

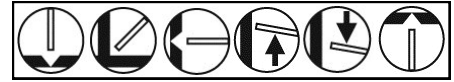


HOBART BROTHERS

METAL-COR® 6L

AWS A5.18: E70C-6M H4

WELDING POSITIONS:



FEATURES:

- Low fume generation rate
- Excellent wetting characteristics
- Virtually no slag coverage
- Low spatter

BENEFITS:

- Increases welder appeal, improves the working environment
- Assists in producing smooth weld beads with uniform fusion
- Reduces clean-up time, minimizes risk of inclusions
- Reduces clean-up time, increases productivity

APPLICATIONS:

- Non-alloyed and fine grain steels
- Single and multi-pass welding
- Automotive
- Structural applications
- Railcars
- Storage vessels

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

SHIELDING GAS: 75-95% Argon (Ar)/Balance Carbon Dioxide (CO₂), 35-50 cfm (14-24 l/min)

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP)

STANDARD DIAMETERS: 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 packaging

TYPICAL WELD METAL PROPERTIES* (Chem Pad):

Weld Metal Analysis	75% Ar/25% CO ₂	90% Ar/10% CO ₂	AWS Spec
Carbon (C)	0.03	0.03	0.12
Manganese (Mn)	1.48	1.67	1.75
Silicon (Si)	0.61	0.80	0.90
Phosphorus (P)	0.013	0.013	0.03
Sulphur (S)	0.009	0.012	0.03

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)	2.5 ml/100g	3.0 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	81,000 psi (560 MPa)	89,000 psi (614 MPa)	70,000 psi (480 MPa) Minimum
Yield Strength	70,000 psi (485 MPa)	70,000 psi (530 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
Avg. at 0°F (-20°C)	75 ft•lbs (101 Joules)	70 ft•lbs (94 Joules)	Not specified
Avg. at -20°F (-30°C)	60 ft•lbs (81 Joules)	56 ft•lbs (75 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 Company expressly disclaims any liability incurred from any reliance thereon. Typical data are those obtained when welded and tested in accordance with 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 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)
0.035	(0.9)	Flat & Horizontal	150	25	295	(7.5)	4.7	(2.1)	5/8	(16)
0.035	(0.9)	Flat & Horizontal	200	27	425	(10.8)	6.9	(3.1)	5/8	(16)
0.035	(0.9)	Flat & Horizontal	250	29	560	(14.2)	9.0	(4.1)	5/8	(16)
0.045	(1.2)	Flat & Horizontal	200	25	225	(5.7)	6.1	(2.8)	5/8	(16)
0.045	(1.2)	Flat & Horizontal	250	26	315	(8.0)	8.4	(3.8)	5/8	(16)
0.045	(1.2)	Flat & Horizontal	300	27	415	(10.5)	11.2	(5.1)	3/4	(19)
0.045	(1.2)	Flat & Horizontal	350	28	545	(13.5)	15.1	(6.9)	3/4	(19)
0.052	(1.4)	Flat & Horizontal	250	25	230	(5.8)	7.9	(3.6)	3/4	(19)
0.052	(1.4)	Flat & Horizontal	300	27	330	(8.4)	11.3	(5.1)	1	(25)
0.052	(1.4)	Flat & Horizontal	350	29	420	(10.7)	14.5	(6.6)	1	(25)
0.052	(1.4)	Flat & Horizontal	400	31	505	(12.8)	17.5	(8.0)	1	(25)
1/16	(1.6)	Flat & Horizontal	250	25	150	(3.8)	7.2	(3.3)	3/4	(19)
1/16	(1.6)	Flat & Horizontal	300	26	210	(5.3)	10.1	(4.6)	1	(25)
1/16	(1.6)	Flat & Horizontal	350	27	255	(6.5)	12.3	(5.6)	1	(25)
1/16	(1.6)	Flat & Horizontal	400	29	310	(7.9)	15.1	(6.8)	1	(25)
1/16	(1.6)	Flat & Horizontal	450	31	375	(9.5)	18.3	(8.3)	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.**
- **See Above:** This information was determined by welding with 90% Ar/10% CO₂ shielding gas with a flow rate between 35-50 cfh (14-24 l/min). For the 75-80% Ar/Balance CO₂ shielding gas requirements of AWS A5.18/A5.18M, 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		33-lb. (15kg)	44-lb. (20kg)	50-lb. (23kg)	60-lb. (27kg)	500-lb. (227kg)	750-lb. (340kg)
Inches	(mm)	Spool	Spool	Spool	Coil	X-Pak	X-Pak
0.045	(1.2)	S280812-X29	S280812-X44	S280812-X27	—	S280812-X50	—
0.052	(1.4)	—	—	S280815-X27	—	S280815-X50	—
1/16	(1.6)	S280819-X19	—	—	S280819-X02	—	S280819-X75

CONFORMANCES AND APPROVALS:

- AWS A5.18, E70C-6M H4
- AWS A5.18M, E48C-6M H4
- ASME SFA 5.18, E70C-6M H4
- CWB, 75-95% Ar/Balance CO₂, E491C-6M-H4, Mison 8C, E492C-6M-H4

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, 550 NW LeJune Road, Miami, FL 33126; OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210

Material Safety Data Sheets on any Hobart Brothers Company product may be obtained from Hobart Customer Service or at www.hobartbrothers.com.

Because Hobart Brothers Company is constantly improving products, Hobart reserves the right to change design and/or specifications without notice.

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