

Pipelin[®] 18P

Low Alloy, Low Hydrogen, Pipe • AWS E8018-G H4

Key Features

- ▶ Low hydrogen, vertical up capability on X70 grade pipe
- ▶ Charpy V-Notch impact toughness tested to -46°C (-50°F)
- ▶ Q2 Lot[®] - Certificate showing actual deposit chemistry available online

Conformances

AWS A5.5/A5.5M: 2006	E8018-G H4
ASME SFA-A5.5:	E8018-G H4
ABS:	E8018-G

Welding Positions

All, except vertical down

Typical Applications

- ▶ Fill and cap pass welding of up to X70 grade pipe

DIAMETERS / PACKAGING

Diameter mm (in)	Length in (mm)	10 lb (4.5 kg) Easy Open Can	30 lb (13.6 kg) Master Carton
3.2 (1/8)	14 (350)		ED032620
4.0 (5/32)	14 (350)		ED032621

MECHANICAL PROPERTIES⁽¹⁾

	Yield Strength ⁽²⁾ MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft•lbf)	
				@ -29°C (-20°F)	@ -46°C (-50°F)
Requirements - AWS E8018-G H4	460 (67) min.	550 (80) min.	19 min.	Not Specified	Not Specified
Typical Results ⁽³⁾ - As-Welded	515-655 (75-95)	620-710 (90-103)	24-32	96-167 (71-123)	50-121 (37-89)

DEPOSIT COMPOSITION⁽¹⁾ – As Required per AWS A5.5/A5.5M: 2006

	%C	%Mn	%Si	%P	%S	%Ni ⁽⁴⁾
Requirements - AWS E8018-G H4	Not Specified	1.00 min.	0.80 min.	0.03 max.	0.03 max.	0.50 min.
Typical Results ⁽³⁾	0.04-0.06	1.28-1.42	0.44-0.58	0.01-0.02	≤ 0.01	0.76-0.85
	%Cr ⁽⁴⁾	%Mo ⁽⁴⁾	%V ⁽⁴⁾	%Cu ⁽⁴⁾	Diffusible Hydrogen (mL/100g weld deposit)	
Requirements - AWS E8018-G H4	0.30 min.	0.20 min.	0.10 min.	0.20 min.	4.0 max.	
Typical Results ⁽³⁾	0.04-0.06	0.17-0.39	< 0.01	< 0.02	1-4	

TYPICAL OPERATING PROCEDURES

Polarity ⁽⁵⁾	Current (Amps)	
	3.2 mm (1/8 in)	4.0 mm (5/32 in)
DC+	80-145	120-185
AC	90-155	130-195

⁽¹⁾Typical all weld metal. ⁽²⁾Measured with 0.2% offset. ⁽³⁾See test results disclaimer below. ⁽⁴⁾In order to meet the alloy requirements of the "G" Designation, the undiluted weld metal shall have the minimum of at least one of the elements listed. ⁽⁵⁾Preferred polarity is listed first.

Material Safety Data Sheets (MSDS) and Certificates of Conformance are available on our website at 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.

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