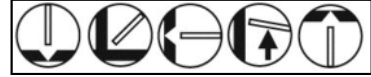


# FabCO® 911B3



AWS A5.29: E91T1-B3C H4, E91T1-B3M H4

WELDING POSITIONS:



**FEATURES:**

- Nominal 2-1/4% Chromium / 1% Molybdenum weld metal composition
- Good creep resistance
- Fast-freezing slag
- Suitable for use with both 100% carbon dioxide and some argon-carbon dioxide mixtures
- "H4" low-hydrogen weld deposit

**BENEFITS:**

- Suitable for use on materials having a similar composition, such as ASTM A387 or P21/P22 pipe
- Suitable for extended service at elevated temperature
- Provides good puddle control and bead contour when welding in all positions
- Provides versatility in procedure and application development
- Helps minimize the risk of hydrogen-induced cracking

**APPLICATIONS:**

- Single or multi-pass welding
- Power generation industries
- P21 & P22 pipe
- 2-1/4% Cr / 1% Mo steels
- Boiler and pressure vessels
- ASTM A387 grades 21 & 22
- Elevated service temperatures

**SLAG SYSTEM:** Fast-freezing, rutile-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:** 0.045" (1.2 mm), 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)	0.05	0.05	0.05-0.12
Manganese (Mn)	0.59	0.74	1.25
Silicon (Si)	0.26	0.47	0.80
Phosphorus (P)	0.009	0.010	0.030
Sulphur (S)	0.010	0.010	0.030
Chromium (Cr)	2.32	2.37	2.00-2.50
Molybdenum (Mo)	0.96	1.03	0.90-1.20

**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)	2.9 ml/100g	3.0 ml/100g	4.0 ml/100g Maximum

**TYPICAL MECHANICAL PROPERTIES\* [PWHT 1 Hr. @ 1275°F (690°C)]:**

Mechanical Tests	100% CO <sub>2</sub>	75% Ar/25% CO <sub>2</sub>	AWS Spec
Tensile Strength	96,000 psi (662 MPa)	100,000 psi (689 MPa)	90,000-110,000 psi (620-760 MPa)
Yield Strength	83,000 psi (572 MPa)	89,000 psi (614 MPa)	78,000 psi (540 MPa) Minimum
Elongation % in 2" (50 mm)	22%	22%	17% Minimum

**TYPICAL CHARPY V-NOTCH IMPACT VALUES\*:** Not required

\*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)
0.045	(1.2)	All Position	115	21	120	(3.0)	2.7	(1.2)	5/8	(16)
0.045	(1.2)	All Position	200	26	285	(7.2)	6.1	(2.8)	5/8	(16)
0.045	(1.2)	All Position	250	28	425	(10.8)	8.8	(4.0)	3/4	(19)
0.045	(1.2)	Flat & Horizontal	275	28	440	(11.2)	9.5	(4.3)	3/4	(19)
0.045	(1.2)	Flat & Horizontal	325	30	660	(16.8)	14.5	(6.6)	3/4	(19)
1/16	(1.6)	All Position	150	22	100	(2.5)	4.0	(1.8)	5/8	(16)
1/16	(1.6)	All Position	225	25	170	(4.3)	6.4	(2.9)	3/4	(19)
1/16	(1.6)	All Position	275	27	220	(5.6)	7.6	(3.4)	3/4	(19)
1/16	(1.6)	Flat & Horizontal	350	29	345	(8.8)	14.0	(6.4)	1	(25)
1/16	(1.6)	Flat & Horizontal	425	31	480	(12.2)	20.2	(9.2)	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 100% Carbon Dioxide (CO<sub>2</sub>) shielding gas with a flow rate between 35-50 cfh (17-24 l/min). When welding using 75% Argon (Ar)/25% Carbon Dioxide (CO<sub>2</sub>) shielding gas, reduce voltage by approximately 1 volt.
- **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		33-lb. (15kg)	60-lb. (27.2kg)	400-lb. (181.4kg)
Inches	(mm)	Spool	Coil	X-Pak
0.045	(1.2)	S285012-029	—	S285012-064
1/16	(1.6)	S285019-029	S285019-002	—

#### CONFORMANCES AND APPROVALS:

- **AWS A5.29**, E91T1-B3C H4, E91T1-B3M H4
- **AWS A5.29M**, E621T1-B3C H4, E621T1-B3M H4
- **ASME SFA 5.29**, E91T1-B3C H4, E91T1-B3M 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](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).

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

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