Unibraze 309/309L

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

DESCRIPTION: Unibraze 309/309L is of similar composition as ER309 except the carbon is held to a maximum of .03%. The lower carbon content reduces the possibility of intergranular corrosion. Unibraze 309/309L is preferred over ER309 for cladding of carbon or low alloy steels, as well as for dissimilar joints that undergo heat treatment.

CHEMICAL COMPOSITION OF WELD METAL (%)

	C	Cr	Ni	Mo	Mn	Si	P	S	Cu	FN WRC
AWS/ASME	.03 max	23-0 – 25.0	12.0 – 14.0	.75 max	1.0 – 2.5	.30 - .65	.03 max	.03 max	.75 max	
Typical	.013	23.03	13.85	.16	1.58	.49	.024	.001	.15	9.5

TYPICAL MECHANICAL PROPERTIES:

Tensile Strength	85,500 psi (590MPa)
Yield Strength	58,000 psi (400 MPa)
Elongation	43%

TYPICAL WELDING PARAMETERS:

	Shielding Gas	Gas Flow	Diameter	Voltage	Amperage
MIG	98/99% Ar +2/1% O_2 97%Ar + 3% CO_2	30 to 50 CFH	.035” (.9mm) .045” (1.14mm) .062” (1.6mm)	26-29 28-32 29-33	160 /210 180/250 200/280
TIG	100% Ar		1/16” (1.6mm) 3/32” (2.4mm) 1/8” (3.2mm)	14-18 15-20 15-20	90/130 120/175 150/220
SUBARC	Suitable Flux		3/32” (2.4mm) 1/8” (3.2mm)	28-33 29-32	275/350 350/450

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.