

# FabCO<sup>®</sup> 95K2



AWS A5.29: E90T5-K2C H4, E90T5-K2M H4  
EN ISO 17632-A T50 5 Z B C1 3 H5, T50 5 Z B M21 3 H5

## WELDING POSITIONS:



### FEATURES:

- Basic slag system provides excellent weld metal toughness
- Very low diffusible hydrogen weld deposit (H4)
- Wire provides excellent arc drive/dig
- Improved sensitivity to higher sulphur contents over wires with acidic/rutile slag (or no slag)

### BENEFITS:

- Helps to minimize risk of cracking in critical applications
- Improved toughness compared to rutile-slag wires
- Helps to minimize risk of hydrogen-induced cracking
- Helps to minimize risk of lack of fusion, even when welding using narrow joint configurations
- Minimizes risk of solidification cracking and helps maintain weld metal toughness and ductility on base metals with less-than-optimal sulphur contents

### APPLICATIONS:

- Single or multi-pass welding
- Shipbuilding
- 90+ KSI tensile-strength High-Strength Low-Alloy (HSLA) steels
- Heavy equipment and machinery
- Offshore
- 90+ KSI (690 MPa) tensile-strength Quench & Tempered (Q&T) steels
- Structural and bridge fabrication
- Crack and casting repairs
- AASHTO M709 HPS 70W

**SLAG SYSTEM:** Slow-freezing, basic type, flux-cored wire

**SHIELDING GAS:** 100% Carbon Dioxide (CO<sub>2</sub>), 75% Argon (Ar)/25% Carbon Dioxide (CO<sub>2</sub>), 35-50 cfh (17-24 l/min)

**TYPE OF CURRENT:** Direct Current Electrode Positive (DCEP)

**STANDARD DIAMETERS:** 1/16" (1.6 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>	75% Ar/25% CO <sub>2</sub>	AWS Spec
Carbon (C)	0.04	0.06	0.15
Manganese (Mn)	1.04	1.10	0.50-1.75
Silicon (Si)	0.59	0.64	0.80
Phosphorus (P)	0.010	0.014	0.030
Sulphur (S)	0.008	0.008	0.030
Nickel (Ni)	1.76	1.70	1.00-2.00
Molybdenum (Mo)	0.22	0.22	0.35

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

### TYPICAL DIFFUSIBLE HYDROGEN\*:

Hydrogen Equipment	100% CO <sub>2</sub>	75% Ar/25% CO <sub>2</sub>	AWS Spec
(GAS CHROMATOGRAPHY)	1.5 ml/100g	2.0 ml/100g	4.0 ml/100g Maximum

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

Mechanical Tests	100% CO <sub>2</sub>	75% Ar/25% CO <sub>2</sub>	AWS Spec
Tensile Strength	91,000 psi (627 MPa)	96,000 psi (662 MPa)	90,000-110,000 psi (620-760 MPa)
Yield Strength	80,000 psi (552 MPa)	85,000 psi (586 MPa)	78,000 psi (540 MPa) Minimum
Elongation % in 2" (50 mm)	26%	25%	17% Minimum

CVN Temperatures	100% CO <sub>2</sub>	75% Ar/25% CO <sub>2</sub>	AWS Spec
CVN @-60°F (-50°C)	72 ft•lbs (98 Joules)	62 ft•lbs (84 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.

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Diameter		Weld Position	Amps	Volts	Wire-Feed Speed		Deposition Rate		Contact Tip to Work Distance	
Inches	(mm)				in/min	(m/min)	lbs/hr	(kg/hr)	Inches	(mm)
1/16	(1.6)	Flat & Horizontal	200	25	200	(5.1)	7.1	(3.2)	3/4	(19)
1/16	(1.6)	Flat & Horizontal	350	28	360	(9.1)	13.5	(6.1)	3/4	(19)
1/16	(1.6)	Flat & Horizontal	485	34	485	(13.3)	18.0	(8.2)	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 75% Argon (Ar)/25% Carbon Dioxide (CO<sub>2</sub>) shielding gas with a flow rate between 35-50 cfh (17-24 l/min). When using 100% Carbon Dioxide (CO<sub>2</sub>) shielding gas, increase voltage by approximately 1 volt.

**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	33-lb. (15kg)
Inches (mm)	Spool
1/16 (1.6)	S659519-029

#### CONFORMANCES AND APPROVALS:

- **AWS A5.29**, E90T5-K2C H4, E90T5-K2M H4
- **AWS A5.29M**, E620T5-K2C H4, E620T5-K2M H4
- **ASME SFA 5.29**, E90T5-K2C H4, E90T5-K2M H4
- **EN ISO 17632-A** T50 5 Z B C1 3 H5, T50 5 Z B M21 3 H5
- **CE Marked** per CPR 305/2011

**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 36 St, # 130, Doral, FL 33166-6672 (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

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

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