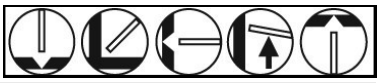
FabCO® 712C

AWS A5.20: E71T-1CJ H4, E71T-9CJ H4, E71T-12CJ H4

WELDING POSITIONS:



FEATURES:

- High impact strengths at low temperatures
- Low diffusible hydrogen weld deposit
- Excellent arc characteristics
- High-deoxidizer formulation
- Fast-freezing slag

BENEFITS:

- Resists cracking in severe applications
- Resists underbead cracking
- Assists in producing smooth weld beads with uniform fusion
- Reduces surface preparation requirements, increases productivity
- Suitable for all-position welding

APPLICATIONS:

- Non-alloyed and fine grain steels
- Single or multi-pass welding
- Structural applications
- Earthmoving equipment
- Storage vessels
- Shipbuilding

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

SHIELDING GAS: 100% Carbon Dioxide (CO_2), 35-50 cfh (17-24 l/min)

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP)

STANDARD DIAMETERS: 0.045" (1.2 mm), 0.052" (1.4 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	AWS Spec
Carbon (C)	0.03	0.12
Manganese (Mn)	1.50	1.60
Silicon (Si)	0.36	0.90
Sulphur (S)	0.010	0.030
Phosphorus (P)	0.011	0.030
Nickel (Ni)	0.41	0.50
Boron ((B)	0.0030	Not specified

Note: AWS specification single values are maximums.

Hydrogen Equipment	100% CO_2	AWS Spec
(GAS CHROMATOGRAPHY)	3.2 ml/100 g	4.0 ml/100 g Maximum

TYPICAL MECHANICAL PROPERTIES* (As Welded) [PWHT 13 Hrs. @1150°F (621°C)]:

Mechanical Tests	As Welded		PWHT 13 Hrs @ 1150°F (621°C)	
	100% CO_2	AWS Spec	100% CO_2	AWS Spec
Tensile Strength	81,000 psi (558 MPa)	70,000 - 90,000 psi (480-620 MPa)	72,000 psi (496 MPa)	Not specified
Yield Strength	75,000 psi (517 MPa)	58,000 psi (400 MPa) Minimum	63,000 psi (434 MPa)	Not specified
Elongation % in 2" (50 mm)_	27%	22% Minimum	32%	Not specified

TYPICAL CHARPY V-NOTCH IMPACT VALUES* (As Welded) [SR 13 Hrs. @1150°F (621°C)]:

CVN Temperatures	As Welded		PWHT 13 Hrs @ 1150°F (621°C)	
	100% CO_2	AWS Spec	100% CO_2	AWS Spec
Avg. at -40°F (-40°C)	124 ft•lbs (168 Joules)	20 ft•lbs (27 Joules) Minimum	135 ft•lbs (183 Joules)	Not specified
Avg. at -76°F (-60°C)	105 ft•lbs (142 Joules)	Not specified	—	Not specified

*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

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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 Position	170	24	280	(7.1)	4.0	(1.8)	3/4	(19)
0.045	(1.2)	All Position	200	24	320	(8.1)	4.5	(2.0)	3/4	(19)
0.045	(1.2)	All Position	220	25	380	(9.6)	5.3	(2.4)	3/4	(19)
0.045	(1.2)	Flat & Horizontal	250	28	450	(11.4)	6.3	(2.8)	3/4	(19)
0.052	(1.4)	All Position	175	24	180	(4.5)	4.9	(2.2)	3/4	(19)
0.052	(1.4)	All Position	200	24	225	(5.7)	6.1	(2.8)	3/4	(19)
0.052	(1.4)	All Position	225	27	300	(7.6)	8.1	(3.7)	3/4	(19)
0.052	(1.4)	Flat & Horizontal	260	28	340	(8.6)	9.1	(4.1)	3/4	(19)

- **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% CO_2 shielding gas with a flow rate between 35-50 cfh (17-24 l/min).

AVAILABLE 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) Vacuum-Packaged Spool
0.045	(1.2)	S292812-053
0.052	(1.4)	S292815-053

CONFORMANCES AND APPROVALS:

- **AWS A5.20,** E71T-1CJ H4, E71T-9CJ H4, E71T-12CJ H4
- **AWS A5.20M,** E491T-1CJ H4, E491T-9CJ H4, E491T-12CJ H4
- **ASME SFA 5.20M,** E491T-1CJ H4, E491T-9CJ H4, E491T-12CJ H4
- **EN 17632-A,** T42 6 P C1 2 H5
- **CE Marked per CPR 305/2011,** (1.2 - 1.4 mm diameter electrodes)
- **DNV-GL,** 100% CO2, V Y40MS(H5)

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

Safety Data Sheets on any Hobart Brothers LLC product may be obtained from Hobart Customer Service or at 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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