

FabCOR[®] Edge[™]



AWS A5.18: E70C-6M H4
EN ISO 17632-A: T46 3 M M21 3 H5



FEATURES:

- Virtually no silicon deposits at weld bead toe lines
- Excellent gap bridging capabilities
- Excellent wetting characteristics
- Capable of higher deposition rates and travel speeds than solid wire

BENEFITS:

- Reduces clean-up time, minimizes risk of inclusions
- Minimizes burn-through, reduces part rejection
- Assists in producing smooth weld beads with uniform fusion
- Increases productivity, more parts per hour

APPLICATIONS:

- Non-alloyed and fine grain steels
- Heavy equipment
- Transportation
- Robotic and mechanized welding
- Agriculture
- Mining

WIRE TYPE: Gas-shielded, metal-powder, metal-cored wire

SHIELDING GAS: 75-95% Argon (Ar)/Balance Carbon Dioxide (CO₂), 35-50 cfh (17-24 l/min)

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP)

STANDARD DIAMETERS: 0.035" (0.9 mm), 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 CHEMISTRY* (Chem Pad):

Weld Metal Analysis (%)	75% Ar/25% CO ₂	90% Ar/10% CO ₂	AWS Spec
Carbon (C)	0.05	0.05	0.12
Manganese (Mn)	1.33	1.50	1.75
Silicon (Si)	0.63	0.72	0.90
Phosphorus (P)	0.006	0.010	0.03
Sulphur (S)	0.007	0.012	0.03
Nickel (Ni)	0.42	0.42	0.50

Note: AWS specification single values are maximums.

TYPICAL DIFFUSIBLE HYDROGEN*:

Hydrogen Equipment	75% Ar/25% CO ₂	90% Ar/10% CO ₂	AWS Spec
(GAS CHROMATOGRAPHY)	1.5 ml/100g	2.1 ml/100g	4.0 ml/100g Maximum

TYPICAL MECHANICAL PROPERTIES* (As Welded):

Mechanical Tests	75% Ar/25% CO ₂	90% Ar/10% CO ₂	AWS Spec
Tensile Strength	82,000 psi (565 MPa)	86,000 psi (593 MPa)	70,000 psi (480 MPa) Minimum
Yield Strength	70,000 psi (483 MPa)	74,000 psi (503 MPa)	58,000 psi (400 MPa) Minimum
Elongation % in 2" (50 mm)	27%	25%	22% Minimum

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

CVN Temperatures	75% Ar/25% CO ₂	90% Ar/10% CO ₂	AWS Spec
CVN @ 0°F (-20°C)	50 ft•lbs (68 Joules)	56 ft•lbs (76 Joules)	Not specified
CVN @ -20°F (-30°C)	40 ft•lbs (54 Joules)	38 ft•lbs (52 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 A5.18 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.

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Diameter Inches	(mm)	Weld Position	Amps	Volts	Wire Feed Speed		Deposition Rate		Contact Tip to Work Distance	
					in/min	(m/min)	lbs/hr	(kg/hr)	Inches	(mm)
0.035	(0.9)	Flat & Horizontal	150	24	320	(8.1)	4.6	(2.1)	1/2	(13)
0.035	(0.9)	Flat & Horizontal	200	26	450	(11.4)	6.9	(3.1)	1/2	(13)
0.035	(0.9)	Flat & Horizontal	250	29	590	(15.0)	9.2	(4.2)	1/2	(13)
0.045	(1.2)	Flat & Horizontal	200	24	225	(5.7)	5.9	(2.7)	5/8	(16)
0.045	(1.2)	Flat & Horizontal	250	25	315	(8.0)	7.9	(3.6)	5/8	(16)
0.045	(1.2)	Flat & Horizontal	300	26	440	(11.2)	11.7	(5.3)	3/4	(19)
0.045	(1.2)	Flat & Horizontal	350	29	600	(12.7)	16.2	(7.3)	3/4	(19)
0.045	(1.2)	Flat & Horizontal	375	31	760	(19.3)	20.7	(9.4)	3/4	(19)
0.052	(1.4)	Flat & Horizontal	250	24	240	(6.1)	8.4	(3.8)	3/4	(19)
0.052	(1.4)	Flat & Horizontal	300	25	355	(9.0)	12.5	(5.7)	1	(25)
0.052	(1.4)	Flat & Horizontal	350	28	460	(11.7)	16.6	(7.5)	1	(25)
0.052	(1.4)	Flat & Horizontal	400	31	555	(14.1)	20.0	(9.1)	1	(25)
1/16	(1.6)	Flat & Horizontal	250	24	150	(3.8)	6.9	(3.1)	3/4	(19)
1/16	(1.6)	Flat & Horizontal	300	26	220	(5.6)	10.1	(4.6)	1	(25)
1/16	(1.6)	Flat & Horizontal	350	27	270	(6.9)	12.8	(5.8)	1	(25)
1/16	(1.6)	Flat & Horizontal	400	29	335	(8.5)	16.1	(7.3)	1	(25)
1/16	(1.6)	Flat & Horizontal	450	32	400	(10.3)	19.6	(8.9)	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.**
- **For out of position welding, short circuit or pulsed spray transfer mode must be used.**
- **Pulse waveforms are designed with nominal operating points that may result in average voltage and current values that differ from the above table. Generally, pulse processes can be expected to produce lower heat inputs than a standard CV process.**
- **See Above:** This information was determined by welding using 90% Ar/10% CO₂ shielding gas with a flow rate between 35-50 cfm (17-24 l/min). For the higher CO₂ shielding gas mixtures within the recommended range, increase listed voltages by 1-3 volts.

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) Spool	50-lb. (22.7kg) Spool	60-lb. (27.2kg) Coil	500-lb. (226.8kg) X-Pak	1000-lb. (453.6kg) X-Pak
Net Pallet Weight		2376-lb. (1078kg)	1600-lb. (726kg)	1920-lb. (871kg)	2000-lb. (907kg)	1000-lb. (453kg)
0.035	(0.9)	S279308-029	—	—	—	—
0.045	(1.2)	S279312-029	S279312-027	—	S279312-050	S279312-058
0.052	(1.4)	S279315-029	S279315-027	S279315-002	S279315-050	S279315-058
1/16	(1.6)	S279319-029	S279319-027	S279319-002	—	S279319-058

CONFORMANCES AND APPROVALS:

- **AWS A5.18**, E70C-6M H4
- **AWS A5.18M**, E48C-6M H4
- **ASME SFA 5.18**, E70C-6M H4
- **ABS**, 80% Ar/20% CO₂, 3YSA H5 (0.045" - 1/16" diameter electrodes, flat position)
- **ABS**, 90% Ar/10% CO₂, 3YSA H5 (0.035" - 1/16" diameter electrodes, all positions)
- **CWB**, E491T15 - (M12, M20, M21, M22, G) A4-CS1-H4 (1.2-1.6 mm diameter electrode)
- **CE Marked** per CPR 305/2011
- **EN ISO 17632-A**: T46 3 M M21 3 H5 (0.9 - 1.6 mm diameter electrode)
- **AWS D1.8/D1.8M**, 75% Ar/25% CO₂, [0.052" (1.4 mm) diameter electrode]
- **AWS D1.8/D1.8M**, 85% Ar/15% CO₂, [0.052" (1.4 mm) diameter electrode]
- **AWS D1.8/D1.8M**, 90% Ar/10% CO₂, [0.045" (1.2 mm) diameter electrode]
- **AWS D1.8/D1.8M**, 75% Ar/25% CO₂, [1/16" (1.6 mm) diameter electrode]

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.

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