



Unibraze® 308L-T1

Classification: AWS A5.22/ASME SFA 5.22 E308LT1-1, E308LT1-4

UNS W30835

Description: Unibraze® 308L-T1 is a gas-shielded, flux cored, stainless steel designed to weld in all positions. It has a nominal weld metal composition of 20% Cr, 10% Ni and maximum C of .04%. By specifying low carbon in this alloy, it is possible to obtain resistance to intergranular corrosion due to carbide precipitation without stabilizers such as Nb or Ti. However, the low carbon, is not as strong at elevated temperatures as the E308H or Nb stabilized alloys. It is used to weld components in the paper, chemical, textile and pharmaceutical industries. It is also used to join 301, 302, 304L, and 308L, as well as 321 and 347 at temperatures below 500°F.

Chemical Composition: (100% CO₂)

	C	Cr	Ni	Mo	Mn	Si	P	S	Cu
Requirement	.04 max	18.0- 21.0	9.0- 11.0	.75 max	.50- 2.5	1.0 max	.04 max	.03 max	.75 max
Typical Results	.034	19.18	10.33	.02	1.21	.59	.013	.008	.03

Mechanical Properties: (100% CO₂)

	Requirement	Typical Results
Tensile Strength	75,000 psi min. (520 MPa)	83,500 psi (575 MPa)
Elongation	30% min.	38%

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.