

IRONARC™ 7018-1 MR®

Mild Steel, Low Hydrogen ■ AWS E7018-1 H4R

KEY FEATURES

- Soft arc for ease of puddle manipulation
- Smooth arc transfer
- Excellent wetting in the toes allowing for less hold times
- Flat bead profile ideal for cap passes on pipe, groove welds and pipe repair
- No intentional addition of zinc for moisture resistance
- Q2 Lot® - Certificate showing actual deposit chemistry and mechanical properties available online

TYPICAL APPLICATIONS

- Pipeline, pipe repair and integrity work
- Boiler, pressure vessel fabrication and repair
- Pipefitting
- Structural fabrication
- General fabrication

DIAMETERS / PACKAGING

Diameter in (mm)	Length in (mm)	50 lb (22.7kg) Easy Open Can
3/32 (2.4)	14 (350)	ED040100
1/8 (3.2)	14 (350)	ED040101
5/32 (4.0)	14 (350)	ED040102

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

	Yield Strength ⁽²⁾ MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft•lbs) @ -46°C (-50°F)
Requirements – AWS E7018-1 H4R	400 (58) min	480 (70) min	22 min	27 (20) min
Typical Results ⁽³⁾ – As-Welded	440-480 (64-69)	540-580 (79-84)	29-32	84-141 (62-104)

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

	%C	%Mn	%Si	%P	%S	%Ni
Requirements – AWS E7018-1 H4R	0.15 max	1.60 max	0.75 max	0.035 max	0.035 max	0.30 max
Typical Results ⁽³⁾	0.05-0.07	1.25-1.37	0.41-0.62	0.010-0.013	0.011-0.017	0.00-0.03
	%Cr	%Mo	%V	%Mn + Ni + Cr + Mo + V	Diffusible Hydrogen (mL/100g weld metal)	
Requirements – AWS E7018-1 H4R	0.20 max	0.30 max	0.08 max	1.75 max	4	
Typical Results ⁽³⁾	0.02-0.05	0.00-0.08	0.01	1.30-1.50	1-3	

TYPICAL OPERATING PROCEDURES

Polarity ⁽⁴⁾	Current (Amps)		
	3/32 in (2.4mm)	1/8 in (3.2mm)	5/32 in (4.0mm)
DC+	70-110	90-160	120-220
AC	80-120	100-160	130-220

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

CONFORMANCES

AWS A5.1:	E7018-1 H4R
CWB CSA W48:	E4918-1-H4R

WELDING POSITIONS

All, except vertical down

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 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 for any updated information.