



Unibraze® 317L-T1

Classification: AWS A5.22/ASME SFA 5.22 E317LT1-1, E317LT1-4

UNS W31735

Description: Unibraze® 317L-T1 is a gas-shielded, flux cored, stainless steel designed to weld in all positions. These electrodes are used for welding alloys of similar composition and are usually limited to severe corrosion applications. The low carbon reduces the possibility of intergranular carbide precipitation and increases corrosion without Nb or Ti stabilizers. However, it is not as strong at elevated temperatures.

Chemical Composition: (100% CO₂)

	C	Cr	Ni	Mo	Mn	Si	P	S	Cu
Requirement	.04 max	18.0- 21.0	12.0- 14.0	3.0- 4.0	.50- 2.5	1.0 max	.04 max	.03 max	.75 max
Typical Results	.03	18.6	13.0	3.7	1.3	.50	.03	.01	.20

Mechanical Properties: (100% CO₂)

	Requirement	Typical Results
Tensile Strength	75,000 psi min. (520 MPa)	85,282 psi (588 MPa)
Elongation	20% min.	25%

NOTE: Strength will be slightly higher with Ar + 20~25% CO₂

Optimum Welding Parameters: DC+ (100% CO₂)

Diameter	Amps	Volts	WFS (IPM)	ESO	Deposition Rate (lbs/hr)
.035"	150	26	500	5/8" - 3/4"	5.4
.035"	165	27	600	5/8" - 3/4"	6.3
.045"	160	26	300	5/8" - 3/4"	6.3
.045"	200	28	425	5/8" - 3/4"	9.2
1/16"	215	27	195	3/4" - 1"	7.0
1/16"	250	28	240	3/4" - 1"	8.6

NOTE: Lower by ~2 volts when using Ar + 20~25% CO₂

Notice: The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus, the results are not guarantees for use in the field. The manufacturer disclaims any warranty of merchantability or fitness for any purpose with respect to its products.