

# Tech-Rod<sup>®</sup> 312

AWS E312-16

## CONFORMANCES

AWS A5.4 E312-16

ASME SFA-A5.4 E312-16



**Tech-Rod<sup>®</sup> 312** is used to weld cast and wrought alloys of similar compositions. The electrode can also be used for joining hard to weld materials and dissimilar metals. Applications should be limited to 800°F (420°C). The weld deposits exhibit high tensile strength and offer some resistance to abrasion.

Applications: Tool steels, Hard to weld steels, Cast and wrought alloys, Dissimilar metals

## DIAMETERS / PACKAGING

Diameter in (mm)	Length in (mm)	10 lb (4.5 kg) Tube 30 lb (13.6 kg) Master Carton
1/8 (3.2)	14 (355)	EL31216125634
5/32 (4.0)	14 (355)	EL31216156634

**DEPOSIT COMPOSITION**

	%C	%Cr	%Ni	%Mo	%Mn
<b>Requirements</b> AWS E312-16	0.15 max.	28.0 - 32.0	8.0 - 10.5	0.75 max.	0.5 - 2.5
<b>Typical Results</b> Tech-Rod® 312	0.12	29.4	9.4	0.15	1.4
	%Si	%P	%S	%Cu	FN
<b>Requirements</b> AWS E312-16	1.00 max.	0.04 max.	0.03 max.	0.75 max.	Not Required
<b>Typical Results</b> Tech-Rod® 312	0.57	0.02	0.01	0.06	30 - 60

\* Nitrogen in these weld deposits is usually between 0.04% and 0.08%

**TYPICAL OPERATING PROCEDURES**

Diameter in (mm)	Length in (mm)	Amperage	
		Flat	Vertical & Overhead
1/8 (3.2)	14 (355)	85-110	80-90
5/32 (4.0)	14 (355)	110-140	100-120

Material Safety Data Sheets (MSDS) are available on our website at [www.techalloy.com](http://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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