



Section 09678 – Seamless Quartz Flooring GRANIT-ROCK™ 1/4" 250 mil (6.4mm) Decorative Composite Flooring System

SPECIFICATION

NOTE TO SPECIFIER

The purpose of this document is to provide pertinent information to a specifier in writing a specification for the use of ROCK-TRED's GRANIT-ROCK™ 1/4" 250 mil (6.4mm) Decorative Composite Flooring System. Questions regarding the selection, installation, or intended end use of ROCK-TRED materials should be directed to a ROCK-TRED technical representative. This document is prepared to be a part of a complete project specification.

PART 1 - GENERAL

1.01 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this section.

1.02 Work Included

- A. This section specifies a highly decorative, seamless epoxy polymer flooring system utilizing multi-colored quartz aggregates to provide an aesthetic, chemical resistant and durable wearing surface.
- B. This Section includes all materials, accessories, labor, equipment, etc., necessary and incidental to the completion of the GRANIT-ROCK™ 1/4" 250 mil (6.4mm) Decorative Composite Flooring System as shown on the drawings and as specified herein. This system can be installed in a variety of temperatures and methods, as well as a variety of colors, degrees of surface texture, and chemical resistance depending upon the requirements of this project.

1.03 Related Work

- A. Concrete – Section 03300
(Note to Specifier: The concrete slab should be either water cured or cured using sodium silicate curing compounds only. Other types of curing compounds are, for the most part, not acceptable. Concrete should be cured for a minimum of 28 days. On or below grade slabs should have a vapor barrier underneath)
- B: Floor Drains – Div. 15
(Note to Specifier: Floor drains, clean outs, etc., should be of the "floor flange" type as manufactured for use with composition floors by most major drain manufacturers.)

1.04 Submittals

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. System Data: Submit manufacturer's specification on cured system and individual components of the 1/4" 250 mil (6.4mm) Decorative Composite Flooring System, including physical properties and performance properties and tests described in part 2.02 and submit Material Safety Data Sheets. Each individual component of the system will be evaluated on the basis of these standards. For any tests not listed in the manufacturer's standard data, the manufacturer must supply the missing data accompanied by an independent testing laboratory's test results which prove compliance in accordance with the referenced standards.
- C. Samples for initial selection purposes in the form of manufacturer's color charts showing full range of colors and finishes available.
- Contractor shall submit 2" x 4" (5.08cm x 10.16cm) samples in color and profile as selected.
 - Contractor shall also submit material certificates signed by manufacturer certifying that the epoxy floor sealing system complies with the requirements specified herein.
- D. The intention of this section is to provide the products as named. Substitutions will only be considered when received by the specifier through a bidding contractor at least 10 days prior to the date set forth for the receipt of bids. Upon receipt of any submission, the specifier will determine that the proposed system is an approved equal, and will issue an addendum to all bidders 48 hours prior to receipt of bids. No substitutions will be considered after contract bid date.

1.05 Quality Assurance

- A. Manufacturer's Qualifications: Obtain System materials from a single manufacturer with a minimum of 20 years verifiable experience providing materials of the type specified in this section.
- B. Installer Qualifications: Engage an experienced, minimum 3 years, installer or applicator who has specialized in installing resinous flooring types similar to that required for this Project and who is acceptable to the manufacturer of the primary materials.
- C. The contractor shall submit a copy of the manufacturer's packing slip, tagged for this specific job, along with calculations, signed by an officer of the primary material supplier demonstrating that the quantity of material furnished for the project will achieve the specified coverage and mil thickness.
- D. Floor Thickness Verification: At the owner's discretion, and under his supervision, the contractor shall take the requested number of 1" cores every 1000 sq. ft. (2.54cm every 92.9m²) through the system and into the substrate to verify the proper system thickness. Areas less than the specified thickness shall be removed and replaced or increased in thickness by the installing contractor, in a manner that does not affect the performance or integrity of the system. Report in writing to architect/engineer, with a copy to manufacturer, any deficiencies that could impair work. Surfaces must be approved prior to application of system.
- E. The contractor shall furnish a standard guarantee of the system for a period of one year after installation. The labor and material guarantee shall include loss of bond and wear-through to the concrete substrate from normal use. Not included in the warranty are damage due to structural design deficiencies including, but not limited to, slab movement, damage due to forklift abuse, delamination due to moisture vapor transmission, Acts of God, or other elements beyond the scope of protection of this system nor causes not related to the system materials. In case of a warranty claim, the owner will notify the contractor in writing within 30 days of the first appearance of problems covered under this warranty. The owner will provide unencumbered access to the area during normal working hours for warranty rework, and property protection is also the owner's responsibility. Remedy is limited to direct repair of the system specified.

1.06 Delivery, Storage and Handling

- A. Deliver materials in original packages and containers with seals unbroken and bearing manufacturer's labels containing brand name, directions for storage and handling, mixing instructions and lot number.
- B. Store materials in accordance with manufacturer's instructions, with seals and labels intact and legible. Maintain temperatures within the manufacturer's required range. Do not use materials that have exceeded the manufacturer's recommended shelf life.

1.08 Project Conditions

- A. Maintain minimum concrete surface temperature of 60 °F (15.6°C) for at least 72 hours before, during and after installation until cured. If the concrete surface temperature is between 35°-60°F (2°C -16°C), install the Low Temperature/Fast Cure version of GRANIT-ROCK. This system can also be used in situations where a faster cure time is required at ambient temperatures.
- B. Concrete must be free of hydrostatic, capillary or moisture vapor pressure. Substrates in contact with ground must have a properly installed, effective vapor barrier.
- C. Concrete should have been designed and installed as approved by architect/engineer to minimize random cracking, curling, slab deflections and shall contain well designed control and isolation joints as approved by architect/engineer.
- D. Concrete surface should be free of sealers or membrane curing agents.
- E. Comply with manufacturer's recommendations for maintenance of ambient temperature, moisture, humidity, ventilation and other conditions required for system installation.
- F. Permanent lighting should be in place and working during the installation. Also, verify adequate supply of utilities, including electricity, water, and heat.

PART 2 - PRODUCTS

2.01 Materials

- A. Epoxy Primer: POXI-ROCK Primer, a two component, 100% solids polyamide epoxy coating as manufactured by ROCK-TRED Corporation, Skokie, Illinois.
- B. Mortar Layer: POXI-ROCK Flooring, a three component, 100% solids epoxy mortar/resurfacer as manufactured by ROCK-TRED Corporation, Skokie, Illinois.
- C. Grout Coat: POXI-ROCK Top Dressing, a two component, thixotropic 100% solids epoxy coating as manufactured by ROCK-TRED Corporation, Skokie, Illinois.

- D. ROCK-TRED Colorant: In field color dispersion for Grout Coat as manufactured by ROCK-TRED Corporation, Skokie, Illinois.
- E. Multi-Colored Aggregate: GRANIT-ROCK Quartz Aggregate, a 40 mesh colored silica sand as manufactured by ROCK-TRED Corporation, Skokie, Illinois.
- F. Top Coat: CHEM-ROCK Seal/Coat, a two component, 100% solids, "water clear", cycloaliphatic epoxy coating as manufactured by ROCK-TRED Corporation, Skokie, Illinois.

2.02 Properties

A. Colors: As selected by specifier from manufacturer's standard colors.

B. Physical Properties:

Provide flooring system that meets or exceeds the listed minimum physical property requirements when tested according to the referenced standard test method.

PROPERTY	TEST METHOD	RESULT
Compressive Strength	ASTM C-579	12,000 psi (82740 kPa)
Tensile Strength	ASTM D-638	8,500 psi (58610 kPa)
Coefficient of Expansion	ASTM C-531	2.5 x 10 ⁻⁵ / °C
Flexural Modulus of Elasticity	ASTM D-790	5.5 x 10 ⁶ psi (3.79 x 10 ⁷ kPa)
Flexural Strength	ASTM D-790	14,000 psi (96530 kPa)
Bond Strength	ACI COM #503	400+ psi (2758 kPa) w/concrete failure
Flammability	ASTM D 635	Self-Extinguishing
Shore D Hardness	ASTM D 2240	80+
Impact Resistance	ASTM D 4226	>160 in-lbs (18.08 Nm)
Abrasion Resistance	ASTM D 4060	0.08g
Indentation	Mil-D-3134F	None
Flammability	ASTM D-635	Self-Extinguishing
Water Absorption	ASTM C-413	0.2%
VOC Content	EPA Method 24	0 g/l
Cure Time (For Use)	N/A	12-18 Hours

2.03 Supplemental and Optional Materials

- A. (Optional): AGUA-ROCK, a two component, 52% solids, water-based epoxy, as manufactured by ROCK-TRED Corporation, Skokie, Illinois. Recommended for concrete surfaces over 20 years old, or those without a moisture barrier, or those that are oil and grease saturated. Not to be used with the low temperature version.
- B. (Optional): ELASTI-POXI Membrane, a two-component 100% solids, elastomeric epoxy coating as manufactured by ROCK-TRED Corporation, Skokie, Illinois. Recommended for waterproofing and to reduce reflective cracking from the substrate. Not to be used with the low temperature version.
- C. (Optional): POXI-ROCK LT Flooring, a three component, 100% solids epoxy mortar/resurfacer that cures down to 35°F (2°C). May be used in place of POXI-ROCK Flooring for cold temperature or fast cure applications.
- D. (Optional): POXI-ROCK LT Top Dressing, a two component, 100% solids epoxy coating that cures down to 35°F (2°C). May be used in place of POXI-ROCK Top Dressing as the Grout Coat for cold temperature and fast cure applications.
- E. (Optional): CHEM-ROCK LT Seal/Coat, a two-component, 100% solids, epoxy coating that cures down to 35F (2°C). May be used in place of CHEM-ROCK Seal/Coat for Top Coat for cold temperature or fast cure applications.
- F. (Optional): NOVO-BRITE, a two-component, 100% solids water-clear Novolac Epoxy, as manufactured by ROCK-TRED Corporation, Skokie, Illinois. May be used in place of CHEM-ROCK Seal/Coat for Middle and Top Coats for applications requiring High Heat and Chemical Resistance. DO NOT TOP COAT WITH ANY OTHER PRODUCT
- G. (Optional): CHEM-THANE SB or WBU Urethane (Gloss or Satin), as manufactured by ROCK-TRED Corporation, Skokie, Illinois. Recommended as an additional top-coat for added abrasion resistance. Do Not Use with NOVO-BRITE.
- H. (Optional): ELASTI-POXI Joint Fill, a 100% solids, thixotropic elastomeric joint filler, as manufactured by ROCK-TRED Corporation, Skokie, Illinois.

PART 3 - EXECUTION

3.01 Inspection

- A. Examine substrates and conditions under which work will be performed for compliance with manufacturer's requirements for application of coating materials. Do not proceed with application until unsatisfactory conditions have been corrected.
- B. Start of coating work will be construed as the Contractor's acceptance of surfaces within particular area.

3.02 Surface Preparation

- A. The substrate must be clean, dry and sound with new concrete cured for at least 30 days at 70 °F (21°C). Remove dust, laitance, grease, curing compounds, waxes, paints and loose coatings, foreign particles, and disintegrated or soft base materials. Create a surface profile on concrete by either steel shot blasting or acid etching. For more specific concrete preparation information and methods, refer to ROCK-TRED's Surface Preparation Guide.

3.03 Installation

- A. General:
Apply each component of the GRANIT-ROCK 1/4" 250 mil (6.4mm) Decorative Composite Flooring System in compliance with manufacturer's written installation instructions and strictly adhere to mixing and installation instructions, recoat windows, cure times and environmental conditions. GRANIT-ROCK can be installed directly over non-moving control joints and cracks that have been repaired/filled ELASTI-POXI² Joint Fill. (See ROCK-TRED's Floor Patching and Joint Repair Guide). GRANIT-ROCK shall terminate at the edge of isolation and expansion joints as designated by the Architect, Engineer or Design Professional. Cove base shall be installed where specified in the drawings.
- B. Apply epoxy and aggregate matrix in accordance to manufacturer's written instructions to a total thickness of 1/4" 250 mils (6.4mm), by trowel and broadcast method.

3.04 Curing, Cleaning, Protection and Maintenance

- A. At the end of each workday, remove rubbish, empty cans, rags and other discarded materials from the site. Dispose of all waste in accordance with federal, state and local regulations.
- B. Protect adjacent surfaces/areas from damage resulting from work of this trade. If necessary, mask and/or cover adjacent surfaces, fixtures, equipment, etc. by suitable means.
- C. Advise other trades of fixtures and fittings not to be installed until floor is cured.
- D. Take necessary precautions to protect floor during installation/cure such as: caution tape, barriers, etc. If floor is to be used (by the customer or other trades) before the "full cure" time specified by the manufacturer, place masonite or other suitable covering over floor that is set to walk on but not fully cured.
- E. Maintain floor in accordance with manufacturer's written Floor Maintenance Instructions, and use floor cleaners as recommended by floor system manufacturer. Always test each cleaner in a small area to how it will affect the floor's gloss, color and texture.

RELATED DOCUMENTS:

GRANIT-ROCK Installation Guide
GRANIT-ROCK Decorative Flooring System Data Sheet
GRANIT-ROCK Chemical Resistance Guide
GRANIT-ROCK Aggregate Data Sheet
CHEM-ROCK Primer Data Sheet
CHEM-ROCK Seal/Coat Data Sheet
AGUA-ROCK Product Data Sheet
CHEM-ROCK LT Seal/Coat Data Sheet
POXI-ROCK Top Dressing Data Sheet
POXI-ROCK Flooring Data Sheet
POXI-ROCK LT Flooring Data Sheet

POXI-ROCK LT Top Dressing Data Sheet
ELASTI-POXI Joint Fill Data Sheet
ELASTI-POXI Membrane Data Sheet
NOVO-BRITE Data Sheet
CHEM-THANE SB or WBU Data Sheet
ROCK-TRED Crack and Joint Repair Guide
ROCK-TRED Surface Preparation Guide
ROCK-TRED Floor Maintenance Guide
ROCK-TRED Seamless Flooring Reference Guide