



## RhinoGuard 2195 Technical Data Sheet

Part A – Isocyanate

Part B – Resin

Date Issued: 28-July-2008

Revised Date: 8-June-2017

**PRODUCT TYPE:**

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

**GENERAL PROPERTIES:**

RhinoGuard 2195 is a two-component, rapid curing, elastomeric polyurethane / polyurea hybrid membrane lining system. RhinoGuard 2195 contains predominantly Polyurethane technology but also contains Polyurea technology to produce a very robust but easy to spray membrane lining system. The addition of Polyurea technology provides enhanced moisture tolerance during application.

- RhinoGuard 2195 is an industrial grade two-component, 100% solids, exothermic, rapid curing, elastomeric hybrid polyurethane / polyurea membrane lining system.
- Lining thickness varies based on application, typically minimum of 1.5mm up to unlimited thickness.
- High tensile strength and tear strength properties.
- Very good abrasion and crush resistance.
- Good chemical resistance.
- Excellent Abrasion and corrosion resistance.
- Spray-on application creates a monolithic seamless lining, which conforms to any shape and size.
- Bonds to virtually any substrates of any dimension, including all metals, concrete, wood and fiberglass.
- Elastomeric properties allow for application to surface subject to extreme vibration, movement, flexing, abrasion and impact.
- Reduces noise from vibration and impact.
- Stable from -40°C to 80°C

**RECOMMENDED USES:**

- Heavy vehicle traffic applications – loading docks, warehouse flooring, fertiliser storage bins.
- Materials handling - Abrasion and corrosion protection in chutes, hoppers, bins.
- Power pole ground level corrosion protection.
- Pipe and tank coating for in ground applications.
- Casting of wear and impact plates.

**NOT RECOMMENDED FOR:**

- Sustained temperatures below -40° C or above 80° C.
- Application to high density polyethylene or thermo plastics.

**CHEMICAL RESISTANCE:**

Good resistance to many commercial and industrial chemicals such as acids, alkalies, oils and cleaning chemicals.

For specific applications and information, please consult with Rhino Linings Technical department.

**PROCESSING CHARACTERISTICS:**

RhinoGuard 2195 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 45C 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 – 98%	24 hours
Re-Coat time (max without priming)	6 hours
Mix ratio	2:1

**SUBSTRATES:**

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

**VOLATILE ORGANIC CONTENT:**

None. 100% solids. No solvents.

**DRY FILM THICKNESS RANGE:**

Varies typically based on application 1.5 mm to unlimited.

**SHELF LIFE:**

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 COLORS:**

Isocyanate - amber/dark brown. Resin - opaque.

**COLOR OPTIONS:**

Standard color - natural. 8 standard colours available by order.

**TYPICAL PHYSICAL PROPERTIES OF RhinoGuard 2195:**

Hardness (Shore A)	95±5	ASTM D-2240
Tensile Strength (psi)*	2000 – 2200	ASTM D-412
Elongation (%)*	75 – 85	ASTM D-412
Flexural Modulus (psi)	2400 – 2800	ASTM D-790
Taber Abrasion Resistance (mg of loss/1000 cycles)		
CS17 Wheel; 1000 grams weight	20 – 25	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
Specific Gravity	1.06 – 1.08	ASTM D-792
Water Absorption (%)	≤1.5	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 A	ASTM D-150

\*Properties were checked using RhinoGuard 2195 at 3mm thick.

**SAFETY PRECAUTIONS:**

**Health Considerations: Consult the Rhino Linings® Material Safety Data Sheets.**

The uncured components of RhinoGuard 2195 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 2195 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 2195, avoid breathing harmful vapors. Fresh air-supplied standard painter's hood or full face respirator must be worn by all personnel entering the area where RhinoGuard 2195 is being applied until all vapors have been exhausted. In case of extreme exposure or adverse reaction, remove affected personnel to fresh air immediately and obtain medical help. RhinoGuard 2195 components are combustible liquids Class IIIB. Store and transport according to regulation.

**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 Reference 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:**

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