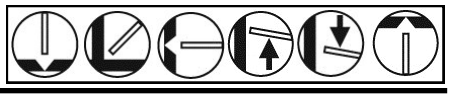
FabCOR® 209

AWS A5.28: E80C-Ni1 H4
CWB: E55C-Ni1-H4 (E80C-Ni1-H4)

WELDING POSITIONS:



FEATURES:

- Excellent gap bridging capability
- Higher deposition rates and travel speeds than solid wire
- High impact strengths at low temperatures

BENEFITS:

- Minimizes burn-through, reduces part rejection
- Increases productivity, more parts per hour
- Resists cracking in severe applications

APPLICATIONS:

- High-strength low-alloy steels
- Single or multi-pass welding
- Structural applications
- Nickel-Molybdenum steels
- Castings
- Weathering steels

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

SHIELDING GAS: 95% Argon (Ar)/Balance Oxygen (O_2), 75-95% Argon (Ar)/Balance Carbon Dioxide (CO_2), 35-50 cfh (14-24 l/min)

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP)

STANDARD DIAMETERS: 0.045" (1.2 mm), 0.052" (1.4 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	95% Ar/5% O_2	AWS Spec
Carbon (C)	0.05	0.04	0.12
Manganese (Mn)	1.38	1.40	1.50
Silicon (Si)	0.65	0.80	0.90
Sulphur (S)	0.011	0.009	0.030
Phophorus (P)	0.013	0.008	0.025
Nickel (Ni)	1.00	0.95	0.80-1.10

Note: AWS specification single values are maximums.

TYPICAL DIFFUSIBLE HYDROGEN*:

Hydrogen Equipment	75% Ar/25% CO_2	95% Ar/5% O_2	AWS Spec
(GAS CHROMATOGRAPHY)	1.2 ml/100g	3.0 ml/100g	4.0 ml/100g Maximum

TYPICAL MECHANICAL PROPERTIES* (AS WELDED):

Mechanical Tests	75% Ar/25% CO_2	95% Ar/5% O_2	AWS Spec
Tensile Strength	92,000 psi (634 MPa)	94,000 psi (645 MPa)	80,000 psi (550 MPa) Minimum
Yield Strength	81,000 psi (559 MPa)	81,000 psi (560 MPa)	68,000 psi (470 MPa) Minimum
Elongation % in 2" (50 mm)	25%	26%	24% Minimum

TYPICAL CHARPY V-NOTCH IMPACT VALUES* (AS WELDED):

CVN Temperatures	75% Ar/25% CO_2	95% Ar/5% O_2	AWS Spec
Avg. at -50°F (-45°C)	44 ft•lbs (60 Joules)	61 ft•lbs (83 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 A5.28 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 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	200	25	210	(5.3)	5.5	(2.5)	5/8	(16)
0.045	(1.2)	Flat & Horizontal	250	26	300	(7.6)	8.0	(3.6)	5/8	(16)
0.045	(1.2)	Flat & Horizontal	300	28	430	(10.9)	11.2	(5.1)	3/4	(19)
0.045	(1.2)	Flat & Horizontal	350	29	570	(14.5)	15.5	(7.1)	3/4	(19)
0.052	(1.4)	Flat & Horizontal	250	26	245	(6.2)	8.1	(3.7)	3/4	(19)
0.052	(1.4)	Flat & Horizontal	300	28	340	(8.6)	11.9	(5.4)	1	(25)
0.052	(1.4)	Flat & Horizontal	350	29	420	(10.7)	15.0	(6.8)	1	(25)
0.052	(1.4)	Flat & Horizontal	400	31	540	(13.7)	19.1	(8.7)	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.**
- **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% CO_2 shielding gas with a flow rate between 35-50 cfh (14-24 l/min). For 95% Ar/5% O_2 shielding gas requirements of AWS A5.28/A5.28M, decrease listed voltages by 1-2 volts. For 75% Ar/25% CO_2 shielding gas, 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	60-lb. (27kg) Coil
0.045	(1.2)	S278912-029	—
0.052	(1.4)	—	S278915-002

CONFORMANCES AND APPROVALS:
- **AWS A5.28,** E80C-Ni1 H4
- **AWS A5.28M,** E55C-Ni1 H4
- **ASME SFA 5.28,** E80C-Ni1 H4
- **CWB,** 75-95% Ar/Balance CO_2, 95% Ar/Balance O_2, E55C-Ni1-H4 (E80C-Ni1-H4)

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 36 St, # 130, Doral, FL 33166-6672 (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

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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HOBART FILLER METALS