

Part

Part A – #60288 – Hybrid 11-55 XP Isocyanate

Part B – #60298 – Hybrid 11-55 XP Resin Black

DESCRIPTION:

Rhino Hybrid™ 11-55 XP is a one-to-one volume ratio, two-component, exothermic, rapid curing, elastomeric hybrid polyurea lining system. Lining thickness can vary from a minimum of 1/16" (62.5 mils; 1.5mm) for non-load bearing or abrasion-resistant linings up to unlimited thickness. It can be sprayed up to 98% humidity and a dew point temperature difference of 15°F or more with no blistering. Hybrid 11-55 XP is easy on spray equipment with no fast gelling at the spray gun tip.

TYPICAL USES:

- Excellent protective lining for abrasion, impact and corrosion resistance
- Spray-on application creates a monolithic, seamless lining which conforms to any shape and size
- Reduces noise from vibration and impact
- Withstands light vehicular and foot traffic
- Elastomeric properties allow application to surfaces subject to vibration, expansion, contraction, movement, flexing, abrasion, and impact
- Aggressive non-slip performance can be achieved with aggregate integrated into lining

FEATURES AND BENEFITS:

- Robust application window with ability to spray at low temperatures and high humidity
- High tensile and tear strength properties
- Superior abrasion, slip, and corrosion resistance
- Good impact absorption
- Noise reduction from vibration and impact
- Provides excellent weather and chemical resistance
- Easy to texture
- Stable from -40°F (-40°C) to 175°F (79.4°C)
- Elastomeric properties allow for application to surfaces subject to vibration, expansion, contraction, movement, flexing, abrasion, and impact
- Aggressive non-slip performance can be achieved with aggregate integrated into lining

CHEMICAL PROPERTIES:	Test	Isocyanate(A)	Resin (B)
Specific Gravity	ASTM D-792	1.14 ± 0.02	1.10 ± 0.02
Viscosity, cps, 77°F (25°C)		450-700	850-1200
Solids by Volume/Weight		100%	100%
Volatile Organic Compounds		0 lbs./gal	0 lbs./gal
Mix Ratio, Parts per Volume		1	1
Mix Ratio, Parts per Weight		9.48 ± 0.03	9.19 ± 0.03
Gel Time, Seconds at 77°F (25°C)		2-3	
Tack-free, Seconds		4	

CHEMICAL PROPERTIES (CONT):

Full Cure	4 hrs	
Theoretical Coverage	1600 sqft/gal at x 1 mil thick	
Odor	Mild	Sweet
Freezing Point	40°F (4.44°C)	
Color	Straw Yellow	Black
Shelf Life - Unopened Containers	12 months	12 months

TYPICAL PHYSICAL PROPERTIES:

	Test	Result
Hardness (Shore D)	ASTM D-2240	55 +/- 5
Tensile Strength (psi)	ASTM D-412	2400 +/- 200
Tear Resistance (pli) Die C	ASTM D-624	600 +/- 50
Elongation (%)	ASTM D-412	160 +/- 20
Pull-Off Strength (psi)*	ASTM D-4541	1000
Impact Dart Test, 75°F (in-lb)	ASTM D-3209	>320
Cold Impact Test, -20°C (in-lb)	ASTM D-2794	120
Mandrel Bend, 75°F, (~1/8", 3mm rod)	ASTM D-1737	PASS

*Values obtained from powder coated metal surfaces

PROCESS PARAMETERS:

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.

SPRAY SYSTEM:

Equipment Used	Process Pressure	Spray Gun	Mix Module
Graco Reactor E-XP1; E-XP2	2000-2500 psi (static) / 1800-2200 psi (dynamic)	Air or Mechanical Purge	00, 01, 02

PROCESS TEMPERATURES:

Iso Component	Resin Component	Hoses	Substrate Surface
150-160° F (65° – 71° C)	140-150° F (60 – 65° C)	140-160° F (60-71° C)	40° – 150° F (4° – 66° C)

LIMITATIONS:

Not recommended for sustained temperatures below -40°F (-40°C) or above 175°F (79.4° C).

Not recommended for application to high density polyethylene or thermo plastics.

CHEMICAL RESISTANCE:

Good resistance to many routine chemicals such as: weak acids, weak alkalis, oils, and cleaning agents. For specific applications and/or information, consult with a Rhino Linings representative.

DRY FILM THICKNESS RANGE:

Varies based on application. Thickness can vary from a minimum of 1/16" (62.5 mils; 1.5mm) to unlimited thickness.

SUBSTRATES:

Metals, wood, concrete, fiberglass, and geotextiles.

COLOR OPTIONS:

Standard color black only. No custom color options are available.

HOW SUPPLIED:

Net weight per set is 910 pounds (412.7 kg). A set of Hybrid 11-55 XP consists of one (1) 55 gallon (208 L) drum of 'A' component and one (1) 55 gallon (208 L) drum of 'B' component.

STORAGE:

Hybrid 11-55 XP should be stored between 50 - 95° F (10 - 35° C). Protect from moisture contamination. Do not store in direct sunlight. Do not allow product to freeze.

Contact Rhino Linings Technical Services for long-term equipment storage recommendations.

SAFETY PRECAUTIONS:

HEALTH CONSIDERATIONS: Consult the Rhino Linings Safety Data Sheets (SDS)

This chemical system requires the use of proper safety equipment and procedures. Please follow the Rhino Linings product SDS 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 particular 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 end users and processors.

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Contact Rhino Linings Technical Support at (800) 747-6966 for additional questions.

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