



Unibraze 316L

CLASSIFICATIONS: AWS A5.9/ASME SFA 5.9 Class ER316L UNS S31683

DESCRIPTION: Unibraze 316L stainless steel wire used for joining low carbon molybdenum bearing austenitic alloys. The low carbon content (.03 max) reduces the possibility of formation of intergranular carbide precipitation. The presence of molybdenum increases creep resistance at elevated temperatures and pitting resistance in the presence of chlorides.

TYPICAL CHEMISTRY:

C	Cr	Ni	Mo	Mn	Si	P	S	Cu	FN (WRC)
.03 max	18.0-20.0	11.0-14.0	2.0-3.0	1.0-2.5	.30-.65	.03 max	.03 max	.75 max	6

TYPICAL MECHANICAL PROPERTIES:

Tensile Strength	86,000 psi (590 MPa)
Yield Strength	58,000 psi (400 MPa)
Elongation	36%

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.