



Unibraze 309L

CLASSIFICATIONS: AWS A5.9/ASME SFA 5.9 Class ER309L UNS S30983

DESCRIPTION:

Unibraze 309L is most often used to join 304, 347, 321 316, and duplex stainless steels to mild and low alloy steel, and as a barrier layer in stainless overlays. It is also used for welding similar alloys in wrought and cast form, and to weld similar base metals, where severe corrosion conditions exist.

TYPICAL CHEMISTRY:

C	Cr	Ni	Mo	Mn	Si	P	S	N	Cu	FN (WRC)
.30 max	23.0-25.0	12.0-14.0	.75 max	1.0-2.5	.30-.65	.03 max	.03 max		.75 max	12

TYPICAL MECHANICAL PROPERTIES:

Tensile Strength	85,000 psi (590MPa)
Yield Strength	58,000 psi (400 MPa)
Elongation	36%
Charpy Impacts@ RT	100 ft lbs

TYPICAL WELDING PARAMETERS:

	Shielding Gas	Gas Flow	Diameter	Voltage	Amperage
MIG	98/99% Ar +2/1% O 97%Ar + 3% CO ₂	30 to 50 CFH	.035" (.9mm)	26-29	160 /210
			.045" (1.14mm)	28-32	180/250
			.062" (1.6mm)	29-33	200/280
TIG	100% Ar		1/16" (1.6mm)	14-18	90/130
			3/32" (2.4mm)	15-20	120/175
			1/8" (3.2mm)	15-20	150/220
SUBARC	Suitable Flux		3/32" (2.4mm)	28-33	275/350
			1/8" (3.2mm)	29-32	350/450

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 particular purpose with respect to its products.