

Tech-Rod[®] 2594

AWS E2594-16

CONFORMANCES

AWS A5.4 E2594-16

ASME SFA-A5.4 E2594-16



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 stress corrosion cracking (SCC) and pitting corrosion.

Applications: Process pipework, Pumps and valves, Pressure vessels

DIAMETERS / PACKAGING

Diameter in (mm)	Length in (mm)	8 lb (3.6 kg) Tube 24 lb (10.9 kg) Master Carton	10 lb (4.5 kg) Tube 30 lb (13.6 kg) Master Carton
3/32 (2.4)	12 (305)	EL259416093632	
1/8 (3.2)	14 (355)		EL259416125634
5/32 (4.0)	14 (355)		EL259416156634
3/16 (4.8)	14 (355)		EL259416187634

DEPOSIT COMPOSITION

	%C	%Cr	%Ni	%Mo	%Mn	%Si
Requirements AWS E2594-16	0.04 max.	24.0 - 27.0	8.0 - 10.5	3.5 - 4.5	0.5 - 2.0	1.00 max.
Typical Results Tech-Rod® 2594	0.02	25.4	9.2	4.2	0.8	0.58
	%P	%S	%N	%Cu	FN	
Requirements AWS E2594-16	0.04 max.	0.03 max.	0.20 - 0.30	0.75 max.	Not Required	
Typical Results Tech-Rod® 2594	0.01	0.01	0.22	0.07	30 - 60	

TYPICAL OPERATING PROCEDURES

Diameter in (mm)	Length in (mm)	Amperage	
		Flat	Vertical & Overhead
3/32 (2.4)	12 (305)	70-85	65-75
1/8 (3.2)	14 (355)	85-110	80-90
5/32 (4.0)	14 (355)	110-140	100-120
3/16 (4.8)	14 (355)	120-160	110-130

Material Safety Data Sheets (MSDS) are available on our website at www.techalloy.com

TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

CUSTOMER ASSISTANCE POLICY

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