

EXCALIBUR® 8018-C3 MR®

Low Alloy, Low Hydrogen ■ AWS E8018-C3 H4R



Key Features

- Designed to produce a 1% nickel deposit
- Premium arc performance
- Easy strike and re-strike
- Effortless slag removal
- Meets NACE MR0175 for sour gas applications
- Test data available for SSC (NACE TM0177) & HIC (NACE TM0284)

Typical Applications

- Shipbuilding
- Piping and gas storage tanks
- Weathering steels
- Cross country pipe repair

Conformances

AWS A5:	E8018-C3 H4R
ABS:	E8018-C3 H4R
CWB/CSA:	E5518-C3-H4
ISO:	E5518-N2 A U H5

Welding Positions

All, except vertical down

DIAMETERS / PACKAGING

Diameter in (mm)	Length in (mm)	10 lb (4.5 kg) Easy Open Can 30 lb (13.6 kg) Master Carton	50 lb (22.7 kg) Easy Open Can
3/32 (2.4)	14 (350)	ED032599	ED030892, ED034039*
1/8 (3.2)	14 (350)	ED032600	ED030893, ED034040*
5/32 (4.0)	14 (350)		ED030894, ED034041*
3/16 (4.8)	14 (350)		ED030895, ED034042*
7/32 (5.6)	18 (450)		ED030897, ED034315*
1/4 (6.4)	18 (450)		ED030896

*Buy America Product

MECHANICAL PROPERTIES⁽¹⁾ – As Required per AWS A5.5

	Yield Strength ⁽²⁾ MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft·lbf) @ -40°C (-40°F)
Requirements - AWS E8018-C3 H4R	470-550 (68-80)	550 (80) min	24 min	27 (20) min
Typical Results⁽³⁾ - As-Welded	505-590 (73-86)	550-675 (80-98)	24-32	81-163 (60-120)

DEPOSIT COMPOSITION⁽¹⁾ – As Required per AWS A5.5

	%C	%Mn	%Si	%P	%S
Requirements - AWS E8018-C3 H4R	0.12 max.	0.40-1.25	0.80 max.	0.03 max	0.03 max
Typical Results⁽³⁾	0.04-0.07	0.40-1.25	0.23-0.46	≤ 0.01	≤ 0.009
	%Ni	%Cr	%Mo	%V	Diffusible Hydrogen (mL/100g weld deposit)
Requirements - AWS E8018-C3 H4R	0.80-1.10	0.15 max	0.35 max	0.05 max	4.0 max
Typical Results⁽³⁾	0.81-1.09	0.04-0.06	0.07-0.27	≤ 0.01	1-2

TYPICAL OPERATING PROCEDURES

Polarity ⁽⁴⁾	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)	7/32 in (5.6 mm)	1/4 in (6.4 mm)
DC±	70-110	90-160	130-210	180-300	250-330	300-400
AC	80-120	100-160	140-210	200-300	270-370	325-425

⁽¹⁾Typical all weld metal. ⁽²⁾Measured with 0.2% offset. ⁽³⁾See test results disclaimer. ⁽⁴⁾Preferred polarity is listed first.

Safety Data Sheets (SDS) and Certificates of Conformance are available on our website at www.lincolnelectric.com

FUMES AND GASES can be hazardous to your health.

- Fumes from the normal use of this product contain significant quantities of potentially hazardous compounds. See consumable product label/insert.
- Keep your head out of the fumes.
- Use enough ventilation and local exhaust to keep fumes and gases from your breathing zone and the general area.
- An approved respirator should be used unless exposure assessments are below applicable exposure limits.

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 business of Lincoln Electric is manufacturing and selling high quality welding equipment, automated welding systems, consumables, and cutting equipment. Our challenge is to meet the needs of our customers, who are experts in their fields, and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or technical information about their use of our products. Our employees respond to inquiries to the best of their ability based on information and specifications 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, or to provide engineering advice in relation to a specific situation. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or communications. Moreover, the provision of such information or technical information does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or technical information, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose or any other equivalent or similar warranty is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the definition of specifications, and 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.