



Rhino Linings®

PREMIUM PROTECTION



RhinoPak 55D-PP

Revised Date: 15/07/2020
This TDS Replaces All Previous Versions

DESCRIPTION

RhinoPak™ 55D-PP is a two-component, rapid curing, elastomeric polyurea lining system. RhinoPak™ 55D-PP is a 1:1 ratio designed to be sprayed with high pressure plural component spray equipment. The protective lining system is packaged in a dual 750ml cartridge for use with the lightweight, portable RhinoPro™ Cartridge Gun. The disposable, quick-load cartridges are great for small jobs, hard to reach places and repairs. Lining thickness varies based on application, typically minimum of 1mm up to unlimited thickness.

FEATURES AND BENEFITS

- Robust application window with ability to spray at low temperatures and high humidity
- High physical properties including tensile, tear, and elongation properties
- Excellent levelling properties
- Excellent abrasion and impact resistance
- Excellent chemical resistance and corrosion resistance
- Reduces noise from vibration and impact
- Bonds to virtually all substrates of any dimension, including metals, woods, concrete, fibreglass and geotextiles
- Stable from -40°C to 110°C
- 100% solids, zero VOCs, no solvents

TYPICAL USES

- Excellent wetting properties for geotextile fabric
- Excellent industrial lining for tough application spray conditions such as:
 - Outdoor application sites where water, humidity or low temperature conditions exist and are tough to eliminate
 - Floor and wall protection in industries such as food processing, food storage, veterinary, production area and laboratories
 - Secondary containment as a monolithic, impermeable lining for industrial plant, agriculture, and petrochemical applications
- Spray-on application creates a monolithic, seamless lining that conforms to any shape and size
- Can withstand vehicle forklift traffic and heavy loads with proper thickness build
- Elastomeric properties allow for application to surfaces subject to: vibration, expansion, contraction, movement, flexing, abrasion and impact.

CHEMICAL PROPERTIES	TEST	ISOCYANATE	RESIN
Specific Gravity (grams/cc)	ASTM D-792	1.14	1.02
Viscosity, cps		675-775	1050-1250
Solids by Volume/Weight		100%	100%
Volatile Organic Compounds		0kgs/ltr	0kgs/ltr
Mix Ratio, parts per volume		1	1
Mix Ratio, parts per weight		109	100
Gel Time, seconds		9-12	
Tack Free, seconds		55-65	
Recoat, max		≤4 hrs	
95-99% Cure Time		24hrs	
Theoretical Coverage		1ltr = 1m ² @ 1mm	
Odour		Mild	Amine
Freezing Point		4.4°C	N/A
Colour		Amber/Brown	Straw
Shelf Life - Unopened Containers		12 Months	12 Months

*Properties were tested at 25°C

PHYSICAL PROPERTIES	TEST	RESULT
Hardness (Shore D)	ASTM D-2240	50±5
Tensile Strength (psi)**	ASTM D-412	2000 – 2400 (13.8 – 16.5 MPa)
Tear Resistance (pli)** Die C	ASTM D-624	400 – 500 (70.1 – 87.6 KN/m)
Elongation (%)**	ASTM D-412	<100
Impact Resistance (in/lbs)	ASTM D-256	160 (28.0 KN/m)
Density (lb/ft ³)	ASTM D-1622	69 – 70 (1104 – 1120 Kg/m ³)
Compressive Strength (psi)	ASTM D-695	800 (5.5 MPa)
Taber Abrasion Resistance (mg of loss/1000 cycles) CS17 Wheel; 1000 grams weight	ASTM D-4060	11
Mandrel Bend, 180°, 1 inch mandrel	ASTM D-522	Pass
Coefficient of Friction on Steel: - Static - Kinetic	ASTM D-1894	.7
	ASTM D-1894	.5
Water Vapor Transmission: - Rate of Transmission (grains/hr/m ²) - Permeance (perm, in - lb)	ASTM E-96 ASTM E-96	0.35 metric perm 1.03 metric perm
Water Absorption (%)	ASTM D-570	≤1
Glass Transition - T _g (°C)	ASTM D-7028	-40°C
Dielectric Strength (volts/mil)	ASTM D-149	300
Volume Resistancy (ohm/inches)	ASTM D-257	6 X 10 (12)
Dielectric Constant (MHz)	ASTM D-150	5.4
Dissipation Factor (MHz)	ASTM D-150	0.058
Cathodic Disbonding	ASTM G-8	Pass

*Properties were tested at 25°C

PROCESSING CHARACTERISTICS

Equipment Used	Process Temperature
Dual Cartridge with static mix tube, air atomization and dry air	27°-38°C on cartridge

DRY FILM THICKNESS

Varies based on application, typically a minimum of 1mm up to unlimited thickness.

NOT RECOMMENDED FOR

Application to high density polyethylene or thermo plastics

SURFACE PREPARATION

Before applying RhinoPak™ 55D-PP, the surface should be prepared properly following recommended Rhino Linings® procedures. The substrate should be clean, dry and free of oil, dirt or other contaminants. It is ideal to roughen the surface to create a profile to bond to. Depending on the application, the use of the appropriate Rhino Linings® primer may be required for best results.

APPLICATION INSTRUCTIONS

Please refer to the RhinoPro™ Cartridge Gun manual for complete instructions on using these cartridges. The RhinoPak™ must be shaken in the RhinoPro™ Cartridge Shaker for 4 to 5 minutes prior to spraying. This procedure ensures proper distribution of pigment and other components. RhinoPak™ 55D-PP cartridge chemical temperature must be between 27°C-38°C) when sprayed.

CHEMICAL RESISTANCE

RhinoPak™ 55D-PP provides good resistance to many commercial and industrial chemicals such as acids, alkalis, oils and cleaning chemicals. For specific applications and information, please consult a Rhino Linings® representative.

COMMON SUBSTRATES

Metals, wood, concrete, fibreglass and geotextile.

COLOUR OPTIONS

Standard colour – Black

HOW SUPPLIED

RhinoPak™ 55D-PP is packaged in a dual 750ml cartridge set.

STORAGE

Cartridges should be stored at 15.6-32.2°C in a dry condition in their original packaging. If RhinoPak™ cartridge has been stored longer than 1 week, shake cartridge to ensure proper distribution of chemicals and pigment.

SAFETY PRECAUTIONS

Health Considerations: Consult the Rhino Linings® Safety Data Sheets (SDS)

Chemical systems require 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 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. Because of numerous factors affecting results, **Rhino Linings Corporation makes no warranty of any kind, express or implied**, other than that the material conforms to its applicable current Standard Specifications. Rhino Linings Corporation 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 Corporation 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.

