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SECTION 09600  
RESINOUS EPOXY FLOOR COATING

# GENERAL

## related sections

### Seamless, resinous, general service, 100% solids, anti-slip, epoxy floor coating.

## Summary

### Definitions: Resinous epoxy floor coating system includes an 100% solids, 0 VOC, two component, moisture-tolerant, pigmented, general service, epoxy primer and an 100% solids, 0 VOC, two component, moisture tolerant, pigmented, general service epoxy topcoat.

## Measurement and Payment

### All costs associated with the work of this Section shall be included in the price(s) for Item No(s). \_\_\_ in the Bid Form.

## Submittals

### Product Data: Submit manufacturer's technical data, installation instructions, and general recommendations for each resinous flooring material required. Include certification indicating compliance of materials with project requirements.

### Samples: Submit, for verification purposes, 4-inch square samples of each type of resinous flooring material required, applied to a rigid backing, in color and finish indicated.

#### For initial selection of colors and finishes, submit manufacturer's color charts showing full range of colors and finishes available.

#### For initial selection of texture, submit manufacturer’s texture samples showing full range of slip resistant textures available.

##### Owner may opt for smooth coating in lieu of anti-slip coating.

## Quality Assurance

### Single Source Responsibility: Obtain primary resinous flooring materials including primers, resins, hardening agents, aggregates, finish or sealing coats from a single manufacturer with not less than ten years of successful experience in manufacturing and installing principal materials described in this section. Contractor shall have completed at least five projects of similar size and complexity; Stonhard or approved equal.

### Pre-Installation Conference

#### General contractor shall arrange a meeting not less than thirty days prior to starting work.

#### Attendance.

##### General Contractor.

##### Architect/Owner's Representative.

##### Manufacturer/Installer's Representative.

### ISO 9001: All materials, including primers, resins, curing agents, finish coats, aggregates and sealants are manufactured and tested under an ISO 9001 registered quality system.

## Delivery, Storage and Handling

### Material shall be delivered to job site and checked by flooring contractor for completeness and shipping damage prior to job start.

### All materials used shall be factory blended and packaged in single, easy to manage batches to eliminate on site blending errors. Only the on-site weighing of catalyst will be allowed.

### Material shall be stored in a dry, enclosed area protected from exposure to moisture. Temperature of storage area shall be maintained between 60 and 85°F (16 and 30°C).

## Project Conditions

### Concrete or masonry substrates shall be properly cured for a minimum of 30 days and shall be tested to ensure relative humidity or water vapour emission rates are in accordance with Manufacturer’s recommendations. A vapor barrier or exterior applied waterproofing membrane must be present for concrete slabs below grade.

### Utilities, including electric, water, heat (air temperature between 32 and 85°F (0 and 30°C) and finished lighting to be supplied by General Contractor.

### Job area to be free of other trades during, and for a period of 24 hours, after flooring system installation.

### Protection of finished flooring system from damage by subsequent trades shall be the responsibility of the General Contractor.

## Warranty

### Manufacturer shall furnish a single, written warranty covering both material and workmanship for a period of one (1) full year from date of installation.

# PRODUCTS

## Colours

### Colors: To be selected by Owner from manufacturer's standard colors.

## Resinous Flooring System

### Stonkote GS4 as distributed by Stonhard division, RPM Canada or approved equal. System is a nominal 12-16 mil, 100% solids, 0 VOC, two-component, moisture tolerant, general service, epoxy floor coating. Stonkote GS4 is comprised of an 100% solids, 0 VOC, moisture tolerant, general service, epoxy primer and an 100% solids, 0 VOC, moisture tolerant, general service, epoxy topcoat. Provide broadcast aggregate per manufacturer’s instructions to provide anti-slip finish.

#### Physical Properties: Provide flooring system in which minimum physical properties of the complete system, including primers, fillers, aggregates, and sealers, and when tested in accordance with standards or procedures referenced below, are as follows:

##### Hardness (ASTM D-2240, Shore D): 80-85.

##### Abrasion Resistance (ASTM D-4060, CS-17, 1 kg Load, 1,000 cycles): 0.02 gm max. weight loss.

##### Bond Strength (ASTM D-7234): >400 psi (100% concrete failure).

##### Heat Resistance Limitation:

###### 140°F/60°C (for continuous exposure).

###### 200°F/93°C (for intermittent spills).

##### Cure Rate allow (at 77oF/25oC):

###### 8 hours for tack-free surface.

###### 24 hours minimum for normal operations.

##### Fire Resistance of Dry Film (CAN/ULC S102.2): Class A.

###### Flame Spread – 0.

###### Smoke Developed – 34.

## Joint Sealant Materials

### Type produced by manufacturer of resinous flooring system for type of service and joint condition indicated.

# EXECUTION

## Preparation

### Concrete Substrate: Concrete preparation shall be by mechanical means and may include use of diamond grinder, sander, shotblast method and / or other mechanical means for removal of bond inhibiting materials such as curing compounds, dust, form release agents or laitance. General contractor shall approve concrete preparation to ICRI Concrete Surface Profile 3 minimum prior to coating application.

### All projections, rough spots, etc. should be removed and patched to achieve a level surface prior to the application.

### Voids, Cracks, etc.: Repair and treat voids, surface cracks, etc. utilizing manufacturer’s standard materials.

## Application

### General: Apply each component of resinous flooring system in compliance with manufacturer's directions to produce a uniform monolithic surface of thickness indicated, uninterrupted except at expansion joints or other types of joints (if any), indicated or required.

### Primer: Mix and apply primer over properly prepared substrate with strict adherence to manufacturer's installation procedures and coverage rates. Primer shall be applied in one coat at 6-8 mils thickness immediately after mixing using high quality medium nap rollers. Coordinate timing of primer application with application of flooring system to ensure optimum inter-coat adhesion.

### Topcoat: Mix material according to manufacturer's recommended procedures. Topcoat material shall be applied in two coats at 6-8 mils per coat immediately after mixing using high quality medium nap rollers. Strict adherence to manufacturer's coverage rates shall be maintained.

### Broadcast aggregate: Per manufacturers recommended procedures to provide an anti-slip finish.

## Field Quality Control

### The right is reserved to invoke the following material testing procedure(s) at any time, and any number of times during period of flooring application.

### The Owner will engage service of an independent testing laboratory to sample materials being used on the job site. Samples of material will be taken, identified and sealed, and certified in presence of Contractor.

### Testing laboratory will perform tests for any of characteristics specified, using applicable testing procedures referenced herein, or if none referenced, in manufacturer's product data.

### The General Contractor shall engage service of an independent coating inspector to perform core tests to verify installation thickness meets the requirements of the specification. Installer shall repair to the Architect’s satisfaction any damage in the flooring system.

### If test results show materials being used do not comply with specified requirements, flooring contractor may be directed by Owner to stop work; remove non-complying materials; pay for testing; reapply flooring materials to properly prepared surfaces which had previously been coated with unacceptable materials.

## Curing, Protection and Cleaning

### Cure resinous flooring materials in compliance with manufacturer's directions, taking care to prevent contamination during stages of application and prior to completion of curing process. Close area of application for a minimum of four (4) hours after application.

### Protect flooring system from damage and wear during construction operation. Where temporary covering is required for this purpose, comply with manufacturer's recommendations for protective materials and method of application. General Contractor shall be responsible for protection and cleaning of surfaces after final coats.

### Cleaning: Remove temporary covering and clean resinous flooring system prior to final inspection. Use cleaning materials and procedures recommended by resinous flooring system manufacturer. General Contractor shall be responsible for cleaning of the surfaces prior to inspection.

END OF SECTION