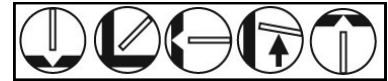


FabCO[®] 910



AWS A5.20: E71T-1MJ, E71T-9MJ, E71T-12MJ

WELDING POSITIONS:



FEATURES:

- Specially formulated to be used with high-argon shielding gas mixtures (>85% argon)
- Excellent low-temperature impact toughness
- Fast-freezing slag

BENEFITS:

- Helps minimize the variety of on-hand shielding gases and equipment required in facilities primarily using high-argon mixtures for GMAW
- Maintains acceptable operating characteristics and mechanical properties unlike most E71T-1 type electrodes when used with >85% argon gas mixtures
- Can help lower the fume generation rate and visible smoke levels
- Suitable for use in a wide variety of critical applications
- Provides good puddle control and bead contour when welding in all positions

APPLICATIONS:

- Single and multi-pass welding
- Railcar
- Heavy equipment
- Non-alloyed and fine grain steels
- Shipbuilding
- Storage and pressure vessels
- General fabrication
- Transportation

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

SHIELDING GAS: 75-95% Argon (Ar)/ Balance Carbon Dioxide (CO₂), 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)

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 (%)	75 Ar/25% CO ₂	92% Ar/8% CO ₂	AWS Spec
Carbon (C)	0.05	0.06	0.12
Manganese (Mn)	0.84	0.86	1.60
Silicon (Si)	0.39	0.41	0.90
Phosphorus (P)	0.008	0.012	0.030
Sulphur (S)	0.009	0.011	0.030
Nickel (Ni)	0.40	0.41	0.50

Note: AWS specification single values are maximums.

TYPICAL MECHANICAL PROPERTIES* (As Welded):

Mechanical Tests	75 Ar/25% CO ₂	92% Ar/8% CO ₂	AWS Spec
Tensile Strength	82,000 psi (565 MPa)	85,000 psi (586 MPa)	75,000-90,000 psi (520-620 MPa)
Yield Strength	73,000 psi (503 MPa)	78,000 psi (538 MPa)	58,000 psi (390 MPa) Minimum
Elongation % in 2" (50 mm)	27%	27%	22% Minimum

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

CVN Temperatures	75 Ar/25% CO ₂	92% Ar/8% CO ₂	AWS Spec
CVN @0°F (-20°C)	90 ft•lbs (122 Joules)	105 ft•lbs (142 Joules)	20 ft•lbs (27 Joules) Minimum
CVN @-40°F (-40°C)	35 ft•lbs (47 Joules)	50 ft•lbs (68 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.

FabCO[®] 910

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	200	23	285	(7.2)	5.4	(2.4)	5/8	(16)
0.045	(1.2)	All Position	225	24	325	(8.3)	5.9	(2.7)	5/8	(16)
0.045	(1.2)	All Position	250	25	360	(9.1)	6.4	(2.9)	5/8	(16)
0.045	(1.2)	Flat & Horizontal	275	26	400	(10.2)	6.9	(3.1)	3/4	(19)
0.045	(1.2)	Flat & Horizontal	300	27	445	(11.3)	7.1	(3.2)	3/4	(19)
0.045	(1.2)	Flat & Horizontal	325	27	490	(12.4)	7.9	(3.6)	3/4	(19)
1/16	(1.6)	All Position	200	23	120	(3.0)	4.3	(2.0)	1	(25)
1/16	(1.6)	All Position	225	24	150	(3.8)	5.7	(2.6)	1	(25)
1/16	(1.6)	All Position	250	24	180	(4.6)	6.7	(3.0)	1	(25)
1/16	(1.6)	All Position	275	25	215	(5.5)	7.9	(3.6)	1	(25)
1/16	(1.6)	Flat & Horizontal	300	25	250	(6.4)	9.1	(4.1)	1	(25)
1/16	(1.6)	Flat & Horizontal	325	26	280	(7.1)	10.5	(4.8)	1 1/4	(32)
1/16	(1.6)	Flat & Horizontal	350	26	315	(8.0)	11.9	(5.4)	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 95% Argon (Ar)/5% Carbon Dioxide (CO₂) shielding gas with a flow rate between 35-50 cfh (17-24 l/min). When welding using 75% Argon (Ar)/25% Carbon Dioxide (CO₂) shielding gas in accordance with the requirements of AWS A5.20/A5.20M, increase voltage by approximately 2-3 volts.
- **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) Spool
Inches	(mm)	
0.045	(1.2)	S288412-029
1/16	(1.6)	S288419-029

CONFORMANCES AND APPROVALS:

- **AWS A5.20**, E71T-1MJ, E71T-9MJ, E71T-12MJ
- **AWS A5.20M**, E491T-1MJ, E491T-9MJ, E491T-12MJ
- **ASME SFA 5.20**, E71T-1MJ, E71T-9MJ, E71T-12MJ
- **CWB**, E491T1-(M20, M21, G)A4-CS2-H4 (E491T-12MJ-H4) [1.2 mm - 1.6 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

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

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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