

FabCO[®] 1101K3-C



AWS A5.29: E111T1-K3CJ H8

WELDING POSITIONS:



FEATURES:

- "H8" low-hydrogen weld deposit
- Excellent low-temperature impact toughness
- Fast-freezing slag
- Optimized for 100% CO₂ shielding gas to provide excellent arc drive/dig
- Excellent slag removal

BENEFITS:

- Helps minimize the risk of hydrogen-induced cracking
- Helps minimize the risk of cracking in critical applications
- Provides good puddle control and bead contour when welding out-of-position
- Improves operator appeal, helps ensure consistent weld quality along the entire weld joint
- Reduces clean-up time, helps minimize risk of inclusions

APPLICATIONS:

- Single or multi-pass welding
- Shipbuilding
- 110+ KSI (760 MPa) tensile-strength High-Strength Low-Alloy (HSLA) steels
- Structural fabrication
- Heavy equipment
- 110+ KSI (760 MPa) tensile-strength Quench & Temper (Q&T) steels
- ASTM A514 [$<2\frac{1}{2}$ " (63 mm)]
- Offshore

SLAG SYSTEM: Fast-freezing, rutile-type, flux-cored wire

SHIELDING GAS: 100% Carbon Dioxide (CO₂), 35-50 cfh (17-24 l/min)

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP)

STANDARD DIAMETERS: 0.045" (1.2 mm), 0.052" (1.4 mm)

RE-DRYING: Not recommended

STORAGE: Product should be stored in a dry, enclosed environment, and in its original intact packaging

TYPICAL WELD METAL CHEMISTRY* (Chem Pad):

Weld Metal Analysis (%)	100% CO ₂	AWS Spec
Carbon (C)	0.08	0.15
Manganese (Mn)	1.75	0.75-2.25
Silicon (Si)	0.40	0.80
Phosphorus (P)	0.008	0.030
Sulphur (S)	0.008	0.030
Nickel (Ni)	1.90	1.25-2.60
Molybdenum (Mo)	0.40	0.25-0.65
Chromium (Cr)	0.05	0.15
Vanadium (V)	0.02	0.05

Note: AWS specification single values are maximums.

TYPICAL DIFFUSIBLE HYDROGEN*:

Hydrogen Equipment	100% CO ₂	AWS Spec
(GAS CHROMATOGRAPHY)	4.2 ml/100g	8.0 ml/100g Maximum

TYPICAL MECHANICAL PROPERTIES* (As Welded):

Mechanical Tests	100% CO ₂	AWS Spec
Tensile Strength	120,000 psi (827 MPa)	110,000-130,000 psi (760-900 MPa)
Yield Strength	112,000 psi (772 MPa)	98,000 psi (680 MPa) Minimum
Elongation % in 2" (50 mm)	17%	15% Minimum

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

CVN Temperatures	100% CO ₂	AWS Spec
CVN @-20°F (-29°C)	40 ft-lbs (54 Joules)	20 ft-lbs (27 Joules) Minimum

*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 A5.29 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.

Hobart Brothers Company • 101 Trade Square East • Troy, OH 45373
PH: (800) 424-1543 • FX: 800-541-6607 • www.hobartbrothers.com

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Diameter Inches (mm)	Weld Position	Amps	Volts	Wire-Feed Speed		Deposition Rate		Contact Tip to Work Distance	
				in/min	(m/min)	lbs/hr	(kg/hr)	Inches	(mm)
0.045 (1.2)	All Position	125	24	180	(4.6)	2.5	(1.1)	5/8	(16)
0.045 (1.2)	All Position	200	25	315	(8.0)	6.0	(2.7)	3/4	(19)
0.045 (1.2)	All Position	250	26	440	(11.2)	9.0	(4.1)	3/4	(19)
0.045 (1.2)	Flat & Horizontal	275	27	520	(13.2)	11.0	(5.0)	3/4	(19)
0.045 (1.2)	Flat & Horizontal	325	30	675	(17.1)	15.0	(6.8)	1	(25)
0.052 (1.4)	All Position	150	24	160	(4.1)	3.4	(1.5)	3/4	(19)
0.052 (1.4)	All Position	200	25	225	(5.7)	5.9	(2.7)	3/4	(19)
0.052 (1.4)	All Position	250	26	304	(7.7)	8.8	(4.0)	1	(25)
0.052 (1.4)	Flat & Horizontal	325	28	440	(11.2)	12.7	(5.8)	1	(25)
0.052 (1.4)	Flat & Horizontal	375	30	570	(14.5)	16.2	(7.3)	1	(25)

- **Maintaining a proper welding procedure - including pre-heat and interpass temperatures - may be critical depending on the type and thickness of steel being welded.**
- **See Above:** This information was determined by welding using 100% Carbon Dioxide (CO₂) shielding gas with a flow rate between 35-50 cfm (17-24 l/min).
- **All positions include:** Flat, Horizontal, Vertical Up, and Overhead.

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 Inches (mm)	33-lb. (15kg) Spool
0.045 (1.2)	S282712-029
0.052 (1.4)	S282715-029

CONFORMANCES AND APPROVALS:

- **AWS A5.29**, E111T1-K3CJ H8
- **AWS A5.29M**, E761T1-K3CJ H8
- **ASME SFA 5.29**, E111T1-K3CJ H8
- **ABS**, 100% CO₂, E111T1-K3CJ H8, (Guaranteed CVN 20 ft·lbs @ -60°F), (0.045"-0.052" diameters)

TECHNICAL QUESTIONS? For technical support of Hobart Filler Metals products, contact the Applications Engineering department by phone toll-free at 1-800-532-2618 or by e-mail at Applications.Engineering@hobartbrothers.com

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, 8669 NW 36 St, # 130, Doral, FL 33166-6672 (can also be downloaded online at www.aws.org); 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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