

# Tech-Rod<sup>®</sup> 2209

AWS E2209-16

## CONFORMANCES

AWS A5.4: 2010 E2209-16

ASME SFA-A5.4 E2209-16



**Tech-Rod<sup>®</sup> 2209** is used to weld duplex stainless steels such as (Type 2205). The welds offer excellent resistance to stress corrosion, cracking and pitting. The microstructure of the weld metal consists of austenite and ferrite. The ferrite content of the weld metal will be lower than the ferrite content of type 2205 base metal. Welding of duplex stainless steels calls for controlled welding parameters to achieve specified mechanical and corrosion resistant properties.

Applications: Offshore, Oil and Gas, Chemical, Petrochemical

## 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)	EL220916093632	
1/8 (3.2)	14 (355)		EL220916125634
5/32 (4.0)	14 (355)		EL220916156634
3/16 (4.8)	14 (355)		EL220916187634

**DEPOSIT COMPOSITION**

	%C	%Cr	%Ni	%Mo	%Mn	%Si
<b>Requirements</b> AWS E2209-16	0.04 max.	21.5 - 23.5	8.5 - 10.5	2.5 - 3.5	0.5 - 2.0	1.0 max.
<b>Typical Results</b> Tech-Rod® 2209	0.02	22.3	9.5	3.2	1.1	0.5
	%P	%S	%N	%Cu	FN	
<b>Requirements</b> AWS E2209-16	0.04 max.	0.03 max.	0.08 - 0.20	0.75 max.	Not Required	
<b>Typical Results</b> Tech-Rod® 2209	0.02	0.01	0.16	0.06	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](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**

The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

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