



Technical Data Sheet

RR-7000 SERIES IR

Trowel-Applied Heavy-Duty Iron Filled Urethane Concrete Flooring System

TECHNOLOGY DESCRIPTION

River Resins™ 7000 Series represents a high-performance urethane concrete flooring system engineered for demanding industrial and commercial environments. The system combines polyurethane chemistry with cementitious aggregates to produce a dense, seamless floor capable of withstanding severe thermal, mechanical, and chemical exposure.

River Resins™ urethane concrete technology is designed to provide exceptional durability in facilities where traditional coatings and flooring systems often fail due to thermal shock, moisture vapor transmission, heavy traffic, or aggressive chemical exposure.

PRODUCT DESCRIPTION

River Resins™ 7000 Series Urethane Concrete is a heavy-duty seamless flooring system typically installed at 1/4" to 3/8" thickness. The system is extremely tough and withstands thermal shock, impact, abrasion, and chemical exposure.

The formulation incorporates specialized additives that provide resistance to microbial and fungal growth in accordance with ASTM G-21.

River Resins™ 7000 Series creates a dense monolithic floor system that protects concrete substrates in industrial and sanitary environments.

BENEFITS

- Seamless, hygienic flooring system with no grout joints
- Impact and abrasion resistant surface suitable for heavy traffic and forklift operation
- Low odor formulation allowing faster installation and return to service
- Excellent corrosion and chemical resistance
- High temperature resistance up to 250°F
- Thermal shock resistant and suitable for steam cleaning
- Resistant to moisture vapor transmission (MVT)
- Slip resistant surface meeting ADA recommendations
- Resistant to fungal growth per ASTM G-21

APPLICATIONS

- Food & beverage processing facilities
- Chemical processing plants
- Pharmaceutical manufacturing facilities
- Pulp & paper mills
- Wet processing and packaging areas
- Commercial kitchens and food preparation areas
- Freezers and refrigerated facilities
- Battery charging areas
- Heavy manufacturing facilities
- Truck loading and unloading areas

These environments demand extreme durability, sanitation, and chemical resistance, making urethane concrete systems the preferred flooring technology.

TYPICAL PROPERTIES

Property	Results	Test Method
Compressive Strength	7,800 psi	ASTM C-579
Tensile Strength	975 psi	ASTM C-307
Flexural Strength	1,900 psi	ASTM C-580
Bond Strength	100% Concrete Failure	ASTM D-4541
Impact Strength	>160 in-lb	ASTM D-4226
VOC Content	5 g/L	EPA METHOD
Resistance to Fungal Growth	Passes, Rating of 1	ASTM G-21
Shelf Life	6 months (unopened)	-

CURE SCHEDULE (77°F)

- Pot Life.....15 minutes
- Light Foot Traffic.....12 hours
- Heavy Foot Traffic.....24 hours
- Full Chemical Cure.....7 days

Cure times may vary based on temperature, humidity, and substrate conditions.

APPLICATION TEMPERATURE

Ambient Temperature: 40°F – 85°F

Material Temperature: 50°F – 80°F

Installation outside these ranges may affect cure time and final performance.

GENERIC DESCRIPTION

Polyurethane Concrete

TYPICAL APPLICATION

1/4" trowel-applied monolithic flooring system

AVAILABLE COLORS

River Resins™ 7000 Series is available in the following standard colors:

- Neutral
- Beige
- Ivy Green
- Tile Red
- Medium Gray

Custom colors may be available upon request.

PACKAGING & COVERAGE

Typical system packaging includes:

- 1/2 gallon Part A
- 1/2 gallon Part B
- 1 bag River Resins 7000 Series urethane IR concrete aggregate filler
- 3 fluid oz liquid pigment

Coverage:

Approximately 23 square feet per unit at 1/4" finished thickness

Coverage rates may vary depending on substrate profile and installation method.

LIMITATIONS

- River Resins™ 7000 Series urethane concrete is not color stable and may exhibit color changes over time due to UV exposure.
- Do not install over wet or saturated concrete substrates.
- Floors should be properly sloped to drains to prevent standing water or chemical pooling.

LIMITATIONS

- Spills should be cleaned promptly to reduce slip hazards.
- Confirm product compatibility with the intended chemical exposure environment prior to installation.
- Substrate must be prepared according to the Surface Preparation guidelines in this document.
- Always follow detailed installation instructions for proper system performance.
- Use appropriate personal protective equipment and follow OSHA safety regulations during installation.
- Refer to the Safety Data Sheet (SDS) for complete safety information.
- Intended for industrial and commercial applications only. Installation should be performed by trained professional installers.

INSTALLATION PROCEDURES

SURFACE PREPARATION

Apply River Resins™ 7000 Series only to properly prepared, clean, dry, and structurally sound concrete substrates free of coatings, sealers, curing compounds, oils, grease, and other contaminants.

New concrete should ideally cure for a minimum of **14 days** to reduce shrinkage cracking. The system may be installed after **7 days**, provided the concrete has achieved at least 3,500 psi compressive strength and proper mechanical preparation can be achieved.

However, any shrinkage movement or cracking in the concrete substrate may telegraph through the finished flooring system.

Surface preparation requirements include:

- Removal of chemical contaminants and foreign materials
- Removal of laitance or weak surface layers, including broom-finished surfaces
- Minimum concrete tensile strength of 300 psi per ASTM D-4541
- Surface profile of CSP-5 or greater, in accordance with ICRI Guideline #03732
- Mechanical preparation methods such as shot blasting or diamond grinding

All cracks, control joints, expansion joints, and surface irregularities must be properly addressed prior to installation.

MIXING & APPLICATION

IMPORTANT: Follow all safety instructions provided in the Safety Data Sheet prior to installation. The following instructions are provided as a general installation guide.

River Resins™ 7000 Series Urethane Concrete flooring systems should be installed only by trained and experienced installers.

Mixing Procedure

1. Cut keyways (minimum 5/16" wide × 5/16" deep) at all terminations, drains, columns, and doorways to prevent delamination.
2. Thoroughly remove all dust and debris from the prepared substrate.
3. Cove base materials may be installed prior to or following floor installation depending on project specifications.
4. Use a mechanical mortar mixer with appropriate paddle to ensure proper blending and minimize entrapped air.
5. With the mixer running, add Part A to the mixing container.
6. Add 3 fl oz liquid pigment to Part A and mix for approximately 15 seconds.
7. Add Part B and mix for an additional 15 seconds.
8. Gradually introduce the urethane concrete filler aggregate while mixing.
9. Continue mixing for approximately 2 minutes until all aggregate particles are fully wetted.
10. Immediately place the mixed material onto the floor within 3 minutes of mixing.

Application Procedure

- Spread the material to a thickness slightly greater than the desired finished thickness using a screed box or trowel.
- Finish the surface with a steel finishing trowel, maintaining consistent stroke direction.
- Avoid excessive troweling to prevent surface defects.
- Final installed thickness should be 1/4" to 3/8".

For applications exceeding 1 inch thickness, add 25 lbs of clean, dry 3/8" pea gravel to the mix to reduce heat generated during curing.

Immediately after finishing, lightly roll the surface with a mohair roller, limiting rolling to two passes maximum.

Excessive rolling or use of loop rollers may reduce slip resistance.

NOTE: Late or aggressive rolling may cause pinholes.

Place adjacent material within 10 minutes to maintain a wet edge and prevent visible seams.

NOTICE TO BUYER – DISCLAIMER

River Resins™ warrants that its products are manufactured to strict quality control standards and that the information provided is accurate to the best of our knowledge.

The information supplied is intended solely as guidance for evaluating product suitability. Users must conduct their own testing to determine fitness for their intended application.

NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS PROVIDED.

River Resins™ shall not be liable for incidental or consequential damages. Liability is limited to replacement of the product or refund of the purchase price at the sole discretion of River Resins™.

River Resins™ products contain chemicals that may cause serious injury. Always read the Safety Data Sheet (SDS) and follow all safety precautions before use.



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