



Supplier of Welding Alloys

Stainless Steel TIG, MIG and SUB-ARC Wire

Oxford Alloy® 2594

SPECIFICATIONS

AWS 5.9
ASME SFA 5.9

CLASSIFICATIONS

AWS ER2594
UNS S32750

DESCRIPTION / APPLICATION

Oxford Alloy ER2594 is a superduplex welding wire. The Pitting Resistance Equivalent Number (PREN) is at least 40, thereby allowing the weld metal to be called a superduplex stainless steel. This welding wire provides matching chemistry and mechanical property characteristics to wrought superduplex alloys such as 2507 and Zeron 100 as well as superduplex casting alloys (ASTM A890). This welding wire is overlaid 2 – 3 percent in Nickel to provide optimum ferrite/austenite ratio in the finished weld. This structure results in high tensile and yield strength along with superior resistance to SCC and pitting corrosion.

Set the parameters to obtain a heat input of 10,000 – 30,000 Joules/ inch. Pre-heat is not required. The interpass temperature should be maintained at 300°F max. If post weld annealing is required this weld metal will require a higher annealing temperature than that required by the duplex base metal.

AWS Chemical Composition						
C	Cr	Ni	Mo	Mn	Si	P
0.03 max	24.0- 27.0	8.0- 10.5	2.5- 4.5	2.5 max	1.0 max	0.03 max
S	N	Cu	W			
0.02 max	0.20- 0.30	1.5 max	1.0 max			

TYPICAL MECHANICAL PROPERTIES

Tensile strength: 123,250 psi 850 MPa

Yield strength: 94,250 psi 650 MPa

Elongation: 28%

Please contact our sales department for more information at 800-562-3355 or 225-273-4800.

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