

# MEGAFIL<sup>®</sup> 731 B



AWS A5. 20: E70T-5MJ H4  
EN 17632-A: T 46 6 B M 3 H5

## WELDING POSITIONS:



### FEATURES:

- Seamless flux-cored electrode
- Low hydrogen weld deposit
- Good impact toughness

### BENEFITS:

- Very low moisture reabsorption after extended exposure
- Minimizes risk of hydrogen-induced cracking
- Minimizes risk of cracking in critical applications

### APPLICATIONS:

- Single or multi-pass welding
- Heavy equipment
- Non-alloyed and fine grain steel
- Equipment repairs and modifications
- Heavy fabrication

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

**SHIELDING GAS:** 75-82% Argon (Ar)/Balance Carbon Dioxide (CO<sub>2</sub>), 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 (%)	80% Ar/20% CO <sub>2</sub>	AWS Spec
Carbon (C)	0.10	0.12
Manganese (Mn)	1.24	1.75
Silicon (Si)	0.25	0.90
Phosphorus (P)	0.014	0.030
Sulphur (S)	0.012	0.030
Nickel (Ni)	0.032	0.50
Copper (Cu)	0.12	0.35

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

### TYPICAL DIFFUSIBLE HYDROGEN\*:

Hydrogen Equipment	80% Ar/20% CO <sub>2</sub>	AWS Spec
(GAS CHROMATOGRAPHY)	2.5 ml/100 g	4.0 ml/100 g Maximum

### TYPICAL MECHANICAL PROPERTIES\* (As Welded):

Mechanical Tests	80% Ar/20% CO <sub>2</sub>	AWS Spec
Tensile Strength	83,000 psi (572 MPa)	70,000-95,000 psi (490-670 MPa)
Yield Strength	70,400 psi (485 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	80% Ar/20% CO <sub>2</sub>	AWS Spec
Avg. at -20°F (-30°C)	94 ft•lbs (127 Joules)	20 ft•lbs (27 Joules) Minimum
Avg. at -40°F (-40°C)	75 ft•lbs (101 Joules)	20 ft•lbs (27 Joules) Minimum "J" Requirement

\*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 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 Company.

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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)	Flat & Horizontal	175	24	226	(5.7)	5.0	(2.2)	5/8	(16)
0.045	(1.2)	Flat & Horizontal	200	26	278	(7.1)	6.1	(2.8)	3/4	(19)
0.045	(1.2)	Flat & Horizontal	225	27	327	(8.3)	7.2	(3.3)	3/4	(19)
1/16	(1.6)	Flat & Horizontal	250	26.5	172	(4.4)	6.7	(3.1)	3/4	(19)
1/16	(1.6)	Flat & Horizontal	275	27	204	(5.2)	8.0	(3.6)	1	(25)
1/16	(1.6)	Flat & Horizontal	300	27.5	235	(6.0)	9.2	(4.2)	1	(25)
1/16	(1.6)	Flat & Horizontal	350	28	298	(7.6)	11.7	(5.3)	1	(25)
1/16	(1.6)	Flat & Horizontal	400	29	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 (CO<sub>2</sub>) shielding gas with a flow rate between 35-50 cfh (17-24 l/min).

**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)
Inches (mm)	Spool
0.045 (1.2)	73115B
1/16 (1.6)	73133B

#### CONFORMANCES AND APPROVALS:

- **AWS A5.20**, E70T-5MJ H4
- **AWS A5.20M**, E490T-5MJ H4
- **ASME SFA 5.20**, E70T-5MJ H4
- **DNV-GL**, 82% Ar/18% CO<sub>2</sub>, IV Y40MS (H5)
- **EN 17632-A**: T 46 6 B M 3 H5
- **Lloyd's Register**, 82% Ar/18% CO<sub>2</sub> 5Y46S H5
- **ABS**, 82% Ar/18% CO<sub>2</sub>, 4YSA, 4Y400SA H5

**TECHNICAL QUESTIONS?** For technical support of Hobart MEGAFIL products, visit [www.HobartBrothers.com/MEGAFIL](http://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](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 Company product may be obtained from Hobart Customer Service or at [www.hobartbrothers.com](http://www.hobartbrothers.com).

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