

# PIPELINER® 16P

Mild Steel, Low Hydrogen ▪ AWS E7016-1 H4

## KEY FEATURES

- Hot, fill and cap pass welding up to X60
- Low hydrogen, vertical up capability on X60 grade pipe
- Q2 Lot® - Certificates showing actual deposit chemistry and mechanical properties available online
- DC- (DCEN) is the recommended polarity for root pass welding on pipe

## CONFORMANCES

**AWS A5.1:** E7016-1 H4

**ASME SFA-A5.1:** E7016-1 H4

## TYPICAL APPLICATIONS

- Root pass welding of up to X100 grade pipe

## WELDING POSITIONS

All

Diameter mm (in)	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
2.5 (3/32)	14 (350)	ED033835	ED030916
3.2 (1/8)	14 (350)	ED033836	ED030917
4.0 (5/32)	18 (450)	ED033837	ED030918

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

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

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

	%C	%Mn	%Si	%P	%S	%Ni
<b>Requirements</b> - AWS E7016-1 H4	0.15 max	1.60 max.	0.75 max	0.035 max	0.035 max	0.30 max
<b>Typical Results</b> <sup>(3)</sup> - 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)	
<b>Requirements</b> - AWS E7016-1 H4	0.20 max	0.30 max	0.08 max	1.75 max	4.0 max	
<b>Typical Results</b> <sup>(3)</sup> - As-Welded	0.01-0.07	0.01-0.03	0.01-0.02	1.14-1.71	1-4	

## TYPICAL OPERATING PROCEDURES

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

<sup>(1)</sup>Typical all weld metal. <sup>(2)</sup>Measured with 0.2% offset. <sup>(3)</sup>See test results disclaimer <sup>(4)</sup>Preferred polarity is listed first. <sup>(5)</sup>DC- for root pass on pipe; DC± for general welding.

*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

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