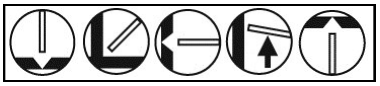
FabCO® 803

AWS A5.29: E81T1-Ni2CJ H4, E81T1-Ni2MJ H4

WELDING POSITIONS:



FEATURES:

- Fast-freezing slag
- Low spatter
- Excellent arc characteristics
- High impact strengths at low temperatures

BENEFITS:

- Suitable for all-position welding
- Reduces clean-up time, increases productivity
- Assists in producing smooth weld beads with uniform fusion
- Resists cracking in severe applications

APPLICATIONS:

- High-strength low-alloy steels
- Single or multi-pass welding
- Weathering steels
- Offshore drilling rigs
- Shipbuilding

SLAG SYSTEM: Fast-freezing, rutile type, flux-cored wire

SHIELDING GAS: 100% Carbon Dioxide (CO_2), 75-80% Argon (Ar)/Balance Carbon Dioxide (CO_2) 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	100% CO_2	75% Ar/25% CO_2	AWS Spec
Carbon (C)	0.04	0.05	0.12
Manganese (Mn)	1.00	1.25	1.50
Silicon (Si)	0.20	0.40	0.80
Phosphorus (P)	0.010	0.010	0.030
Sulphur (S)	0.012	0.010	0.030
Nickel (Ni)	1.84	2.00	1.75-2.75

Note: AWS specification single values are maximums.

TYPICAL DIFFUSIBLE HYDROGEN*:

Hydrogen Equipment	100% CO_2	75% Ar/25% CO_2	AWS Spec
(GAS CHROMATOGRAPHY)	2.6 ml/100g	2.7 ml/100g	4.0 ml/100g Maximum

TYPICAL MECHANICAL PROPERTIES* (As Welded):

Mechanical Tests	100% CO_2	75% Ar/25% CO_2	AWS Spec
Tensile Strength	88,000 psi (609 MPa)	96,000 psi (660 MPa)	80,000-100,000 psi (550-690 MPa)
Yield Strength	81,000 psi (535 MPa)	86,000 psi (596 MPa)	68,000 psi (470 MPa) Minimum
Elongation % in 2" (50 mm)	27%	24%	19% Minimum

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

CVN Temperatures	100% CO_2	75% Ar/25% CO_2	AWS Spec
CVN @-40°F (-40°C)	72 ft•lbs (98 Joules)	55 ft•lbs (74 Joules)	20 ft•lbs (27 Joules) Minimum
CVN @-60°F (-50°C)	68 ft•lbs (92 Joules)	44 ft•lbs (60 Joules)	20 ft•lbs (27 Joules) Minimum "J" Requirement

Hobart Brothers Company • 101 Trade Square East • Troy, OH 45373
PH: (800) 424-1543 • FX: 800-541-6607 • www.hobartbrothers.com

FabCO® 803

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)	All Position	100	22	130	(3.3)	2.7	(1.2)	5/8	(16)
0.045	(1.2)	All Position	200	26	315	(8.0)	6.1	(2.8)	5/8	(16)
0.045	(1.2)	Flat & Horizontal	250	28	445	(11.3)	8.5	(3.9)	3/4	(19)
1/16	(1.6)	All Position	150	25	110	(3.0)	3.8	(1.7)	3/4	(19)
1/16	(1.6)	All Position	250	26	210	(5.3)	6.6	(3.0)	1	(25)
1/16	(1.6)	Flat & Horizontal	300	27	285	(7.2)	9.3	(4.3)	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.**
- **See Above:** The information above was determined by welding using 75% Ar/25% CO_2 shielding gas with a flow rate between 35-50 cfh (17-24 l/min). When using 100% CO_2 shielding gas, increase voltage 1-2 volts.
- **All positions include:** Flat, Horizontal, Vertical Up, and Overhead.

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. (27.2kg) Coil
0.045	(1.2)	S283712-029	—
1/16	(1.6)	S283719-029	S283719-002

CONFORMANCES AND APPROVALS:
- **AWS A5.29,** E81T1-Ni2CJ H4, E81T1-Ni2MJ H4
- **AWS A5.29M,** E551T1-Ni2CJ H4, E551T1-Ni2MJ H4
- **ASME SFA 5.29,** E81T1-Ni2CJ H4, E81T1-Ni2MJ H4
- **CWB,** 100% CO_2, E551T1-Ni2C-JH4, E81T1-Ni2C-JH4, 75-80% Ar/Balance CO_2, E551T1-Ni2M-JH4, E81T1-Ni2M-JH4
- **DNV,** 100% CO_2, III Y40MS
- **Lloyd's Register,** 100% CO_2, 3YS H15
- **AWS D1.8,** 100% CO_2 (1/16" 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, 550 NW LeJune Road, Miami, FL 33126 (can 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.

Revision Date: 140317 (Replaces 130404)

HOBART FILLER METALS