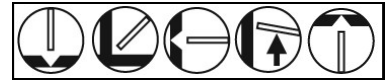


MEGAFIL[®] 713 R



AWS A5. 20: E71T-1MJ H4, E71T-1C H4, E71T-9MJ H4, E71T-9C H4
E71T-12MJ H4, E71T-12C H4
EN 17632-A: T 46 4 P M 1 H5, T 46 2 P C 1 H5

WELDING POSITIONS:



FEATURES:

- Seamless flux-cored electrode
- Low hydrogen weld deposit
- Fast-freezing slag
- Smooth arc characteristics
- Easy slag removal
- Good impact toughness, especially when used with a Argon-CO₂ shielding gas mixture

BENEFITS:

- Very low moisture reabsorption after extended exposure
- Minimizes risk of hydrogen-induced cracking
- Excellent out-of-position performance
- Assists producing welds of consistent appearance and quality
- Reduces clean-up time, minimizes risk of inclusions
- Minimizes risk of cracking in critical applications

APPLICATIONS:

- Single or multi-pass welding
- Offshore
- Pipelines
- Non-alloyed and fine grain steel
- Heavy equipment
- Pressure vessels
- General fabrication
- Equipment repairs and modifications
- Structural fabrication

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

SHIELDING GAS: 100% Carbon Dioxide (CO₂), 75-80% Argon (Ar)/Balance Carbon Dioxide (CO₂), 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 ₂	80% Ar/20% CO ₂	AWS Spec
Carbon (C)	0.02	0.02	0.12
Manganese (Mn)	0.90	1.18	1.60
Silicon (Si)	0.29	0.46	0.90
Phosphorus (P)	0.012	0.012	0.030
Sulphur (S)	0.011	0.011	0.030
Nickel (Ni)	0.31	0.30	0.50
Copper (Cu)	0.14	0.14	0.35

Note: AWS specification single values are maximums.

TYPICAL DIFFUSIBLE HYDROGEN*:

Hydrogen Equipment	100% CO ₂	80% Ar/20% CO ₂	AWS Spec
(GAS CHROMATOGRAPHY)	1.5 ml/100 g	1.6 ml/100 g	4.0 ml/100 g Maximum

TYPICAL MECHANICAL PROPERTIES* (As Welded):

Mechanical Tests	100% CO ₂	80% Ar/20% CO ₂	AWS Spec
Tensile Strength	86,000 psi (593 MPa)	88,000 psi (607 MPa)	70,000-90,000 psi (490-620 MPa)
Yield Strength	79,000 psi (545 MPa)	81,000 psi (558 MPa)	58,000 psi (390 MPa) Minimum
Elongation % in 2" (50 mm)	26%	26%	22% Minimum

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

CVN Temperatures	100% CO ₂	80% Ar/20% CO ₂	AWS Spec
Avg. at -20°F (-30°C)	25 ft•lbs (34 Joules)	65 ft•lbs (89 Joules)	20 ft•lbs (27 Joules) Minimum
Avg. at -40°F (-40°C)	—	60 ft•lbs (81 Joules)	20 ft•lbs (27 Joules) Minimum "J" Requirement
Avg. at -50°F (-46°C)	—	57 ft•lbs (77 Joules)	—

*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.

MEGAFIL® 713 R

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	150	22.5	175	(4.4)	3.8	(1.7)	5/8	(16)
0.045	(1.2)	All Position	175	23	226	(5.7)	5.0	(2.2)	5/8	(16)
0.045	(1.2)	All Position	200	24	278	(7.1)	6.1	(2.8)	3/4	(19)
0.045	(1.2)	All Position	225	25	327	(8.3)	7.2	(3.3)	3/4	(19)
0.045	(1.2)	Flat & Horizontal	250	26	379	(9.6)	8.4	(3.8)	3/4	(19)
0.045	(1.2)	Flat & Horizontal	300	27	480	(12.2)	10.6	(4.8)	3/4	(19)
1/16	(1.6)	All Position	200	23.5	120	(3.0)	4.7	(2.1)	3/4	(19)
1/16	(1.6)	All Position	225	24	141	(3.6)	5.5	(2.5)	1	(25)
1/16	(1.6)	All Position	250	24.5	172	(4.4)	6.7	(3.1)	1	(25)
1/16	(1.6)	All Position	275	25	204	(5.2)	8.0	(3.6)	1	(25)
1/16	(1.6)	Flat & Horizontal	300	25.5	235	(6.0)	9.2	(4.2)	1	(25)
1/16	(1.6)	Flat & Horizontal	350	26.5	298	(7.6)	11.7	(5.3)	1	(25)
1/16	(1.6)	Flat & Horizontal	400	27	361	(9.2)	14.2	(6.4)	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 75% Argon (Ar)/25% Carbon Dioxide (CO₂) shielding gas with a flow rate between 35-50 cfh (17-24 l/min). When welding using 100% Carbon Dioxide (CO₂) shielding gas, increase voltage by approximately 0.5 - 1 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		35-lb. (15.9kg)	660-lb. (300kg)
Inches	(mm)	Spool	Drum
0.045	(1.2)	71315B	71316B
1/16	(1.6)	71333B	—

CONFORMANCES AND APPROVALS:

- **AWS A5.20**, E71T-1MJ H4, E71T-1C H4, E71T-9MJ H4, E71T-9C H4, E71T-12MJ H4, E71T-12C H4
- **AWS A5.20M**, E491T-1MJ H4, E491T-1C H4, E491T-9MJ H4, E491T-9C H4, E491T-12MJ H4, E491T-12C H4
- **ASME SFA 5.20**, E71T-1MJ H4, E71T-1C H4, E71T-9MJ H4, E71T-9C H4, E71T-12MJ H4, E71T-12C H4
- **ABS**, 100% CO₂, 3YSA, 3Y400SA H5, 82% Ar/18% CO₂, 4YSA, 4Y400SA H5
- **CWB**, 100% CO₂, E491T1-C1A3-CS1-H4 (E491T-9-H4)
- **CWB**, 80% Ar/20% CO₂, E491T1-M21A4-CS1-H4 (E491T-9MJ-H4)
- **DNV-GL**, 100% CO₂, IV Y40MS(H5), 75-80% Ar/Balance CO₂, IV Y40MS(H5)
- **EN 17632-A**: T 46 4 P M 1 H5, T 46 2 P C 1 H5
- **Lloyd's Register**, 100% CO₂, 3Y40S H5, 82% Ar/18% CO₂, 3Y40S H5

TECHNICAL QUESTIONS? For technical support of Hobart MEGAFIL products, visit www.HobartBrothers.com/MEGAFIL. OR 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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Revision Date: 190927 (Replaces 190610)

