

Part A – Hi-Chem 21-70 Iso – Part #60060  
 Part B – Hi-Chem 21-70-90 Resin – Part # 60071

**DESCRIPTION:**

Hi-Chem™ is a two-component, 100% solids (no VOCs, no solvents), exothermic, rapid curing, elastomeric polyurethane lining system specifically designed for excellent chemical resistance.

**TYPICAL USES:**

- Durable protective lining with excellent chemical resistance for applications such as: primary and secondary containment, chemical processing equipment, tank lining and wet wells, water and wastewater, immersion service, etc.
- Spray-on application creates a monolithic, seamless lining which conforms to any shape and size.
- Stable in a wide temperature range from -5° to 175° F (-20.6° to 79.4° C)

**FEATURES & BENEFITS:**

- Excellent corrosion resistance
- Excellent chemical resistance
- Dense chemical structure imparts high impermeability

<b>CHEMICAL PROPERTIES:</b>	<b>Isocyanate (A)</b>	<b>Resin (B)</b>
Solids by Volume/Weight	100%	100%
Volatile Organic Compounds, calculated	0 lbs/gal	0 lbs/gal
Mix Ratio, Parts per volume	2	1
Mix Ratio, parts per weight	60	100
Gel Time, seconds at 80°F (26°C)	90	
Theoretical Coverage (dft)	1600 sqft/gal at 1 mil thick	
Base Color	amber/dark brown	off-white
Shelf Life - Unopened Containers	12 months	12 months

<b>TYPICAL PHYSICAL PROPERTIES:</b>	<b>Test</b>	<b>Result</b>
Hardness (Shore D)	ASTM D-2240	70±3
Tensile Strength (psi)	ASTM D-412	3500 – 3700
Tear Resistance (pli) Die C	ASTM D-624	180 – 190
Elongation (%)	ASTM D-412	25 – 30
Taber Abrasion Resistance (mg of los/1000 cycles) CS17 Wheel; 1000 grams weight	ASTM D-4060	53

\*Properties were checked of Hi-Chem lining, 1/8" (125 mils), (3.2 mm) thick stock.

**PROCESSING CHARACTERISTICS:** The system settings required to achieve quality spray sealant application will vary depending on environmental and substrate conditions. The following recommended parameters will help ensure optimum lining quality.

<b>Equipment Used</b>	<b>Spray Pressure</b>	<b>Process Pressure</b>
Graco EXP-2	2000 psi	2300 – 3500 psi
<b>Spray Gun</b>	<b>Mix Module</b>	
Fusion - Air Purge or Mechanical Purge	AR2942 or AR2232	

Process Temperatures

<b>Component Temperature (A&amp;B)</b>	<b>Hoses - High Pressure</b>	<b>Surface Temperature</b>
120° – 150° F (49° – 66° C)	120° – 150° F (49° – 66° C)	60° – 110°F (15° – 43°C)

**DRY FILM THICKNESS RANGE:** Varies based on application, typically used at 40 mils (1 mm) to 80 mils (2 mm)

**RHINO® HI-CHEM™ 21-70-90 (continued):**

**NOT RECOMMENDED FOR:**

- Sustained temperatures below -5° F (-20.6° C) or above 175° F (79.4° C)
- Concrete substrates subject to high impact
- Application to high density polyethylene or thermo plastics

**CHEMICAL RESISTANCE:** For comprehensive list, please refer to our Chemical Resistance Chart or speak to a Rhino Linings® representative.

**SUBSTRATES:** Concrete, fiberglass, metals, wood and geotextiles

**COLOR OPTIONS:** Limited color range available

**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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