (DCEP) or AC
ARC LENGTH:	Very short arc
FLAT:	Angle electrode 10-15° from 90°
VERTICAL-UP:	Use weaving techniques
VERTICAL-DOWN:	Not recommended
OVERHEAD:	Use slight weaving motion within the puddle
STORAGE:	After opening, store in holding oven (220°F to 350°F) until used.
RECONDITIONING:	If exposed to atmosphere for extended periods, reconditioned for one (1) hour at 600°F.

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 RATES (at Optimum):

Diameter		Type of Power	Amperage	Deposition Rate Lbs/Hr.
Inches	mm			
3/32	2.4	DCEP	100	2.0
1/8	3.2	DCEP	135	2.9
5/32	4.0	DCEP	170	3.8
3/16	4.8	DCEP	250	5.9
1/4	6.4	DCEP	350	8.1

AVAILABLE DIAMETERS AND PACKAGES:

Diameter		Length		10# Cans	50# Cans
Inches	mm	Inches	mm		
3/32	2.4	14"	355	--	S125332-035
1/8	3.2	14"	355	S125344-033	S125344-035
5/32	4.0	14"	355	S125351-033	S125351-035
3/16	4.8	14"	355	--	S125358-035
1/4	6.4	18"	457	--	S125381-035

Material Safety Data Sheets on any Hobart Brothers Company product may be obtained from Hobart Customer Service.

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

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