TECHNICAL DATA SHEET

RIO-CRETE SF

Trowel Applied Heavy-Duty Polyurethane Concrete

TECHNOLOGY DESCRIPTION
RIO FLOORING SYSTEMS represent the next generation of polyurethane concrete technology. These Bio-Based flooring systems utilize domestically produced soy bean oil and environmentally friendly packaging.

PRODUCT DESCRIPTION
RIO-CRETE SF is a heavy-duty seamless flooring system typically installed at 1/4" in thickness. RIO-CRETE SF tough and withstands thermal shock, impact, abrasion and chemical exposure. RIO-CRETE SF offers various surface profiles to meet individual project requirements. RIO-CRETE SF is formulated with a natural additive to be resistant to fungi growth per the industry standard ASTM G-21.

TYPICAL PROPERTIES AT 70°F

Compressive Strength (ASTMC-579)	8,200 psi
Tensile Strength (ASTM C-307)	975 psi
Flexural Strength (ASTM C-580)	2,500 psi
Bond Strength (ASTMD-4541)	100% Concrete Failure
Impact Strength, in/lbs (ASTM D-4226)	>160 in-lb
VOC	5 gm/l
Resistance to Fungi Growth (ASTM G-21)	Passes, Rating of 1

The data shown above reflects typical results based on laboratory testing under controlled conditions. Variations from the data shown may result. Test methods are modified where applicable.

INSTALLATION DATA

Application Temperature, ambient	40 – 85ºF
Application Temperature, material	50 – 80ºF
Shelf Life	6 months
Pot Life,@77ºF	15 minutes
Traffic, @77ºF	Light:12 hours / Full: 24 hours
Fully Cured,@77ºF	7 days

IMPORTANT INFORMATION
1. RIO-CRETE SF is not color stable unless UV resistant topcoat is used.
2. RIO-CRETE flooring should not be installed on wet concrete.
3. Floors should be sloped to drain to prevent standing water or chemicals.
4. Spills should be removed as soon as possible to prevent a slipping hazard.
5. Confirm product performance in specific chemical environment prior to use.
6. Prepare substrate according to "Surface Preparation" portion of this document.
7. Follow detailed instructions in the "Installation Steps" portion of this document.
8. Always use protective clothing consistent with OSHA regulations during use.
9. Refer to Safety Data Sheet for detailed safety precautions.
10. For industrial/commercial use. Installation by trained personnel only.

BENEFITS
- Seamless, hygienic finish; no grout joints
- Impact & abrasion resistant surface
- Low odor, fast installation, fast cure
- Thermal shock & chemical resistant
- High temperature resistant to 200ºF, varies with different topcoat options
- Anti-slip surface, meets ADA recommendations
- Resistant to moisture vapor transmission (MVT)
- Resistant to fungi growth per ASTM G-21

RECOMMENDED USES
- Food & beverage processing facilities
- Chemical process facilities
- Pharmaceutical facilities
- Wet processing & packaging areas
- Commercial Kitchens

GENERIC DESCRIPTION
Polyurethane Concrete

TYPICAL APPLICATION
1/4" Slurry applied broadcasted and top coated

AVAILABLE COLORS
Red, Dark Red, Gray, Dark Gray, Tan, Green, Blue, Light Blue, Safety Yellow

PACKAGING & COVERAGE
1/2 Gallon Part A, 1/2 Gallon Part B
1 SF Filler Bag
3 fluid oz. liquid pigment

23 sq ft/unit for a 1/4" finished floor

SURFACE PREPARATION

Concrete: Apply only to properly prepared clean, dry and sound concrete substrates that are free of all coatings, sealers, curing compounds, oils, greases or any other contaminants.

- New concrete should ideally be cured for a minimum of 14 days to reduce possible shrinkage cracking in the concrete. RIO-CRETE SF can be installed after 7 days or when concrete reaches a minimum 3,500 psi compressive strength, which will allow for proper surface preparation, however, early curing movement, shrinkage or cracking that may occur in the concrete will be reflected through the final RIO-CRETE flooring.
- Concrete that has been contaminated with chemicals or other foreign matter must be neutralized or removed.
- Remove any laitance or weak surface layers including broom finish surface.
- Concrete should have a minimum surface tensile strength of at least 300 PSI per ASTM D-4541.
- Surface profile shall be CSP-5 or greater meeting ICRI (International Concrete Repair Institute) standard guideline #03732 for coating concrete, producing a profile equal to 40-grit sandpaper or coarser. Prepare surface by mechanical means to achieve this desired profile.
- All concrete surface irregularities, cracks, expansion joints, control joints and terminations should be properly addressed and prepared prior to application of the flooring. Moving joints and cracks will reflect through the final installed RIO-CRETE flooring.

INSTALLATION STEPS

IMPORTANT – Follow the detailed application instructions and the safety instructions listed on the product Safety Data Sheets (SDS) copies available upon request. The following installation summary is for reference only and should not be relied upon as all inclusive. RIO-CRETE systems should only be installed by trained persons experienced in polyurethane concrete flooring applications.

1. To prevent lifting or delamination, keyways (minimum 5/16” wide x 5/16” deep) must be cut at all terminations, joints, columns, doorways, and drains.
2. Clean sand and dust from prepared concrete where the floor is to be installed.
3. A cove base material can be used to install a cove and/or base as required. The cove/base can be installed before or after the installation of the RIO-CRETE SF depending on the specification and or the desired result.
4. It is very important to utilize a proper mixer and paddle to ensure a complete mix and to reduce the risk of introducing excessive air into the mixture. Rio Flooring Systems recommends the use of a MAN-U-FAB M-61 (1 HP) mixer with a 10 gallon pail and TR4-10 mixing arm. (www.mixall.com)
5. With the mixer running, pour ½ Gallon Part A into the mixing pail.
6. Add 3 fluid oz. liquid pigment to Part A and mix for about 15 seconds.
7. Add ½ Gallon Part B, mix another 15 seconds.
8. Gradually add all contents of a bag of RIO-CRETE SF filler into the liquid mixture and blend thoroughly until all particles are wetted out, normally about two minutes.
9. Immediately after mixing (within 3 minutes), spread the mixed RIO-CRETE SF onto the floor at the desired thickness, using a cam rake or trowel. Approximately 3/16” for a 1/4” finished floor.
10. Lay abutting edges within 10 minutes to ensure a clean edge. A “wet edge” installation is imperative during large placements to avoid lines and ridges in the finished floor.
11. Evenly apply to desired thickness while trying to keep cam rake lines to a minimum. Backroll across slurry with spike roller to help settle aggregates and blend cam rake lines. Further roll with loop/texture roller perpendicular to cam rake lines over entire floor to even and settle slurry prior to broadcasting.
12. Broadcast to rejection specified broadcast media (aggregate or decorative flakes) onto the wet slurry. Do not broadcast onto the wet edge area until settling and backrolling is complete. Continue broadcasting until no wet areas remain.
13. After curing (approximately 6-8 hours to withstand foot traffic), remove all excess broadcast media and scrape floor as required.
14. Apply specified topcoat to lock system and achieve desired slip resistance.

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