

Part A – Rhino Extreme™ 21-50 Iso, Part # 60075

Part B – Rhino Extreme™ 21-50 Resin, Part # 60077

**DESCRIPTION:** Rhino Extreme™ 21-50 is a two-component, rapid curing, elastomeric pure polyurea lining system. Rhino Extreme™ 21-50 is a 2:1 ratio designed to be sprayed with high pressure plural component spray equipment such as the RhinoPro™ HP-21 Max. Thickness of the lining will vary depending on the application, typically from a minimum of 30 mils up to unlimited thickness.

**TYPICAL USES:**

- Excellent industrial lining for tough application spray conditions such as:
  - Outdoor application sites where water, humidity or low temperature conditions exist and are tough to eliminate
  - Floor and wall protection in industries such as food processing, food storage, veterinary, production area and laboratories
  - Secondary containment as a monolithic, impermeable lining for industrial plant, agriculture, and petrochemical applications
- Spray-on application creates a monolithic, seamless lining which conforms to any shape and size.
- Elastomeric properties allow for application to surfaces subject to: vibration, expansion, contraction, movement, flexing, abrasion and impact.
- Can withstand vehicle forklift traffic and heavy loads with proper thickness build
- Reduces noise from vibration and impact

**FEATURES & BENEFITS:**

- Robust application window with ability to spray at low temperatures and high humidity
- High physical properties including tensile, tear, and elongation properties
- Very good abrasion and impact resistance
- Good chemical resistance and corrosion resistance
- Bonds to virtually all substrates of any dimension, including metals, woods, concrete, fiberglass and geotextiles
- Excellent resistance to thermal shock and bridges cracks
- Stable from -50°F to 200°F (-45° to 93°C)
- 100% solids, zero VOCs, no solvents

<b>CHEMICAL PROPERTIES:</b>	<b>Standard Test</b>	<b>Isocyanate (A)</b>	<b>Resin (B)</b>
Specific Gravity (grams/cc)	ASTM D-792	1.14	1.02
Viscosity, CPS at 77°F (25°C)		400 – 500	300 – 400
Solids by Volume/Weight		100%	100%
Volatile Organic Compounds		0 lbs/gal	0 lbs/gal
Mix Ratio, Parts per Volume		1	2
Mix Ratio, Parts per Weight		60	100
Gel Time, Seconds at 77°F (25°C)		7 – 9	
Tack-free, Seconds		15 – 25	
Theoretical Coverage (dft)		1600 sqft/gal at 1 mil thick	
Shelf Life - Unopened Containers		12 months	12 months
Base Color		amber	straw opaque

<b>TYPICAL PHYSICAL PROPERTIES:</b>	<b>Test</b>	<b>Result</b>
Hardness (Shore D)	ASTM D-2240	50±5
Tensile Strength (psi)*	ASTM D-412	2200 – 2500
Elongation (%)*	ASTM D-412	300 – 350
Tear Resistance (pli) Die C*	ASTM D-624	330 – 400
Water Absorption (%) - 24 hours	ASTM D-570	≤1.5
Dielectric Strength (volts/mil)	ASTM D-149	300
Volume Resistancy (ohm/inches)	ASTM D-257	6 X 10 (12)

**RHINO EXTREME™ 21-50****TYPICAL PHYSICAL PROPERTIES** *(continued):*

	<b>Test</b>	<b>Result</b>
Dielectric Constant (MHz)	ASTM D-150	5.4
Dissipation Factor (MHz)	ASTM D-150	0.058
Cathodic Disbonding	ASTM G-8	Pass

\*Properties were checked of Rhino Extreme™ polyurea lining, 1/8" (125 mils), (3.18 mm) thick stock.

**PROCESSING CHARACTERISTICS:**

<b>Equipment Used</b>	<b>Process Pressure</b>	<b>Spray Gun</b>	<b>Mix Module</b>
RhinoPro HP-21 Classic	2000 psi	Fusion - Air Purge or Mechanical Purge	AR2232

**Process Temperatures** – The system settings required to achieve quality lining application will vary depending on environmental and substrate conditions. The following recommended parameters will help ensure optimum lining quality.

<b>Isocyanate Temperature</b>	<b>Resin Temperature</b>	<b>Hoses - High Pressure</b>	<b>Substrate Surface</b>
140° – 160°F (60° – 70°C)	140° – 150°F (60° – 66°C)	140° – 160°F (60 – 70°C)	60° – 110°F (15° – 43°C)

**DRY FILM THICKNESS:** Varies based on application, typically a minimum of 1/16" (62.5 mil; 1.5mm) up to unlimited thickness

**CHEMICAL RESISTANCE:** Excellent resistance to many commercial and industrial chemicals such as acids, alkalis, oils and cleaning chemicals. For specific applications and information, please consult our chemical resistance chart available on our website or speak to a Rhino Linings® representative.

**COLOR OPTIONS:** Color - Unpigmented. Standard colors in stock. Custom colors are also available by special order.

**STORAGE:** Rhino Extreme™ 21-50 components should be stored in sealed containers at 60° – 90°F (16° – 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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