

Part A – Pipeliner 5100 PW Iso, Part # 60269

Part B – Pipeliner 5100 PW Resin, Part # 60270

DESCRIPTION:

Pipeliner 5100 PW is a two-component, 1:1 ratio, rapid curing, elastomeric structural lining system developed for high build applications of 30 – 500 mil cross sections. Specifically designed for potable water applications, Pipeliner 5100 has passed the rigorous testing requirements of the NSF/ANSI 61 Section 5 potable water standard and is Truesdail Laboratories listed. This polyurea system is sprayed with high pressure plural component spray equipment and can also be sprayed with a cartridge gun for repairs. Thickness of the lining will vary depending on the application, typically from a minimum of 30 mils up to unlimited thickness.

TYPICAL USES:

- Excellent lining for water tanks, pipelines and water treatment facilities
- Excellent material for robotic spray on interior of pipelines
- Excellent industrial lining for tough application spray conditions such as:
 - Wall protection in industries such as food processing, food storage, veterinary, production area and laboratories
- Spray-on application creates a monolithic, seamless lining that conforms to any shape and size
- Elastomeric properties allow for application to surfaces subject to: vibration, contraction, movement, flexing, abrasion and impact.

FEATURES & BENEFITS:

- Complies with NSF/ANSI 61 Section 5 potable water standard
- High build cross sections
- Can be sprayed in large pipelines: 6" diameter and greater
- Robust application window with ability to spray at low temperatures and high humidity
- High physical properties including tensile, tear, flexural and compressive properties
- Excellent leveling properties
- Excellent impact resistance
- Excellent chemical resistance
- Excellent corrosion resistance
- Bonds to virtually all substrates of any dimension, including metals, woods, concrete and fiberglass
- 100% solids, zero VOCs, no solvents



CHEMICAL PROPERTIES*:	Test	Isocyanate	Resin
Specific Gravity (grams/cc)	ASTM D-792	1.21	1.16
Viscosity, cps		1300 – 1700	120 – 180
Solids by Volume/Weight		100%	100%
Volatile Organic Compounds		0 lbs/gal	0 lbs/gal
Mix Ratio, parts per volume		1	1
Gel Time, seconds		3 – 5	
Tack Free, seconds		5 – 7	
Recoat, max		≤4 hrs	
Full Cure Time @ 75°F 50% RH		24 hrs	
Theoretical Coverage		1600 sqft @ 1 mil	
Odor		mild	amine
Freezing Point		40°F	n/a
Color		amber	blue
Shelf Life - Unopened Containers		12 months	6 months

*Properties were tested at 77°F (25°C).

TYPICAL PHYSICAL PROPERTIES:

	Test	Result
Hardness (Shore D)	ASTM D-2240	65±5
Tensile Strength (psi)**	ASTM D-638	4100 – 4300
Flexural Modulus (psi)	ASTM D-790	235,000 – 295,000

PIPELINER™ 5100 PW

TYPICAL PHYSICAL PROPERTIES (continued):

	Test	Result
Tear Resistance (pli)** Die C	ASTM D-624	550 - 600
Elongation (%)**	ASTM D-638	30 - 35
Impact Resistance (in/lbs)	ASTM D-256	160
Density (lb/ft ³)	ASTM D-1622	69 - 70
Compressive Strength (psi)	ASTM D-695	>800
Taber Abrasion Resistance (mg of loss/1000 cycles) CS17 Wheel; 1000 grams weight	ASTM D-4060	50 - 60
Mandrel Bend, 180°, 3 inch mandrel	ASTM D-522	Pass
Water Absorption (%)	ASTM D-570	≤1
Glass Transition - T _g (°C)	ASTM D-7028	5°F (-15°C)
Cathodic Disbonding	ASTM G-8	Pass

**Properties were checked on lining, 1/8" (125 mil), (3.18 mm) thick stock.

PROCESSING CHARACTERISTICS: Constant light agitation of the resin must be maintained. The system settings required to achieve quality spray application will vary depending on environmental and substrate conditions. The following recommended parameters will help ensure optimum quality.

Equipment Used	Process Pressure	Spray Gun	Mix Module
Graco E-XP2 R2	2300 - 2500 psi (static) 1700 - 1900 psi (dynamic)	Fusion - Air Purge	AR2929

PROCESS TEMPERATURE:

Iso Component	Resin Component	Hoses
140°-160°F (60°-71°C)	140°-150°F (60°-66°C)	140°-160°F (60°-71°C)

DRY FILM THICKNESS: Varies based on application, typically a minimum of 1/16" (30 mil; 1.5mm) up to unlimited thickness

NOT RECOMMENDED FOR: Bonding to high density polyethylene or thermo plastics is minimal

CHEMICAL RESISTANCE: Pipeliner 5100 provides good resistance to many commercial and industrial chemicals such as acids, alkalies, oils and cleaning chemicals. For specific applications and information, please consult a Rhino® representative.

SUBSTRATES: Bonds to virtually all substrates of any dimension, including metals, wood, concrete and fiberglass

HOW SUPPLIED: Pipeliner 5100 PW is supplied in totes and drums. Net weight per drum set is 950 pounds (431 kgs). A set of Pipeliner 5100 consists of one (1) 55 gallon (208 L) drum of 'A' component and one (1) 55 gallon (208 L) drum of 'B' component. Net weight per tote set is 4750 pounds (2154.6 kgs).

STORAGE: Pipeliner 5100 components should be stored in sealed containers at 60 - 90°F (15 - 32°C) in a dry area.

SAFETY PRECAUTIONS: Health Considerations: Consult the Rhino Linings® Safety Data Sheets (SDS)

This chemical system requires the use of proper safety equipment and procedures. Please follow the Rhino Linings® product SDS and Safety Manual for detailed information and handling guidelines.

For Your Protection: The information and recommendations in this publication are, to the best of our knowledge, reliable. Suggestions made concerning the products and their uses, applications, storage and handling are only the opinion of Rhino Linings Corporation. Users should conduct their own tests to determine the suitability of these products for their own particular purposes and of the storage and handling methods herein suggested. The toxicity and risk characteristics of products made by Rhino Linings Corporation will necessarily differ from the toxicity and risk characteristics developed when such products are used with other materials during a manufacturing process. The resulting risk characteristics should be determined and made known to ultimate end-users and processors.

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