



Unibraze 321

CLASSIFICATIONS: AWS A5.9/ASME SFA 5.9 Class ER321 UNS S32180

DESCRIPTION: Unibraze 321 is a 19.5% Chromium 9.5% Nickel with added Titanium that is used to weld Cr-Ni stainless steels of similar chemical composition. The titanium content reduces intergranular chromium carbide precipitation thereby increasing resistance to intergranular corrosion. UNIBRAZE 321 is not suitable for use with submerged arc process because only a small portion of the titanium will be recovered in the weld metal.

TYPICAL CHEMISTRY:

C	Cr	Ni	Mo	Mn	Si	P	S	Cu	Ti
.08	18.5-20.5	9.0-10.5	.75	1.0-2.5	.30-.65	.03	.03	.75 max	9xC/1.0 max

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

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.