

# TECH-ROD® 276

Nickel ▪ AWS ENiCrMo-4

## KEY FEATURES

- Due to high molybdenum content, this alloy offers excellent resistance to stress corrosion cracking and pitting and crevice corrosion
- Q2 Lot® - certificates showing actual deposit composition available online
- This low carbon, nickel-chromium-molybdenum tungsten alloy can also be used for dissimilar welding between nickel base alloys and stainless steels, as well as for surfacing and cladding

## CONFORMANCES

**AWS A5.11/A5.11M: 2010** ENiCrMo-4  
**ASME SFA-A5.11** ENiCrMo-4  
**UNS** W80276

## TYPICAL APPLICATIONS

- Used for welding materials of similar composition

## DIAMETERS / PACKAGING

Diameter in (mm)	Length in (mm)	8 lb (3.6 kg) Can 24 lb (10.9 kg) Master Carton	10 lb (4.5 kg) Can 30 lb (13.6 kg) Master Can
3/32 (2.4)	12 (305)	EL276093632	EL276125634 EL276156634 EL276187634
1/8 (3.2)	14 (355)		
5/32 (4.0)	14 (355)		
3/16 (4.8)	14 (355)		

## MECHANICAL PROPERTIES - As Required per AWS A5.11/A5.11M:2010

	Tensile Strength Mpa (ksi)	Elongation %
<b>Requirements</b> AWS A5.11/A5.11M:2010	690 (100 min)	25 min
<b>Typical Performance</b> Tech-Rod® 276	750 (108)	46

## DEPOSIT COMPOSITION<sup>(1)</sup> - As Required per AWS A5.11/A5.11M: 2010

	%C	%Mn	%Fe	%P	%S	%Si	%Cu
<b>Requirements</b> AWS ENiCrMo-4	0.02 max	1.0 max	4.0 - 7.0	0.04 max	0.03 max	0.2 max	0.50 max
<b>Typical Performance<sup>(2)</sup></b> Tech-Rod® 276	0.02	0.7	5.7	0.02	0.001	0.1	0.01
	%Ni	%Co	%Cr	%Mo	%V	%W	%Other
<b>Requirements</b> AWS ENiCrMo-4	Remainder	2.5 max	14.5 - 16.5	15.0 - 17.0	0.35 max	3.0 - 4.5	0.50 max
<b>Typical Performance<sup>(2)</sup></b> Tech-Rod® 276	58.6	0.10	15.6	15.5	0.04	3.9	<0.50

## TYPICAL OPERATING PROCEDURES

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

<sup>(1)</sup>Typical all wire chemistry. <sup>(2)</sup>See test results disclaimer on pg. 13.  
 Safety Data Sheets (SDS) are available on our website at [www.lincolnelectric.com](http://www.lincolnelectric.com)

*Material Safety Data Sheets (MSDS) and Certificates of Conformance are available on our website at [www.lincolnelectric.com](http://www.lincolnelectric.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.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to [www.lincolnelectric.com](http://www.lincolnelectric.com) for any updated information.

---

**THE LINCOLN ELECTRIC COMPANY**  
22801 St. Clair Avenue ■ Cleveland, OH ■ 44117-1199 ■ U.S.A.  
Phone: +1.216.481.8100 ■ [www.lincolnelectric.com](http://www.lincolnelectric.com)

