

PIPELINER® NR®-208-XP

Low Alloy, All Position ▪ AWS E81T8-G, E81T8-A4-K12

KEY FEATURES

- Vertical down hot, fill and cap pass welding of up to X80 grade pipe
- Capable of producing weld deposits with impact toughness exceeding 122 J (90 ft•lbf) @ -40°C (-40°F)
- Q2 Lot® - Certificate showing actual deposit chemistry and mechanical properties available online
- ProTech® hermetically sealed packaging

CONFORMANCES

AWS A5.29/A5.29M:	E81T8-G
ASME SFA-5.29:	E81T8-G
AWS A5.36/A5.36M:	E81T8-A4-K12
ASME SFA-5.36:	E81T8-A4-K12

TYPICAL APPLICATIONS

- Hot, fill and cap pass welding of up to X80 grade pipe
- Cold temperature cross country pipe applications

WELDING POSITIONS

All, except vertical up

DIAMETERS / PACKAGING

Diameter mm (in)	14 lb (6.4 kg) Coil	56 lb (25.4 kg) Hermetically Sealed Pail
1.7 (0.068)	ED036650	
2.0 (5/64)	ED031968	

MECHANICAL PROPERTIES⁽¹⁾

	Yield Strength ⁽²⁾ MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Charpy V-Notch J (ft•lbf)	
				@ -29°C (-20°F)	@ -40°C (-40°F)
Requirements - AWS A5.29: E81T8-G AWS A5.36: E81T8-A4-K12	470 (68) min	550 - 690 (80 - 100)	19 min	Not Specified	Not Specified 27 (20) min
Typical Results⁽³⁾ - As-Welded	485 - 515 (70 - 75)	550 - 585 (80 - 85)	27 - 29	153 - 302 (113 - 223)	81-162 (60-120)

DEPOSIT COMPOSITION⁽¹⁾

	%C	%Mn ⁽⁴⁾	%Si	%P	%S
Requirements - AWS A5.29: E81T8-G AWS A5.36: E81T8-A4-K12	Not Specified 0.15 max	0.50 min 1.50 - 2.75	1.00 max 0.80 max	0.030 max	0.030 max
Typical Results⁽³⁾	≤ 0.02	2.10-2.20	0.12-0.13	0.004-0.007	< 0.003
	%Ni ⁽⁴⁾	%Cr ⁽⁴⁾	%Mo ⁽⁴⁾	%V ⁽⁴⁾	%Al ⁽⁴⁾
Requirements - AWS A5.29: E81T8-G AWS A5.36: E81T8-A4-K12	0.50 min 0.75 - 2.00	0.30 min 0.20 max	0.20 min 0.50 max	0.10 min 0.05 max	1.8 max
Typical Results⁽³⁾	0.74-0.80	0.04-0.05	0.01-0.03	< 0.004	0.9-1.1

TYPICAL OPERATING PROCEDURES

Diameter, Polarity	CTWD ⁽⁵⁾ mm (in)	Wire Feed Speed m/min (in/min)	Voltage (volts)	Approx. Current (amps)	Melt-Off Rate kg/hr (lb/hr)	Deposition Rate kg/hr (lb/hr)	Efficiency (%)
1.7mm (0.068 in) DC-	19 (3/4)	1.7-3.8 (70-150)	16-22	165-250	1.4-3.1 (3.1-6.8)	1.1-2.5 (2.5-5.5)	78-81
2.0 mm (5/64 in) DC-	19 (3/4)	1.7-3.3 (70-130)	17-20	195-295	1.8-3.5 (4.0-7.6)	1.5-2.9 (3.3-6.4)	82-83

⁽¹⁾Typical all weld metal. ⁽²⁾Measured with 0.2% offset. ⁽³⁾See test results disclaimer. ⁽⁴⁾In order to meet the alloy requirements of the "G" group, the undiluted weld metal shall have not less than the minimum of at least one of the elements listed. ⁽⁵⁾For electrical stickout (ESO) subtract 6.4 mm (1/4 in) from contact tip to work distance (CTWD).

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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