



RhinoGuard 2185

Technical Data Sheet

Part A - Isocyanate
Part B - Resin

Date Issued: 28-July-2008
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PRODUCT TYPE

Elastomeric Polyurethane / Polyurea Hybrid. 100% solids (no (VOCs, no solvents)

GENERAL PROPERTIES:

RhinoGuard 2185 is a two-component, rapid curing, elastomeric polyurethane / polyurea hybrid membrane lining system. RhinoGuard 2185 contains predominantly Polyurethane technology with a small percentage of Polyurea technology added to produce a very robust but easy to spray membrane lining system. The addition of Polyurea technology provides enhanced moisture tolerance during application.

- Lining thickness varies based on application typically minimum of 3mm up to unlimited thickness in one application
- Excellent abrasion resistance
- Excellent impact resistance
- Excellent casting material
- Good noise reduction
- Excellent weather resistance
- Excellent corrosion resistance
- Resistant to most common oils and chemicals
- UV stable

RECOMMENDED USES

- Excellent protective lining for abrasion, impact and corrosion.
- Spray-on application creates a monolithic seamless lining, which conforms to any shape and size.
- Elastomeric properties allow for application to surface subject to extreme vibration, expansion, contraction, movement, flexing, abrasion and impact.
- Bonds virtually to all substrates of any dimension, including all metals, concrete, wood and fibreglass.
- Reduces noise from vibration and impact.
- Stable from -20°C to 80°C
- Ideal for pedestrian traffic and suitable for light vehicular traffic.
- Casting of wear plates, impact plates, chute liners, rollers, vibration isolation pads.
- Additional slip resistance performance can be achieved with aggregate integrated into lining.
- Corrosion protection for steel substrates.

NOT RECOMMENDED FOR:

- Sustained temperatures below -20°C or above 80°C.
- Application to high density polyethylene or thermo plastics.
- Immersion applications in chemicals

CHEMICAL RESISTANCE:

Good resistance to many routine, general purpose chemicals such as: weak acids, weak alkalies, motor oils and cleaning agents. For specific applications and/or information, consult with Rhino Linings technical department.

PROCESSING CHARACTERISTICS:

RhinoGuard 2185 can be applied using either high or low pressure, plural component spray equipment such as the RhinoPro Hi-Flow or the RhinoPro HP21 Spray machines. When using Rhino Low pressure application equipment heating of the chemical is not required however optimum mixing will occur if the chemical is at 25C. When using high pressure application equipment a recommended starting point for heater settings is 50C on the primary heaters and 50C on the hose heaters. Spray pressure (not static pressure) should be a minimum of 1800psi. Adjust according to ambient and substrate temperatures and the specific application.

| | |
|------------------------------------|------------|
| Initiation | 10-20 secs |
| Gel Time | 20-30 secs |
| Tack Free time | 60 secs |
| Cure time - 95% | 24 hours |
| Re-Coat time (max without priming) | 6 hours |
| Mix ratio | 2:1 |

SUBSTRATES:

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

DRY FILM THICKNESS RANGE (subject to application)

Varies based on application, typically used at a minimum of 3mm up to unlimited thickness.

Waterproof Coating Thickness: 2mm to unlimited. Industrial Coating Thickness: 3mm to unlimited.

SHELF LIFE and CONTAINER SIZE:

Store product in a dry environment away from direct sunlight. 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 – light straw colour. Resin – Opaque Standard color – Natural. Available in 8 standard colours.

TYPICAL PHYSICAL PROPERTIES OF RhinoGuard 2185

| | | |
|--|-------------|----------------|
| Hardness (Shore A) | 85A±5 | ASTM D-2240 |
| Tensile Strength (psi)* | 1800 – 2100 | ASTM D-412 |
| Elongation (%) | 220 – 280 | ASTM D-412 |
| Compressive Strength (psi) | 800 | ASTM D-695-96 |
| Taber Abrasion Resistance (mg of loss/1000 cycles) | | |
| CS17 Wheel: 1000 grams weight | 15 - 20 | ASTM D-4060 |
| Tear Resistance (pli)* Die C | 200 – 250 | ASTM D-624 |
| Ross Flex (% crack growth per 50,000 cycles) | 0 | ASTM FIA-308 |
| Coefficient of Friction on Steel | | |
| Static | 0.84 | ASTM D-1894-95 |
| Kinetic | 0.76 | ASTM D-1894-95 |
| Specific Gravity (grams/cc) | 1.06 – 1.08 | ASTM D-792 |
| Water Absorption (%) | ≤1.6 | ASTM D-570 |
| Dielectric Strength (volts/mil) | 300 | ASTM D-149 |
| Volume Resistancy (ohm/inches) | 6 x 10 (12) | ASTM D-257 |
| Dielectric Constant (MHz) | 5.4 | ASTM D-150 |
| Dissipation Factor (MHz) | 0.058 | ASTM D-150 |
| Cathodic Disbonding | Pass | ASTM G-8 |

* Properties were checked of RhinoGuard 2185 polyurethane lining 3.18 mm thick stock.

SAFETY PRECAUTIONS:

Health Considerations: consult Rhino Linings Material Safety Data Sheets.

The uncured components of Rhino Linings RhinoGuard 2185 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.

RhinoGuard 2185 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 RhinoGuard 2185, 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 RhinoGuard 2185 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 any and 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.

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