



# Techalloy 2594

## Description

Techalloy 2594 provides matching chemistry and mechanical property characteristics to wrought super duplex alloys such as 2507 and Zeron 100, as well as to super duplex casting alloys (ASTM A890). The welding wire is over alloyed 2-3% in Nickel to provide the optimum ferrite/austenite ratio in the finished weld. This structure results in high tensile/yield strength and superior resistance to SCC and pitting corrosion.

## Specifications & Approvals

AWS A5.9 ER2594

UNS S32750

ISO 14343:2009 25 9 4 N L

ABS

## Typical Chemical Composition

C	Mn	Si	Cr	Mo	Ni	N	S	P	Cu	FN (WRC)	PREN
.01	.60	.40	25.1	3.9	9.2	.27	.010	.020	0.1	40 min	41/43

## Typical Mechanical Properties

Tensile Strength	123.0 PSI	850 MPA
Yield Strength	94.0 PSI	650 MPA
Elongation	28%	

## Welding Parameters

	Shielding	Gas Flow	Diameter	Voltage	Amperage
Mig Welding	Argon + 2-5% CO <sub>2</sub>	30 to 50 CFH	.035" (0.9mm) .045" (1.14mm) .062" (1.6mm))	26 to 29 28 TO 32 29 TO 33	160/210 180/250 200/280
Tig Welding	Argon with up to 2% Nitrogen				
Sub Arc Welding	Suitable flux may be used		3/32" (2.5mm) 1/8" (3.14mm) 5/32" (4.0mm)	28 to 33 29 TO 32 30 TO 33	275/350 350/450 400/550

## Standard Packages:

Mig Wire– 33# wire basket	Tig Wire– 10# tube/30# Master Carton	SAW– 60# Coil
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