

# EXCALIBUR® 347-16

Stainless ▪ AWS E347-16

## KEY FEATURES

- Niobium stabilized stainless steel electrodes
- The addition of niobium reduces intergranular corrosion in severe operating conditions
- Q2 Lot® - Certificate showing actual deposit composition and ferrite number (FN) by ferrite scope available online
- High tensile and yield strength results, as well as superior resistance to Stress Cracking (SCC) and pitting corrosion

## WELDING POSITIONS

All, except vertical down

## CONFORMANCES

<b>AWS A5.4/A5.4M: 2012</b>	E347-16
<b>ASME SFA-A5.4:</b>	E347-16

## TYPICAL APPLICATIONS

- Process Piping
- Power Generation Equipment
- Welding 321 and 347 Stainless Steels
- Food Processing
- Pharmaceutical Equipment

## DIAMETERS / PACKAGING

Diameter in (mm)	Length in (mm)	8 lb (3.6 kg) Easy Open Can 24 lb (10.9 kg) Master Carton	10 lb (4.5 kg) Easy Open Can 30 lb (13.6 kg) Master Carton
3/32 (2.4)	12 (305)	ED035006	ED035007 ED035008 ED035009
1/8 (3.2)	14 (355)		
5/32 (4.0)	14 (355)		
3/16 (4.8)	14 (355)		

## DEPOSIT COMPOSITION<sup>(1)</sup>

	%C	%Cr	%Ni	%Mo	%Nb+Ta	%Mn
<b>Requirements</b> AWS E347-16	0.08 max	18.0 - 21.0	9.0 - 11.0	0.75 max	8 x C to 1.00 max	0.5 - 2.5
<b>Typical Results<sup>(2)</sup></b>	0.03	19.5	10.1	0.19	0.36	1.5
	%Si	%P	%S	%Cu	FN	
<b>Requirements</b> AWS E347-16	1.00 max	0.04 max	0.03 max	0.75 max	Not Required	
<b>Typical Results<sup>(2)</sup></b>	0.54	0.02	0.01	0.16	2-8	

## TYPICAL OPERATING PROCEDURES

Polarity <sup>(3)</sup>	Current (Amps)			
	3/32 in (2.4 mm)	1/8 in (3.2 mm)	5/32 in (4.0 mm)	3/16 in (4.8 mm)
DC+	40-80	75-110	95-150	130-200
AC	40-80	75-110	95-150	130-200

<sup>(1)</sup>Typical all weld metal. <sup>(2)</sup>Measured with 0.2% offset. <sup>(3)</sup>See test results disclaimer <sup>(4)</sup>AWS Requirement for E316-16 is 0.08% max. carbon. <sup>(5)</sup>Preferred polarity is listed first.

IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m<sup>3</sup> maximum exposure guideline for general welding fume.

BEFORE USE, READ AND UNDERSTAND THE MATERIAL SAFETY DATA SHEET (MSDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.

*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.