



Unibraze 410

CLASSIFICATIONS: AWS A5.9/ASME SFA 5.9 Class ER410 UNS S41080

DESCRIPTION: Unibraze 410 is used to weld stainless grades 403, 405, 410, 416 and for welding overlay on carbon steels to resist corrosion, erosion, or abrasion. Since Unibraze 410 is an air hardening type of material the joint should be preheated to 350°F.

TYPICAL CHEMISTRY:

C	Cr	Ni	Mo	Mn	Si	P	S	N	Cu	FN (WRC)
.12 max	11.5-13.5	.60 max	.75 max	.60 max	.50 max	.03 max	.03 max		.75 max	0

TYPICAL MECHANICAL PROPERTIES:

(As welded post weld heat treatment 1350°-1400° for one hour)

Tensile Strength	89,000 psi (620MPa)
Yield Strength	78,500 psi (540 MPa)
Elongation	24%

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.