

PIPELINER® 16P

Mild Steel, Low Hydrogen · AWS E7016-1 H4

KEY FEATURES

- Q2 Lot® - Lot Controlled Chemistry and Mechanical Properties
- Designed for root pass welding of up to X100 grade pipe
- DC- (DCEN) is the recommended polarity for root pass welding on pipe

TYPICAL APPLICATIONS

- Root pass welding of up to X100 grade pipe
- Hot, fill and cap pass welding up to X60
- Low hydrogen, vertical up capability on X60 grade pipe

CONFORMANCES

AWS A5.1:	E7016-1 H4, also meets E7016-H4
ABS:	E7016-H4
CWB/CSA:	E4916-H4

WELDING POSITIONS

All

DIAMETERS / PACKAGING

Diameter in (mm)	Length in (mm)	~4.5 lb (2.1 kg) VPMD 28 lb (12.6 kg) Master Carton
3/32 (2.5)	14 (350)	ED0372209
1/8 (3.2)	14 (350)	ED0372210
5/32 (4.0)	14 (350)	ED0372212

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

	Yield Strength ⁽²⁾ MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft-lbf)	
				@ -46°C [-50°F]	@ -40°C [-40°F]
Requirements - AWS E7016-1 H4	400 (58) min	490 (70) min	22 min	27 (20) min	Not Specified
Typical Results⁽³⁾ - As-Welded	420-470 (61-68)	530-570 (76-83)	30-32	75-125 (55-92)	99-141 (73-104)

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

	%C	%Mn	%Si	%P	%S	%Ni
Requirements - AWS E7016-1 H4	0.15 max	1.60 max.	0.75 max	0.035 max	0.035 max	0.30 max
Typical Results⁽³⁾ - As-Welded	0.04-0.08	1.10-1.60	0.39-0.67	0.005-0.020	0.004-0.012	< 0.07
	%Cr	%Mo	%V	%Mn + Ni + Cr + Mo + V	Diffusible Hydrogen (mL/100g weld metal)	
Requirements - AWS E7016-1 H4	0.20 max	0.30 max	0.08 max	1.75 max	4 max	
Typical Results⁽³⁾ - As-Welded	0.01-0.07	0.01-0.03	0.01-0.02	1.14-1.71	1-4	

TYPICAL OPERATING PROCEDURES

Polarity ⁽⁴⁾	Current (Amps)		
	2.5 mm (3/32 in)	3.2 mm (1/8 in)	4.0 mm (5/32 in)
DC+	55-105	75-135	120-170
AC	60-115	80-150	120-185

⁽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 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.

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