

FabCO[®] 316LT1



AWS/ASME A5.22: E316LT1-1/4

WELDING POSITIONS:



FEATURES:

- All position
- Self-detaching slag
- Spray-like arc transfer
- High moisture resistance

BENEFITS:

- Welds extremely well in vertical (up) position, as well as flat, horizontal & overhead
- Excellent welder appeal
- Low spatter and less clean-up
- Good weld soundness and extended shelf-life

APPLICATIONS:

- Used for joining and cladding of Type 316, 316L, CF-3M and CF-8M stainless steel.

SLAG SYSTEM OR WIRE TYPE: Fast-freezing, flux-cored wire

SHIELDING GAS: 100% Carbon Dioxide (CO₂), 75% Argon (Ar)/25% Carbon Dioxide (CO₂), 35-50 cfh (17-24 l/min)

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP)

STANDARD DIAMETERS: 0.045" (1.2 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) | 0.026 | 0.022 | 0.04 |
| Manganese (Mn) | 1.23 | 1.46 | 0.5-2.5 |
| Silicon (Si) | 0.538 | 0.753 | 1.0 |
| Phosphorus (P) | 0.020 | 0.021 | 0.040 |
| Sulphur (S) | 0.005 | 0.006 | 0.030 |
| Nickel (Ni) | 12.75 | 12.59 | 11.0-14.0 |
| Chromium (Cr) | 18.70 | 19.05 | 17.0-20.0 |
| Molybdenum (Mo) | 2.50 | 2.20 | 2.0-3.0 |

Note: AWS specification single values are maximums.

TYPICAL MECHANICAL PROPERTIES* (As Welded):

| Mechanical Tests | 100% CO ₂ | 75% Ar/25% CO ₂ | AWS Spec |
|----------------------------|----------------------|----------------------------|------------------------------|
| Tensile Strength | 82,000 psi (565 MPa) | 84,200 psi (581 MPa) | 70,000 psi (480 MPa) Minimum |
| Yield Strength | 60,000 psi (414 MPa) | 58,900 psi (406 MPa) | Not required |
| Elongation % in 2" (50 mm) | 39% | 32% | 30% Minimum |
| Delong Ferrite Number | 9 | 10 | Not required |

*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 the AWS A5.22 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 | | Deposition Rate | | Contact Tip to Work Distance | |
|-------------------------|-------------------|------|-------|--------------------|---------|--------------------|---------|---------------------------------|------|
| | | | | in/min | (m/min) | lbs/hr | (kg/hr) | Inches | (mm) |
| 0.045 (1.2) | All Position | 140 | 24 | 210 | (5.3) | 5.0 | (2.3) | 5/8 | (16) |
| 0.045 (1.2) | All Position | 160 | 25 | 275 | (7.0) | 6.0 | (2.7) | 5/8 | (16) |
| 0.045 (1.2) | Flat & Horizontal | 200 | 29 | 380 | (9.7) | 8.0 | (3.6) | 5/8 | (16) |
| 0.045 (1.2) | Flat & Horizontal | 300 | 33 | 680 | (17.3) | 15.0 | (6.8) | 5/8 | (16) |

- **Maintaining a proper welding procedure - including pre-heat and interpass temperatures - may be critical depending on the type and thickness of steel being welded.**
- The above information was determined by welding using 100% CO₂ shielding gas with a flow rate between 35-50 cfh (17-24 l/min). When welding using 75% Argon (Ar)/25% Carbon Dioxide (CO₂) shielding gas, decrease voltage by 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) | 27.5-lb. (12.5kg) Spool |
|-------------------------|----------------------------|
| 0.045 (1.2) | S689312-078 |

CONFORMANCES AND APPROVALS:

- **AWS A5.22**, E316LT1-1/4
- **ASME SFA 5.22**, E316LT1-1/4
- **CWB**, Ar + 20% CO₂ to 100% CO₂, E316LT1-1, E316LT1-4, (1.2 mm 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, 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 Company product may be obtained from Hobart Customer Service or at www.hobartbrothers.com.

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