FabCO® 105D2

AWS A5.29: E100T5-D2C

WELDING POSITIONS:

FEATURES:

- Basic slag system affords excellent impact toughness and low diffusible hydrogen
- Maintains good mechanical properties after extended post-weld stress-relief (PWHT)
- Available in large wire diameters, optimized for welding in the flat and horizontal positions
- Penetrating arc characteristics, optimized for with 100% CO_2 shielding gas

BENEFITS:

- Helps minimize the risk of cracking in critical applications and repairs. Improved toughness compared to rutile-slag wires.
- Suitable for use in applications where the weldment requires lengthy stress-relief hold times
- Allows the use of high welding currents suitable for joining thick sections and achieving high productivity
- Assists achieving good weld fusion when welding thick sections or narrow joint designs

APPLICATIONS:

- Single or multi-pass welding
- 100-110 KSI (690-760 MPa) steels requiring stress-relief
- Manganese-Moly castings
- Machine components
- Heavy equipment

SLAG SYSTEM: Slow-freezing, basic-type, flux-cored wire

SHIELDING GAS: 100% Carbon Dioxide (CO_2), 35-50 cfh (17-24 l/min)

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP)

STANDARD DIAMETERS: 1/16" (1.6 mm), 3/32" (2.4 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	AWS Spec
Carbon (C)	0.08	0.15
Manganese (Mn)	2.02	1.65-2.25
Silicon (Si)	0.48	0.80
Phosphorus (P)	0.011	0.030
Sulphur (S)	0.008	0.030
Molybdenum (Mo)	0.43	0.25-0.55

Note: AWS specification single values are maximums.

TYPICAL MECHANICAL PROPERTIES* [PWHT 1 Hr. @ 1150°F (620°C)]:

Mechanical Tests	100% CO_2	AWS Spec
Tensile Strength	113,000 psi (779 MPa)	100,000-120,000 psi (690-830 MPa)
Yield Strength	97,000 psi (669 MPa)	88,000 psi (610 MPa) Minimum
Elongation % in 2" (50 mm)	22%	16% Minimum

TYPICAL CHARPY V-NOTCH IMPACT VALUES* [PWHT 1 Hr. @ 1150°F (620°C)]:

CVN Temperatures	100% CO_2	AWS Spec
CVN @-40°F (-40°C)	40 ft•lbs (54 Joules)	20 ft•lbs (27 Joules) Minimum

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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)
1/16	(1.6)	Flat & Horizontal	200	25	200	(5.1)	7.1	(3.2)	3/4	(19)
1/16	(1.6)	Flat & Horizontal	350	28	360	(9.1)	13.2	(6.0)	1	(25)
1/16	(1.6)	Flat & Horizontal	425	34	485	(12.3)	18.0	(8.2)	1	(25)
3/32	(2.4)	Flat & Horizontal	300	26	130	(3.5)	10.2	(4.6)	1	(25)
3/32	(2.4)	Flat & Horizontal	450	31	215	(5.5)	17.2	(7.8)	1 1/4	(32)
3/32	(2.4)	Flat & Horizontal	600	35	340	(8.6)	27.4	(12.4)	1 1/4	(32)

- **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:** This information was determined by welding using 100% Carbon Dioxide (CO_2) shielding gas with a flow rate between 35-50 cfh (17-24 l/min).

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
1/16	(1.6)	—	S650419-002
3/32	(2.4)	—	S650429-002

CONFORMANCES AND APPROVALS:
- **AWS A5.29,** E100T5-D2C
- **AWS A5.29M,** E690T5-D2C
- **ASME SFA 5.29,** E100T5-D2C

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.

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

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