



Unibraze 2594-16

CLASSIFICATIONS: AWS A5.4/ASME SFA 5.4 Class E2594-16 UNS W39594 ISO 3581: E25 94 N L

DESCRIPTION: Unibraze 2594-16 is a 25Cr, 9Ni, 4Mo, .25N, all position, superduplex stainless steel electrode created to weld 2507, and Zeron® 100 as well as ASTM A890 castings. It can also weld carbon and low alloy steels to duplex stainless steels. Applications include energy generation, flue gas desulfurization, piping systems, pumps, valves, and heat exchangers.

Note: Zeron® is a registered trademark owned by Rolled Alloys

Typical Chemistry:

	C	Cr	Ni	Mo	Mn	Si	P	S	N	Cu	FN (WRC)	PRE _N
AWS/ASME	.04 max	24.0-27.0	8.0-10.5	3.5-4.5	.50-2.0	1.0	.04	.03	.20-.30	.75	Not required	40 min
Typical	.024	25.15	9.06	3.74	.62	.86	.021	.002	.26	.06	46	43.3

Typical Mechanical Properties:

	AWS/ASME	Typical
Tensile Strength	110,000 psi (760 MPa) min.	130,000 psi (900 MPa)
Yield Strength	Not required	101,000 psi (695 MPa)
Elongation	15% min.	25%

Typical Welding Parameters: (DCEP or AC)

Dia.	Amps Flat	Amps Out of Position	Voltage
3/32"	70-90	65-75	24-28
1/8"	85-110	80-90	26-30
5/32"	110-140	100-120	28-32
3/16"	120-160	110-130	28-32

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.