



Rhino PP2190

Technical Data Sheet

Date Issued 02 Dec 2007
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Part A - Isocyanate
Part B - Resin

DESCRIPTION:

Rhino PP2190 is a two-component, rapid curing, elastomeric Pure Polyurea lining system designed for heavy duty industrial applications where high performance and rapid turn around times are critical. Being a Pure Polyurea, PP2190 will cure and exhibit full mechanical properties even when applied in high humidity, cold or moist substrate scenarios. Rhino PP2190 is tack free within seconds and can be walked on within minutes. The product is both solvent and VOC free.

FEATURES & BENEFITS:

- High performance industrial lining for extreme application conditions such as low temperatures and high humidity.
- High physical properties including tensile, tear, and elongation properties.
- Excellent abrasion and impact resistance.
- Potable water certified in accordance with AS/NZ 4020.
- Remains flexible through a wide temperature range.
- Good chemical resistance and corrosion resistance.
- Bonds to virtually all substrates of any dimension, including metals, woods, concrete and fibreglass.
- 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.
- Reduces noise from vibration and impact.
- Stable from -40°C to 125°C
- 100% solids, zero VOCs, no solvents.

APPLICATIONS:

- Industrial and mining applications where rapid turn around is critical.
- Secondary containment as a monolithic, impermeable lining for industrial plant, mining, agriculture, chemical and petrochemical applications.
- Primary containment in tanks and vessels subject to abrasion and/or substantial substrate movement.
- Protection against food acids, processing chemicals.
- Water and waste water applications – canals, leeching ponds, waste pits, raw and treated sewer.
- Abrasion, impact, chemical and corrosion protection.
- Industrial flooring subject to heavy vehicle traffic.

PROCESSING CHARACTERISTICS:

Rhino PP2190 is designed to be spray applied with high pressure, plural component spray equipment such as the RhinoPro HP-21 spray machine. The B-Side component should be thoroughly stirred using a power agitator prior to use. A recommended starting point for heater settings is 55C on the primary heaters and 60C 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.

Gel Time	6 secs
Tack Free time	20 secs
Cure time – 98%	24 hours
Re-Coat time (max without priming)	6 hours
Mix ratio	2:1
Specific Gravity	1.07 L/Kg

CHEMICAL RESISTANCE:

Good 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 or speak to a Rhino Linings representative.

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TYPICAL PHYSICAL PROPERTIES OF Rhino PP2190:

Hardness (Shore A)	90±5	ASTM D-2240
Tensile Strength (psi)	2600 – 2800	ASTM D-412
Elongation (%)	400 – 450	ASTM D-412
Tear Resistance (pli) Die C*	300 – 330	ASTM D-624
Taber Abrasion Resistance	20	ASTM D-4060
- (mg of loss/1000 cycle) CS17 Wheel, 1000 grams weight		
Water Absorption (%)	≤1.0	ASTM D-570

SUBSTRATES:

Metals, wood, concrete, fibreglass, and geotextiles. (May be subject to application of suitable primers)

STORAGE AND PACKAGING:

Rhino PP2190 components should be stored in sealed containers, in a dry area away from direct sunlight at 15°C – 30°C. Constant 25°C recommended.

Part A – Isocyanate: Twelve months, unopened; stored properly.

Part B – Resin: six months, unopened; stored properly.

Available in 205L and 60L drums

COLOUR OPTIONS:

Colour – Natural

Rhino PP2190 is available in 8 standard colours – separate order necessary. Custom colours are also available by special order.

SAFETY PRECAUTIONS OF Rhino PP2190:

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

The uncured components of Rhino PP2190 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.

Rhino PP2190 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 Rhino PP2190, avoid breathing harmful vapours. Fresh air-supplied standard painter's hood and full face respirator must be worn by all personnel entering the area where Rhino PP2190 is being spray applied until all 100% solid vapours have been exhausted. In case of extreme exposure or adverse reaction, remove affected personnel to fresh air immediately and obtain medical help.

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

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 suggested. The toxicity and risk characteristics of products made by Rhino Linings Australasia 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 of 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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