Unibraze 2594

CLASSIFICATIONS: AWS A5.9 ER2594 UNS S32750 BS EN ISO 14343-A 25 9 4 NL

DESCRIPTION: Unibraze 2594 is a super duplex stainless steel used to weld supermartensitic stainless steels. The welding wire is over alloyed 2-3% in Nickel to provide optimum ferrite/austenite ratio in the finished weld. This results in high tensile/yield strength and superior resistance to SCC and pitting corrosion. Unibraze 2594 chemistry and mechanical properties match characteristics to wrought super duplex alloys like 2507 & Zeron 100 as well as super duplex casting alloys (ASTM A890).

TYPICAL CHEMISTRY:

C	Mn	Si	Cr	Mo	Ni	N	S	P	Cu	PREN
.03 max	2.5 max	1.0 max	24.0-27.0	2.5-4.5	8.0-10.5	.20-.30	.02 max	.03 max	1.5 max	41/43

TYPICAL MECHANICAL PROPERTIES:

Tensile Strength	**123,000 psi**
Yield Strength	**94,000 psi**
Elongation	**28%**

TYPICAL WELDING PARAMETERS:

	Shielding Gas	Gas Flow	Diameter	Voltage	Amperage
MIG	Argon + 2-5% CO2	30 to 50 CFH	.035" (.9mm) .045" (1.14mm) .062" (1.6mm)	26 to 29 28 to 32 29 to 33	160/210 180/250 200/280
TIG	Argon with up to 2% Nitrogen				
SUBARC	Suitable Flux		3/32" (2.4mm) 1/8" (3.2mm)	28 to 33 29 to 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.