

HOBALLOY® 8018C3



AWS E8018-C3 H4

WELDING POSITIONS:



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

APPLICATIONS:

- Commercial
- Military

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP) or AC

RECOMMENDED WELDING TECHNIQUES:

- 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.

TYPICAL WELD METAL PROPERTIES* (Chem Pad):

Weld Metal Analysis (%)		AWS Spec
Carbon (C)	0.04	0.12 max
Manganese (Mn)	0.98	0.40 - 1.25
Phosphorus (P)	0.01	0.03 max
Sulphur (S)	0.01	0.03 max
Silicon (Si)	0.26	0.80 max
Chromium (Cr)	0.07	0.15 max
Vanadium (V)	0.01	0.05 max
Nickel (Ni)	0.89	0.80 - 1.10
Molybdenum (Mo)	0.09	0.35 max

TYPICAL MECHANICAL PROPERTIES* (As Welded):

		AWS Spec
Tensile Strength	84,000 psi (576 MPa)	80,000 psi
Yield Strength	73,000 psi (503 MPa)	68,000 - 80,000 psi
Elongation % in 2"	30%	24%

TYPICAL CHARPY V-NOTCH IMPACT VALUES* (As Welded):

		AWS Spec
Avg. at -40°F (-___°C)	98 ft•lbs (133 Joules)	20 ft•lbs (27 Joules)

TYPICAL DIFFUSIBLE HYDROGEN:

Hydrogen Equipment		AWS Spec
(GAS CHROMATOGRAPHY)	2.8 ml/100 g	—

*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 the 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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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	2.0
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

- Maintaining a proper welding procedure - including pre-heat and interpass temperatures - may be critical depending on the type and thickness of steel being welded.

STANDARD DIAMETERS AND PACKAGES: For a complete list of diameters and packaging, please contact Hobart Brothers at (800) 424-1543, or (937) 332-5188 for International Customer Service.

Diameter		Length		10-lb Can	50-lb Can
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

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)

CAUTION:

Consumers should be thoroughly familiar with the safety precautions on the warning label posted in each shipment and in the American National Standard Z49.1, "Safety in Welding and Cutting," published by the American Welding Society, 550 NW LeJune Road, Miami, FL 33126; OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210

Material Safety Data Sheets on any Hobart Brothers Company product may be obtained from Hobart Customer Service or at www.hobartbrothers.com.

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