

FabCO[®] 115K3



AWS A5.29: E110T5-K3 C H4, E110T5-K3M H4

WELDING POSITIONS:



FEATURES:

- Basic slag system
- “H4” low-hydrogen weld deposit
- Excellent arc drive/dig
- High-strength weld deposit
- Large-diameter availability, optimized for welding in the flat & horizontal positions

BENEFITS:

- Provides consistently excellent mechanical properties to help ensure weld integrity in critical applications
- Helps minimize the risk of hydrogen-induced cracking
- Assists producing welds with consistent fusion and overall quality along the entire weld joint
- Suitable for many 110+ KSI (730+ MPa) high-strength low-alloy (HSLA) and quench & tempered (Q&T) steels
- Allows the use of high currents and wire feed speeds to help improve weldability and increase productivity

APPLICATIONS:

- Single or multi-pass welding
- Pressure vessels
- 110+ KSI (760 MPa) HSLA and Q&T steels
- Structural fabrication
- ASTM A514 [$<2\text{-}1/2$ " (63mm)]
- Heavy equipment
- Offshore

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

SHIELDING GAS: 100% Carbon Dioxide (CO₂), 75% Argon (Ar)/25% Carbon Dioxide (CO₂) 35-50 cfh, (17-24 l/min)

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP)

STANDARD DIAMETERS: 1/16" (1.6 mm), 3/32" (2.4 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 | 75% Ar/25% CO ₂ | AWS Spec |
|-------------------------|----------------------|----------------------------|-----------|
| Carbon (C) | 0.04 | 0.05 | 0.015 |
| Manganese (Mn) | 1.64 | 1.76 | 0.75-2.25 |
| Silicon (Si) | 0.40 | 0.43 | 0.80 |
| Phosphorus (P) | 0.008 | 0.007 | 0.030 |
| Sulphur (S) | 0.007 | 0.007 | 0.030 |
| Nickel (Ni) | 2.08 | 2.15 | 1.25-2.60 |
| Molybdenum (Mo) | 0.37 | 0.34 | 0.25-0.65 |

Note: AWS specification single values are maximums.

TYPICAL DIFFUSIBLE HYDROGEN*:

| Hydrogen Equipment | 100% CO ₂ | 75% Ar/25% CO ₂ | AWS Spec |
|----------------------|----------------------|----------------------------|---------------------|
| (GAS CHROMATOGRAPHY) | 2.0 ml/100g | 2.5 ml/100g | 4.0 ml/100g Maximum |

TYPICAL MECHANICAL PROPERTIES* (As Welded):

| Mechanical Tests | 100% CO ₂ | 75% Ar/25% CO ₂ | AWS Spec |
|----------------------------|-----------------------|----------------------------|-----------------------------------|
| Tensile Strength | 117,000 psi (807 MPa) | 122,000 psi (841 MPa) | 110,000-130,000 psi (760-900 MPa) |
| Yield Strength | 105,000 psi (724 MPa) | 106,000 psi (731 MPa) | 98,000 psi (680 MPa) Minimum |
| Elongation % in 2" (50 mm) | 20% | 20% | 15% Minimum |

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

| CVN Temperatures | 100% CO ₂ | 75% Ar/25% CO ₂ | AWS Spec |
|--------------------|-----------------------|----------------------------|-------------------------------|
| CVN @-60°F (-50°C) | 58 ft•lbs (79 Joules) | 54 ft•lbs (73 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) | 13.2 | (6.0) | 3/4 | (19) |
| 1/16 | (1.6) | Flat & Horizontal | 425 | 34 | 485 | (12.3) | 18.0 | (8.2) | 1 | (25) |
| 3/32 | (2.4) | Flat & Horizontal | 300 | 26 | 130 | (3.3) | 10.2 | (4.6) | 1 | (25) |
| 3/32 | (2.4) | Flat & Horizontal | 450 | 31 | 215 | (5.5) | 17.2 | (7.8) | 1 | (25) |
| 3/32 | (2.4) | Flat & Horizontal | 600 | 35 | 340 | (8.6) | 27.4 | (12.4) | 1 1/4 | (32) |

- **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% CO₂ shielding gas with a flow rate between 35-50 cfh (17-24 l/min). When using 75% Argon (Ar)/25% CO₂ shielding gas, reduce voltage by approximately one 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) | 60-lb. (27.2kg) | 600-lb. (272.2kg) | 600-lb. (272.2kg) |
|----------|-------|---------------|-----------------|-------------------|-------------------|
| Inches | (mm) | Spool | Coil | X-Pak | Drum |
| 1/16 | (1.6) | S651519-029 | S651519-002 | S651519-056 | — |
| 3/32 | (2.4) | — | S651529-002 | — | S651529-008 |

CONFORMANCES AND APPROVALS:

- **AWS A5.29**, E110T5-K3C H4, E110T5-K3M H4
- **AWS A5.29M**, E760T5-K3C H4, E760T5-K3M H4
- **ASME SFA 5.29**, E110T5-K3C H4, E110T5-K3M H4
- **ABS**, 100% CO₂, E110T5-K3C H4

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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