

FabCOR® Elevate™



AWS A5.18: E70C-6M H4

WELDING POSITIONS:



FEATURES:

- Wire manufacturing process optimized for Automated and mechanized welding
- Proprietary formula specifically address the disadvantages of welding using high wire-feed speeds with conventional wires
- Designed to offer robust mechanical properties and good low-temperature toughness when welding at high amperages and wire feed speeds

BENEFITS:

- Provides consistent feedability at very high wire feed speeds on automated equipment
- Maintains good bead appearance and contour, even when welding at high travel speeds
- Suitable for use in critical applications where weld integrity and performance is a key consideration

APPLICATIONS:

- Heavy equipment fabrication
- Agricultural equipment fabrication
- Truck and trailer fabrication
- Single and multi-pass welding
- Automated welding
- Structural steel fabrication

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

SHIELDING GAS: 75-95% Argon (Ar)/Balance Carbon Dioxide (CO₂), 40-50 cfh (19-24 l/min)

Note: FabCOR Elevate has been optimized for use with 90% Ar/10% CO₂ shielding gas. 75% Ar/25% CO₂ is typically used for classification purposes only.

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP)

STANDARD DIAMETERS: 0.045" (1.2 mm), 0.052" (1.4 mm), 1/16" (1.6mm)

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)	0.03	0.04	0.12
Manganese (Mn)	1.55	1.68	1.75
Silicon (Si)	0.58	0.67	0.90
Phosphorus (P)	0.009	0.010	0.030
Sulphur (S)	0.020	0.020	0.030
Nickel (Ni)	0.37	0.36	0.50
Boron (B)	0.0011	0.0009	Not specified

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)	3.1 ml/100g	3.8 ml/100g	4.0 ml/100g

TYPICAL MECHANICAL PROPERTIES* (As Welded):

Mechanical Tests	75% Ar/25% CO ₂	90% Ar/10% CO ₂	AWS Spec
Tensile Strength	84,000 psi (579 MPa)	83,000 psi (572 MPa)	70,000 psi (480 MPa) Minimum
Yield Strength	73,000 psi (503 MPa)	72,000 psi (496 MPa)	58,000 psi (400 MPa)
Elongation % in 2" (50 mm)	25%	26%	22% 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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TYPICAL CHARPY V-NOTCH IMPACT VALUES* (As Welded):

CVN Temperatures	75% Ar/25% CO ₂	90% Ar/10% CO ₂	AWS Spec
Avg. at -20°F (-30°C)	34 ft •lbs. (46 Joules)	55 ft •lbs. (75 Joules)	20 ft •lbs. (27 Joules) Minimum
Avg. at -40°F (-40°C)	32 ft •lbs. (43 Joules)	41 ft •lbs. (56 Joules)	Not specified

TYPICAL OPERATING PARAMETERS

Diameter Inches (mm)	Weld Position	Amps	Volts	Wire-Feed Speed in/min (m/min)	Deposition Rate lbs./hr. (kg/hr.)	Contact Tip to Work Distance Inches (mm)
0.045 (1.2)	Flat & Horizontal	220	26.2	325 (8.3)	8.4 (3.8)	3/4 (19)
0.045 (1.2)	Flat & Horizontal	285	27.8	475 (12.1)	12.3 (5.6)	3/4 (19)
0.045 (1.2)	Flat & Horizontal	310	28.2	550 (14.0)	14.2 (6.4)	3/4 (19)
0.045 (1.2)	Flat & Horizontal	340	29	625 (15.9)	16.2 (7.3)	3/4 (19)
0.052 (1.4)	Flat & Horizontal	200	25	215 (5.5)	7.4 (3.3)	3/4 (19)
0.052 (1.4)	Flat & Horizontal	250	25	260 (6.6)	8.9 (4.0)	3/4 (19)
0.052 (1.4)	Flat & Horizontal	300	27	355 (9.0)	12.4 (5.6)	1 (25)
0.052 (1.4)	Flat & Horizontal	350	28.5	430 (10.9)	14.7 (6.6)	1 (25)
0.052 (1.4)	Flat & Horizontal	400	30	555 (14.1)	20.0 (9.1)	1 (25)
1/16 (1.6)	Flat & Horizontal	250	25.5	180 (4.6)	8.5 (3.8)	7/8 (22)
1/16 (1.6)	Flat & Horizontal	300	28.5	280 (6.6)	13.3 (6.0)	1 (25)
1/16 (1.6)	Flat & Horizontal	375	30	350 (8.9)	16.6 (7.5)	1 (25)
1/16 (1.6)	Flat & Horizontal	400	32	450 (11.4)	21.4 (9.7)	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.
- 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% Argon (Ar)/10% Carbon Dioxide (CO₂) shielding gas with a flow rate between 40-50 cfh (19-24 l/min). For the higher Carbon Dioxide (CO₂) shielding gas mixtures

AVAILABLE 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 (15 kg) Spool	50-lb (22.7 kg) Spool	500-lb (226 kg) X-Pak	1000-lb (454 kg) X-Pak
Net Pallet Weight	2645-lb. (1200 kg)	1795-lb. (814 kg)	2150-lb. (975 kg)	1025-lb. (465 kg)
0.045 (1.2)	S279712-X29	S279712-X27	S279712-X50	S279712-X58
0.052 (1.4)	S279715-X29	S279715-X27	—	S279715-X58
1/16 (1.6)	S279719-X29	S279719-X27	—	S279719-X58

CONFORMANCES AND APPROVALS:

- AWS A5.18, E70C-6M H4
- AWS A5.18M, E49C-6M H4
- ASME SFA 5.18, E70C-6M H4
- CWB, E491T15-(M20, M21) A4-CS1-H4 (1.2 mm - 1.6 mm diameter electrodes)
- AWS D1.8, D1.8, See Approval Certificate for Details [0.052" (1.4 mm) – 1/16" (1.6 mm) diameters]

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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