

# Lincoln® 7018 AC

AWS E7018 H8 • Mild Steel, Low Hydrogen

## Conformances

AWS A5.1/A5.1M: 2004	E7018 H8
ASME SFA-A5.1:	E7018 H8
CWB/CSA W48-06:	E4918-H8

## Welding Positions

All, except vertical down

## Key Features

- ▶ AC polarity welding
- ▶ Low open circuit voltage operation
- ▶ Minimal spatter
- ▶ Capable of cold re-strikes

## Typical Applications

- ▶ General fabrication
- ▶ Thin sections
- ▶ Tack and skip welds

## DIAMETERS / PACKAGING

Diameter in (mm)	Length in (mm)	1 lb (0.5 kg) Plastic Tube 6 lb (2.7 kg) Master Carton	5 lb (2.3 kg) Plastic Tube 20 lb (9.1 kg) Master Carton	50 lb (22.7 kg) Easy Open Can
3/32 (2.4)	14 (350)	ED031714	ED032454	ED031732
1/8 (3.2)	14 (350)	ED031715	ED032455	ED031734
5/32 (4.0)	14 (350)			ED031738

## MECHANICAL PROPERTIES<sup>(1)</sup> – As Required per AWS A5.1/A5.1M: 2004

	Yield Strength <sup>(2)</sup> MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft•lbf) @ -29°C (-20°F)
Requirements - AWS E7018 H8	400 (58) min.	490 (70) min.	2 min.	27 (20) min.
Typical Results <sup>(3)</sup> - As-Welded	435-625 (63-91)	515-685 (75-99)	23-29	27-76 (20-56)

## DEPOSIT COMPOSITION<sup>(1)</sup> – As Required per AWS A5.1/A5.1M: 2004

	%C	%Mn	%Si	%P	%S	%Ni
Requirements - AWS E7018 H8	0.15 max.	1.60 max.	0.75 max.	0.035 max.	0.035 max.	0.30 max.
Typical Results <sup>(3)</sup>	0.04-0.06	1.00-1.60	0.32-0.63	0.01-0.02	≤ 0.01	0.01-0.03
	%Cr	%Mo	%V	%Mn + Ni + Cr + Mo + V	Diffusible Hydrogen (mL/100g weld metal)	
Requirements - AWS E7018 H8	0.20 max.	0.30 max.	0.08 max.	1.75 max.	8.0 max.	
Typical Results <sup>(3)</sup>	0.03-0.08	≤ 0.01	0.02-0.05	1.13	2-4	

## TYPICAL OPERATING PROCEDURES

Polarity	Current (Amps)		
	3/32 in (2.4 mm)	1/8 in (3.2 mm)	5/32 in (4.0 mm)
AC	75-120	105-150	130-200
DC+	70-115	100-140	120-185

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

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.