



Rhino Linings®
PREMIUM PROTECTION



RhinoChem® 2170

SIDE-A – ISO SIDE-B - Resin

Revised Date: 01/02/2010

This TDS Replaces All Previous Versions

DESCRIPTION

Chemical resistant Elastomeric polyurethane.

FEATURES AND BENEFITS

RhinoChem 2170 is a two-component, 100% solids (zero VOC's) rapid curing elastomeric polyurethane lining displaying excellent chemical and immersion characteristics. It is highly cross-linked resulting in a membrane liner that is extremely dense providing superior protection against chemical attack.

- Dense chemical structure imparts high impermeability
- Excellent corrosion resistance
- Excellent chemical resistance
- Immersion applications in ambient and elevated temperatures
- Stable from -20.6°C to 76.7°C.

TYPICAL USES

- Durable protective lining such as: Primary and secondary chemical and water containment.
- Chemical processing equipment, tank linings and wet wells
- Water and wastewater applications

NOT RECOMMENDED FOR

- Sustained temperatures below -40°C or above 100°C. Exhibits short term stability up to 125°C.
- Concrete substrates subject to high impact.
- Application to high density polyethylene or thermo plastics.
- Do not apply to concrete with curing or sealing membranes.
- Do not apply to substrates affected by moisture content in excess of 5%.
- Do not apply to concrete less than 28 days old
- Avoid applying in conditions with high humidity.
- **NOTE** – Substrate temperature **must** be 3°C above the dew point prior to application

TYPICAL PHYSICAL PROPERTIES OF RHINOCEM 2170

Hardness (Shore D)	70±3	ASTM D-2240
Tensile Strength (psi)*	3500 – 3700	ASTM D-412
Elongation (%)	10 – 15	ASTM D-412
Taber Abrasion Resistance (mg of loss/1000 cycles)		
CS17 Wheel: 1000 grams weight	53	ASTM D-4060
Tear Resistance (pli)* Die C	350 – 400	ASTM D-624
Impact Resistance (2.5mm thick sample)	No cracking deterioration	Gardner Tester

*Properties were checked using RhinoChem 2170 polyurethane lining at 3mm thick.

CHEMICAL RESISTANCE

RhinoChem 2170 has excellent resistance to a variety of commercial and industrial chemicals. Examples of some of the chemicals it can withstand are listed below. For further information, please consult with Rhino Linings technical department. Properties were checked at 3mm thick at 25°C in a laboratory environment. Results in the field and at elevated temperatures may vary.

- | | | |
|--|---------------------|-----------------------|
| • Acetic Acid | • Hydrochloric Acid | • Salts |
| • Ammonia | • Hydrogen Peroxide | • Salt Solutions |
| • Bleach | • Nitric Acid | • Sodium Hydroxide |
| • Caustic Soda Lye | • Oils | • Sodium Hypochlorite |
| • Cleaning Chemicals | • Phosphoric Acid | • Sulphuric Acid |
| • Disinfecting Chemicals | • Potash Lye | • Tannic Acid |
| • Ammonium Nitrate (crystalline solid) | | |

CHEMICAL PROPERTIES

Initiation	20-30 secs
Gel Time	50-60 secs
Tack Free time	90 secs
Cure time – 98%	24 hours
Re-Coat time (max without priming)	6 hours
Mix ratio	2:1

COMMON SUBSTRATES

Metals, wood, concrete, brick, fibreglass, and geotextiles.

VOLATILE ORGANIC CONTENT

Zero VOC

DRY FILM THICKNESS RANGE (Subject to application)

Varies based on application, typically used at a minimum of 2mm to 6mm.

Waterproof Coating Thickness:	2+ mm.
Chemical Immersion Coating Thickness:	Bund Floors 3 to 6+ mm, Walls 3+ mm.

STORAGE AND PACKAGING

Store product in a dry environment away from direct sunlight and moisture. Recommended storage temperature is 25C.

Part A – Isocyanate: nine months, unopened.	75kg and 250kg Drums.
Part B – Resin: nine months, unopened.	62kg and 204kg Drums.

BASE MATERIAL COLOURS

Isocyanate – amber/dark brown colour
Resin – Off-white

COLOUR OPTIONS

Natural - Cream
Limited colour range available

PROCESSING CHARACTERISTICS

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	Spray Pressure	Process Temperature	Spray Gun	Mix Module
Rhino MK-15	N/A	25°C - 35°C	Rhino 2:1 Gun	1/4"–3/8" static Mixer

RE-APPLICATION PROCEDURES

Clean old Polyurethane so it is free from contaminants, cleaning with biodegradable foaming agents or similar if necessary. Once cleaned and dry, abrade surface to gain a rough scratched profile (80 Grit sandpaper or nylon cup brush). Remove all dust with air and wipe substrate with acetone then prime using RhinoPrime 251 primer to TDS.

SAFETY PRECAUTIONS

Health Considerations: consult Rhino Linings Material Safety Data Sheets. The uncured components of Rhino Linings RhinoChem 2170 can cause irritation to the eyes, skin, mucous membranes and are harmful if swallowed. When handling, avoid contact with eyes and skin (especially open cuts). In case of contact, immediately wash off with plenty of water for at least fifteen (15) minutes. For eyes, obtain medical attention. Always wash hands before eating. Obtain immediate medical attention in case of ingestion.

RhinoChem 2170 contains isocyanates and may cause allergic skin or respiratory reactions. Do not use if you have chronic breathing problems (asthma) or if you have ever had reactions to isocyanates. When applying RhinoChem 2170, avoid breathing harmful vapours. Fresh air-supplied standard painter's hood or full-face respirator must be worn by all personnel entering the area where RhinoChem 2170 is being applied until all vapours have been exhausted. In case of extreme exposure or adverse reaction, remove affected personnel to fresh air immediately and obtain medical help.

Important: consult the Rhino Linings Material Safety Data Sheets. Read and follow warning labels on all components. For professional use only. Follow cautions and handling guidelines in Rhino Linings Technical Manual. The information herein is believed to be reliable, but unknown risks may be present. All warranties of any kind, expressed or implied, including warranties of fitness for a particular purpose, are specifically disclaimed.

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 Australasia Pty Ltd. 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 Pty Ltd 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. Because of numerous factors affecting results, **Rhino Linings Australasia Pty Ltd makes no warranty of any kind, express or implied**, other than that the material conforms to its applicable current Standard Specifications. Rhino Linings Australasia Pty Ltd hereby disclaims all other warranties, including but not limited to those of merchantability or fitness for a particular purpose. No statements made herein may be construed as a representation or warranty. The liability of Rhino Linings Australasia Pty Ltd for any claims arising from or sounding in breach of warranty, negligence, strict liability, or otherwise shall be limited to the purchase price of the material.