

FabCO[®] 309LT1



AWS/ASME A5.22: E309LT1-1/4

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 common austenitic stainless steel such as Types 304, 304L, 309, 309L. It is often used in dissimilar welding, such as stainless steel to carbon steel, low alloy steel, heat-resistant steel and clad 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), 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)	0.028	0.027	0.04
Manganese (Mn)	1.04	1.07	0.5-2.5
Silicon (Si)	0.53	0.51	1.0
Phosphorus (P)	0.025	0.024	0.040
Sulphur (S)	0.001	0.001	0.030
Copper (Cu)	<0.01	<0.01	0.75
Nickel (Ni)	12.77	12.75	12.0-14.0
Chromium (Cr)	23.73	23.63	22.0-25.0
Molybdenum (Mo)	<0.01	<0.01	0.75

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	78,300 psi (539 MPa)	79,100 psi (545 MPa)	75,000 psi (520 MPa) Minimum
Yield Strength	59,400 psi (409 MPa)	60,100 psi (414 MPa)	Not required
Elongation % in 2" (50 mm)	38%	37%	30% Minimum
Delong Ferrite Number	17	20	Not required

*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 A5.22 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 LLC.

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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)	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)
1/16	(1.6)	Flat & Horizontal	200	28	155	(3.9)	6.5	(2.9)	3/4	(19)
1/16	(1.6)	Flat & Horizontal	240	29	230	(5.8)	8.5	(3.9)	3/4	(19)
1/16	(1.6)	Flat & Horizontal	280	33	290	(7.4)	11.0	(5.0)	3/4	(19)
1/16	(1.6)	Flat & Horizontal	350	35	420	(10.7)	16.0	(7.3)	3/4	(19)

- **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)	S689212-078
1/16	(1.6)	S689219-078

CONFORMANCES AND APPROVALS:

- **AWS A5.22**, E309LT1-1/4
- **ASME SFA 5.22**, E309LT1-1/4
- **CWB**, Ar + 20% CO₂ to 100% CO₂, E309LT1-1, E309LT1-4, (1.2 mm electrode diameter)

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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