

Element™ 71T1C



AWS A5.20: E71T-1C H8, E71T-9C H8, E71T-12C H8

WELDING POSITIONS:



FEATURES:

- Enhanced out of positional capability
- Low spatter and fume
- Extremely low manganese emissions
- Enhanced slag release

BENEFITS:

- Increased operator appeal
- Improved operator comfort and productivity
- Assists with conformance to environmental regulations
- Reduced clean-up time and risk of inclusions

APPLICATIONS:

- Shipbuilding
- Structural steel
- Heavy equipment
- General fabrication

SLAG SYSTEM: Fast freezing, rutile type, flux-cored wire

SHIELDING GAS: 100% Carbon Dioxide (CO₂) 35-50 cfh (14-24 l/min)

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP)

STANDARD DIAMETERS: 0.045" (1.2 mm), 0.052" (1.4 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 PROPERTIES* (Chem Pad):

Weld Metal Analysis	100% CO ₂	AWS Spec
Carbon (C)	0.057	0.120
Manganese (Mn)	0.202	1.750
Silicon (Si)	0.367	0.900
Sulphur (S)	0.012	0.030
Phosphorus (P)	0.010	0.030
Nickel (Ni)	0.450	0.500

Note: AWS specification single values are maximums.

TYPICAL DIFFUSIBLE HYDROGEN*:

Hydrogen Equipment	100% CO ₂	AWS Spec
(GAS CHROMATOGRAPHY)	5.0 ml/100 g	8.0 ml/100 g Maximum

TYPICAL MECHANICAL PROPERTIES* [Aged 48 Hrs. @ 220°F (104°C)]:

Mechanical Tests	100% CO ₂	AWS Spec
Tensile Strength	73,000 psi (503 MPa)	70,000-95,000 psi (490-670 MPa)
Yield Strength	64,000 psi (441 MPa)	58,000 psi (390 MPa) Minimum
Elongation % in 2" (50 mm)	27.7%	22.0% Minimum

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

CVN Temperatures	100% CO ₂	AWS Spec
A . at 0°F (-20°C)	90 ft•lbs (122 Joules)	20 ft•lbs (27 Joules) Minimum
Avg. at -20°F (-30°C)	75 ft•lbs (102 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 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 Company.

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Diameter Inches (mm)		Weld Position	Amps	Volts	Wire-Feed Speed in/min (m/min)		Deposition Rate lbs/hr (kg/hr)		Contact Tip to Work Distance Inches (mm)	
0.045	(1.2)	All Positions	170	24	260	(6.6)	5.2	(2.4)	3/4	(19)
0.045	(1.2)	All Positions	220	25	380	(9.7)	7.6	(3.5)	3/4	(19)
0.045	(1.2)	Flat & Horizontal	260	28	475	(12.1)	9.5	(4.3)	3/4	(19)
0.045	(1.2)	Flat & Horizontal	300	30	590	(15.0)	11.8	(5.4)	3/4	(19)
0.052	(1.4)	All Positions	180	24	190	(4.8)	5.4	(2.4)	3/4	(19)
0.052	(1.4)	All Positions	250	26	275	(7.0)	7.8	(3.5)	3/4	(19)
0.052	(1.4)	Flat & Horizontal	270	27	320	(8.1)	8.5	(3.9)	3/4	(19)
0.052	(1.4)	Flat & Horizontal	350	30	570	(14.5)	14.5	(6.6)	1	(25)
1/16	(1.6)	All Positions	215	24	160	(4.1)	5.8	(2.6)	3/4	(19)
1/16	(1.6)	All Positions	275	27	225	(5.7)	8.2	(3.7)	1	(25)
1/16	(1.6)	Flat & Horizontal	280	27	240	(6.1)	8.7	(4.0)	1	(25)
1/16	(1.6)	Flat & Horizontal	400	31	400	(10.2)	14.5	(6.6)	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:** The information above was determined by welding using 100% CO₂ shielding gas with a flow rate between 35-50 cfh (14-24 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)		33-lb. (15kg) 12" (305mm) Fiber Spool	60-lb. (27kg) Coil
0.045	(1.2)	S292112-029	S292112-002
0.052	(1.4)	S292115-029	S292115-002
1/16	(1.6)	S292119-029	S292119-002

CONFORMANCES AND APPROVALS:

- **AWS A5.20**, E71T-1C H8, E71T-9C H8, E71T-12C H8
- **AWS A5.20M**, E491T-1C H8, E491T-9C H8, E491T-12C H8
- **ASME SFA 5.20**, E71T-1C H8, E71T-9C H8, E71T-12C H8
- **ABS**, 100% CO₂, 2YSA H10
- **CWB**, 100% CO₂, E491T-9-H8

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 36th St., Miami, FL 33166 (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.

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

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Revision Date: 151123 (Replaces 130718)

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