

# FabCO<sup>®</sup> TR-70



AWS A5.20: E70T-1C H8, E70T-9C H8

**WELDING POSITIONS:**



**FEATURES:**

- Low fume generation rate
- High deposition rates
- Flat bead profile with fillet welds
- Easy slag removal
- Smooth stable arc, tolerant to changes in stick-out
- Weld deposit with low diffusible hydrogen and good impact toughness
- Very flexible amperage/voltage range

**BENEFITS:**

- Provides cleaner work environment, enhances welder appeal
- Increases productivity, more parts per hour
- Assists in producing high-quality welds
- Reduces clean-up time, excellent for deep groove applications
- Assists in compensating for gaps and producing welds of uniform appearance and quality
- Minimizes risk of cracking in restrained joints, thick sections, and critical applications
- Promotes versatility

**APPLICATIONS:**

- Earthmoving equipment
- Steel structures
- Non-alloyed and fine grain steels
- Heavy fabrication
- Storage vessels
- Rail cars

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

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

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

**STANDARD DIAMETERS:** 0.045" (1.2 mm), 1/16" (1.6 mm), 5/64" (2.0 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 <sub>2</sub>	AWS Spec
Carbon (C)	0.02	0.12
Manganese (Mn)	1.62	1.75
Silicon (Si)	0.57	0.90
Sulphur (S)	0.006	0.03
Phosphorus (P)	0.013	0.03

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

**TYPICAL DIFFUSIBLE HYDROGEN\*:**

Hydrogen Equipment	100% CO <sub>2</sub>	AWS Spec
(GAS CHROMATOGRAPHY)	6.3ml/100g	8.0ml/100g Maximum

**TYPICAL MECHANICAL PROPERTIES\* [Aged 48 Hrs. @ 200°F (93°C)]:**

Mechanical Tests	100% CO <sub>2</sub>	AWS Spec
Tensile Strength	84,000 psi (579 MPa)	70,000-95,000 (490-670 MPa)
Yield Strength	77,000 psi (531 MPa)	58,000 psi (390 MPa) Minimum
Elongation % in 2" (50 mm)	28%	22% Minimum

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

CVN Temperatures	100% CO <sub>2</sub>	AWS Spec
Avg. at 0°F (-20°C)	55 ft•lbs (75 Joules)	20 ft•lbs (27 Joules) Minimum
Avg. at -20°F (-30°C)	44 ft•lbs (60 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 LLC expressly disclaims any liability incurred from any reliance thereon. Typical data are those obtained when welded and tested in accordance with the AWS A5.20 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.

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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)	Flat & Horizontal	150	25	245	(6.2)	5.3	(2.4)	3/4	(19)
0.045 (1.2)	Flat & Horizontal	200	26	365	(9.3)	7.7	(3.5)	3/4	(19)
0.045 (1.2)	Flat & Horizontal	250	26	540	(13.7)	10.9	(4.9)	3/4	(19)
0.045 (1.2)	Flat & Horizontal	280	27	635	(16.1)	13.7	(6.2)	3/4	(19)
1/16 (1.6)	Flat & Horizontal	170	25	140	(3.6)	5.3	(2.4)	1	(25)
1/16 (1.6)	Flat & Horizontal	200	26	170	(4.3)	6.4	(2.9)	1	(25)
1/16 (1.6)	Flat & Horizontal	260	27	210	(5.3)	7.8	(3.5)	1	(25)
1/16 (1.6)	Flat & Horizontal	350	32	345	(8.8)	12.9	(5.9)	1	(25)
5/64 (2.0)	Flat & Horizontal	250	26	110	(2.8)	6.5	(3.0)	1	(25)
5/64 (2.0)	Flat & Horizontal	300	26	140	(3.6)	8.3	(3.8)	1	(25)
5/64 (2.0)	Flat & Horizontal	350	27	170	(4.3)	10.0	(4.6)	1	(25)
5/64 (2.0)	Flat & Horizontal	420	27	225	(5.7)	13.5	(6.1)	1	(25)
5/64 (2.0)	Flat & Horizontal	550	32	345	(8.8)	20.8	(9.4)	1	(25)
3/32 (2.4)	Flat & Horizontal	350	27	125	(3.2)	10.4	(4.7)	1	(25)
3/32 (2.4)	Flat & Horizontal	450	30	174	(4.4)	15.3	(6.9)	1	(25)
3/32 (2.4)	Flat & Horizontal	550	32	245	(6.2)	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.**

**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	60-lb. (27.2kg) Coil	600-lb. (272.2kg) Drum / X-Pak	800-lb. (363kg) Flat Reel
<b>Net Pallet Weight</b>	<b>2376-lb. (1078kg)</b>	<b>1920-lb. (871kg)</b>	<b>2400-lb. (1089kg)</b>	<b>1600-lb. (726kg)</b>
0.045 (1.2)	S247012-029	—	—	—
1/16 (1.6)	S247019-029	S247019-002	S247019-056	—
5/64 (2.0)	—	S247025-002	S247025-008	—
3/32 (2.4)	—	S247029-002	S247029-008	S247029-069

### CONFORMANCES AND APPROVALS:

- **AWS A5.20**, E70T-1C H8, E70T-9C H8
- **AWS A5.20M**, E490T-1C H8, E490T-9C H8
- **ASME SFA 5.20**, E70T-1C H8, E70T-9C H8
- **ABS**, 100% CO<sub>2</sub>, E70T-1CJ
- **CWB**, E490T1-C1A3-CS1-H8 (E492T-9-H8)
- **AWS D1.8 Conformance:** 100% CO<sub>2</sub> [1.6 mm, 2.0 mm & 2.4 mm diameter electrodes]

**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.

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