



# Tech-Rod 2594

## Description

Tech-Rod 2594 is a super-duplex grade electrode that 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 (ATSM A890). The electrode is over-alloyed 2-3% in nickel to provide the optimum ferrite/austenite ratio in the finished weld. This structure results in high tensile and yield strengths and superior resistance to SCC and pitting corrosion.

## Specifications & Approvals

AWS A5.4 E2594-16

UNS W39594

CWB

ASME QSC-395

## Typical Chemical Composition

C	Mn	Si	Fe	Cr	Mo	Ni	Nb	N	S	P	Cu	FN (WRC)
.02	1.00	1.00	BAL	25.50	3.90	9.25		.25	.01	.025	.50	40 min

## Typical Mechanical Properties

Tensile Strength	130,000 PSI	900 MPA
Yield Strength	101,000 PSI	695 MPA
Elongation	31%	

## Welding Parameters

Process	Diameter x Length	Voltage	Amperage	
			Flat	Vertical & Overhead
SMAW	3/32" (2.4mm) x 12" (305mm)	24-28	70-85	65-75
	1/8" (3.2mm) x 14" (355mm)	26-30	85-110	80-90
	5/32" (4.0mm) x 14" (355mm)	28-32	110-140	100-120
	3/16" (4.8mm) x 14" (355mm)	28-32	120-160	110-130

## Standard Packages:

3/32" Diameter	8 Lb (3.6Kg) Can	24 Lb (10.9Kg) Master Carton	26 Electrodes per Lb
1/8" Diameter	10 Lb (4.5Kg) Can	30 Lb (13.6Kg) Master Carton	14 Electrodes per Lb
5/32" Diameter	10 Lb (4.5Kg) Can	30 Lb (13.6Kg) Master Carton	9 Electrodes per Lb
3/16" Diameter	10 Lb (4.5Kg) Can	30 Lb (13.6Kg) Master Carton	6 Electrodes per Lb