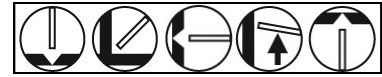


# FabCO<sup>®</sup> 91K2-C



AWS A5.29: E91T1-K2C J H4

## WELDING POSITIONS:



### FEATURES:

- Fast freezing slag
- Low spatter and easy slag removal
- Stable arc transfer
- Low smoke levels
- Excellent impact toughness

### BENEFITS:

- Produces flat weld contours when welding out of position
- Reduces clean-up time and minimizes risk of inclusions
- Assists in producing smooth weld beads with uniform fusion
- Helps increase operator appeal and improve the working environment
- Minimizes risk of cracking in critical applications

### APPLICATIONS:

- Single or multi-pass welding
- Railcar
- Offshore
- Heavy equipment
- Shipbuilding
- Structural fabrication

**SLAG SYSTEM OR WIRE TYPE:** Fast-freezing, rutile-type, flux-cored wire

**SHIELDING GAS:** 100% Carbon Dioxide (CO<sub>2</sub>), 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 <sub>2</sub>	AWS Spec
Carbon (C)	0.06	0.15
Manganese (Mn)	1.55	0.50-1.75
Silicon (Si)	0.22	0.80
Phosphorus (P)	0.007	0.030
Sulphur (S)	0.007	0.030
Nickel (Ni)	1.70	1.00-2.00
Chromium (Cr)	0.04	0.15
Molybdenum (Mo)	0.002	0.35
Boron (B)	0.0035	Not specified

**Note:** AWS specification single values are maximums.

### TYPICAL DIFFUSIBLE HYDROGEN\*:

Hydrogen Equipment	100% CO <sub>2</sub>	AWS Spec
(GAS CHROMATOGRAPHY)	3.5 ml/100g	4.0 ml/100g Maximum

### TYPICAL MECHANICAL PROPERTIES\* (As Welded):

Mechanical Tests	100% CO <sub>2</sub>	AWS Spec
Tensile Strength	96,000 psi (662 MPa)	90,000-110,000 psi (620-760 MPa)
Yield Strength	88,200 psi (608 MPa)	78,000 psi (540 MPa) Minimum
Elongation % in 2" (50 mm)	25%	17% Minimum

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

CVN Temperatures	100% CO <sub>2</sub>	AWS Spec
Avg. at 0°F (-20°C)	108 ft•lbs (146 Joules)	20 ft•lbs (27 Joules) Minimum
Avg. at -20°F (-30°C)	95 ft•lbs (129 Joules)	20 ft•lbs (27 Joules) Minimum
Avg. at -40°F (-40°C)	92 ft•lbs (125 Joules)	Not specified
Avg. at -76°F (-60°C)	72 ft•lbs (98 Joules)	Not specified

\*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and Hobart Brothers LLC 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 LLC.

# FabCO<sup>®</sup> 91K2-C

Diameter Inches (mm)	Weld Position	Amps	Volts	Wire Feed Speed		Deposition Rate		CTWD	
				in/min	(m/min)	lbs/hr	(kg/hr)	Inches	(mm)
0.045" (1.2 mm)	All Position	150	22	200	(5.1)	3.8	(1.7)	5/8	(16)
0.045" (1.2 mm)	All Position	200	24	275	(7.0)	5.2	(2.3)	5/8	(16)
0.045" (1.2 mm)	All Position	240	26	375	(9.5)	7.1	(3.2)	3/4	(19)
0.045" (1.2 mm)	Flat & Horizontal	275	28	475	(12.1)	8.9	(4.0)	3/4	(19)
0.045" (1.2 mm)	Flat & Horizontal	300	29	550	(14.0)	10.3	(4.7)	3/4	(19)
0.052 (1.4 mm)	All Position	190	23	215	(5.5)	5.6	(2.5)	3/4	(19)
0.052 (1.4 mm)	All Position	200	24	230	(5.8)	5.9	(2.7)	3/4	(19)
0.052 (1.4 mm)	All Position	225	25	285	(7.2)	7.4	(3.3)	3/4	(19)
0.052 (1.4 mm)	Flat & Horizontal	250	27	330	(8.4)	8.5	(3.9)	3/4	(19)
0.052 (1.4 mm)	Flat & Horizontal	275	28	360	(9.1)	9.3	(4.2)	3/4	(19)

- **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 (CO<sub>2</sub>) shielding gas with a flow rate between 35-50 cfh (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)	15-lb. (7kg) VCI Spool	33-lb. (15kg) VCI Spool
<b>Net Pallet Weight</b>	<b>2400 lb. (1089kg)</b>	<b>2376 lb. (1078kg)</b>
0.045 (1.2)	-	S289112-053
0.052 (1.4)	S289115-025	S289115-053

**CONFORMANCES AND APPROVALS:**

- **AWS A5.29**, E91T1-K2C J H4
- **ABS**, 100% CO<sub>2</sub> 4YQ500 H5

**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](mailto: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 36th St., Miami, FL 33166 (can also be downloaded online at [www.aws.org](http://www.aws.org)); OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210

Safety Data Sheets on any Hobart Brothers LLC product may be obtained from Hobart Customer Service or at [www.hobartbrothers.com](http://www.hobartbrothers.com).

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

Hobart and FabCO are registered trademarks of Hobart Brothers LLC, Troy, Ohio.

**Revision Date: 230131** (Replaces 160725)

