



TECHNICAL DATA SHEET

RR Series 8000 Urethane

Aliphatic High Wear Urethane (Gloss & Satin)

- Product Number: 194-RO-100 (Part A)
- Product Number: 194-RO-101 (Part B)
- Product Number: 194-1-AO (Part C)

PRODUCT DESCRIPTION

River Resins 8000 Series High Wear Urethane is a high-solids, moisture-cured urethane coating designed for demanding environments requiring superior abrasion resistance and durability. It may be applied clear or pigmented without filler to produce a smooth, high-gloss finish.

Glass beads may be incorporated to enhance slip resistance and abrasion performance while maintaining a high-gloss appearance. Aluminum oxide can be added to achieve the highest level of abrasion resistance. Increased aluminum oxide loading produces a satin finish, while lower loading results in a glossier appearance.

BENEFITS

- Excellent adhesion to properly prepared substrates
- Outstanding abrasion, stain, and chemical resistance
- Ideal for high-performance urethane topcoat applications
- Extremely low VOC (50-state compliant)
- Minimal to no odor during application
- User-friendly application characteristics
- Non-yellowing, UV-stable, 100% aliphatic urethane

APPLICATIONS

River Resins 8000 Series High Wear Urethane is ideal for use as a protective urethane topcoat in commercial, industrial, and high-traffic flooring systems where long-term wear resistance, chemical resistance, and UV stability are required.

TYPICAL PROPERTIES

Property Results Test Method

- Percent Solids, by wt. (by vol.) A = 100 ; B = 50.1 ASTM D2369
- VOC (A + B + C) 0.6 lb/gal (7.2 g/L) ASTM D3620

CURED COATING PROPERTIES

- Property Results Test Method
- Abrasion Resistance, Taber Abraser CS-17, 1,000 g, 1,000 rev 18 mg loss ASTM D4060
- Coefficient of Friction, James Friction Tester 0.63 (Exceeds OSHA standards) ASTM D2047
- Wet Static COF, BOT 3000 0.94 ANSI/NFSI B101.1
- Flammability 182 mm/min ASTM D635
- Resistance to Yellowing (1000 hrs QUV) <10 Δb if pigmented ASTM G154
- Dry Film Thickness 3.0 mils (76.2 microns), 1 coat —
- Tensile Strength (resin only) 6,250 psi (43.09 MPa) ASTM D2370
- Percent Elongation (resin only) 6% ASTM D2370
- König Hardness (3 mil film, resin only) 171.3 ASTM D4366
- Water Absorption, 24-hr immersion 0.2% weight increase ASTM C413

Values represent typical laboratory results obtained at 77°F (25°C). Variations may occur under field conditions.



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PACKAGING & COVERAGE

1.5-Gallon Kit

- Part A – Resin: 1 Gallon
- Part B – Hardener: 1 Quart
- Part C – Satin Additive: 3 lbs
- Coverage: ~750 sq ft @ 3.2 wet mils

6-Gallon Kit

- Part A – Resin: 4 Gallons
- Part B – Hardener: 1 Gallon
- Part C – Satin Additive: 12 lbs
- Coverage: ~3,000 sq ft @ 3.2 wet mils

LIMITATIONS

River Resins 8000 Series High Wear Urethane must be applied over a properly primed or coated surface.

For optimal adhesion, the basecoat should be applied within 24 hours and mechanically abraded using an abrasive buffing disc (typically 180-grit carborundum).

Maximum application thickness is 4 mils per coat.

Do not allow puddling. Excessive film thickness may cause gassing and result in a fan-like surface appearance.

CHEMICAL RESISTANCE

Chemical resistance testing was conducted in accordance with ASTM D1308, Test Method 3.1.1 (spot test, covered). Results are based on 1-day and 7-day exposure. Coating was cured for two (2) weeks prior to testing.

Chemical Resistance Ratings

Reagent 1 Day 7 Days

Acids – Inorganic

- 10% Hydrochloric Acid E E
- 30% Hydrochloric Acid (Muriatic) E E
- 10% Nitric Acid E E
- 50% Phosphoric Acid E G
- 37% Sulfuric Acid (Battery Acid) E E
- Acids – Organic
- 10% Acetic Acid E E
- 10% Citric Acid E E
- Oleic Acid E E

Rating Legend

E – Excellent: No adverse effect; recommended

G – Good: Limited adverse effect; short-term exposure only

F – Fair: Moderate adverse effect; not recommended

P – Poor: Unsatisfactory; little or no resistance

* Only adverse effect was staining



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Chemical Resistance Ratings
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- 10% Acetic Acid E E
- 10% Citric Acid E E
- Oleic Acid E E

Alkalies

- 20% Ammonium Nitrate E E
- 10% Ammonium Hydroxide E E
- 50% Sodium Hydroxide E E
- 20% Sodium Chloride E E

Solvents – Aromatic

- Xylene E E
- Solvents – Chlorinated
- Methylene Chloride P P

Solvents – Ketones & Esters

- Methyl Ethyl Ketone (MEK) E E
- Propylene Glycol Methyl Ether Acetate (PMA) E E
- Solvents – Alcohols
- Isopropyl Alcohol E E
- Methanol E E
- Ethylene Glycol (Antifreeze) E E

Solvents – Aliphatic

- d-Limonene E E
- Jet Fuel (JP-4) E E
- Gasoline E E
- Mineral Spirits E E

Miscellaneous Chemicals

- Brake Fluid E E
- Bleach E E
- Motor Oil (SAE 30) E E
- Skydrol® 500B E E
- Skydrol® LD4 E E
- 10% Trisodium Phosphate E E
- Coffee E E
- Coke® E E
- Ketchup E E
- Mustard G *G*
- Red Wine E G*

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IMPORTANT NOTE

Reduced chemical resistance and staining potential may occur in pigmented versions of the River Resins 8000 Series High Wear Urethane system.

INSTALLATION STEPS

Before You Begin

Concrete substrates must be tested for moisture vapor transmission prior to installing any coating materials. Follow industry-accepted moisture testing methods and confirm acceptable ranges before installation of River Resins 8000 Series High Wear Urethane.

Surface Preparation

Shot blasting or diamond grinding are the preferred surface preparation methods for concrete substrates. The surface should be mechanically prepared to achieve a 10–20 grit sandpaper profile.

All oils, curing compounds, sealers, and surface contaminants must be completely removed prior to installation.

Mixing

1. River Resins 8000 Series High Wear Urethane is supplied in 1.25-gallon and 5.5-gallon kits.
2. Mixing procedure:
3. Open Part A container.
4. Pour Part B into Part A.

If a gloss finish is desired, add color (if applicable) and mix for 2–3 minutes using a low-speed mechanical mixer.

If Part C Satin Additive is being used, slowly introduce it into the vortex of the mixer and continue mixing for an additional 2–3 minutes.

Important:

Temperature directly affects pot life and working time. Higher temperatures will significantly reduce working time. Do not mix more material than can be applied within the stated pot life.

Application

NO FILLERS

- Immediately pour the mixed material onto the prepared concrete surface.
- Squeegee material evenly at a maximum thickness of 4 wet mils.
- Back-roll using a chemical-resistant roller cover to level the coating and eliminate puddling.
- Do not allow puddles to remain, as excessive film thickness may cause surface defects.



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WITH FILLERS (Glass Beads or Aluminum Oxide)

- Immediately split the mixed material into multiple buckets.
- Apply by dipping rollers directly into the pails.
- A 1-gallon lid with holes punched in it may be placed in the bottom of each pail to prevent rollers from contacting settled fillers.
- Avoid puddles and drip marks, as these areas may cure inconsistently.
- Rotate buckets regularly, as material will begin to set up and become more difficult to roll.

Curing Characteristics (Mixed Components)

Temperature	50°F	70°F	90°F
Working Time	30–40 min	20–25 min	15–20 min
Dry to Touch	8–12 hrs	6–8 hrs	4–5 hrs

- Maximum recoat window: Surface must be mechanically buffed prior to recoating.
- Installation temperature limits: 50°F minimum to 90°F maximum.

Cleaning

All mixing and application equipment must be cleaned immediately after use. Xylene may be used to clean tools and equipment.

Coverage

- When glass beads or aluminum oxide are added, material must be roller applied only.
- When applied without fillers, the coating may be squeegeed and back-rolled using a chemical-resistant roller cover.
- Maximum application thickness is 4 mils.

Humidity and Dew Point

- River Resins 8000 Series High Wear Urethane is a moisture-cured urethane.
- Do not install when relative humidity is below 50% or above 90% without consulting River Resins technical support.
- Condensation may occur if substrate temperature is below the dew point, potentially causing adhesion failure or surface blush.
- Always verify dew point conditions prior to application.
- Hazing or a greasy surface feel may indicate blush formation—do not proceed without technical guidance.

Disposal

- Dispose of all materials, containers, and waste in accordance with applicable Federal, State, and Local regulations.

Storage and Shelf Life

- Store materials in original, unopened containers in a dry, enclosed building out of direct sunlight.
- Ideal material temperature prior to installation is 60–80°F for a minimum of 24 hours.
- Installation outside this temperature range may negatively impact workability.
- Shelf life: Minimum of 1 year in unopened containers.
- Contact River Resins if there are concerns regarding material condition or age.



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Safety

- Use appropriate ventilation during mixing and application.
- Avoid contact with eyes and skin.
- Skin contact: Wash immediately with soap and water.
- Eye contact: Flush eyes immediately with clean water and seek medical attention.
- Remove contaminated clothing and wash before reuse.
- For industrial use only. Refer to the Safety Data Sheet (SDS) for complete safety information.



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