

SECTION 096723

RESINOUS FLOORING CASTORCRETE® RT-B

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 1. Moisture vapor emission testing.
 2. Surface preparation.
 3. Furnishing and installation of urethane mortar flooring.

1.02 RELATED SECTIONS

- A. Section 03300 - Cast-In-Place Concrete:
 1. Concrete slabs on or below grade shall be installed over an effective moisture vapor barrier.
 2. Concrete slabs shall be cured 30 days, be structurally sound and have a steel trowel finish.
 3. Surface shall be well sloped to drains, straight and level with the permissible degree of tolerance of 1/4" in 10'-0" in any direction.
 4. No curing compounds or surface contaminants shall be used in placing new concrete.

1.03 SUBMITTALS

- A. Submit manufacturer's product data, literature and brochures.
- B. Submit manufacturer's samples showing color choices and texture.
- C. Submit a statement from the manufacturer indicating the installer's certification.
- D. Prior to commencing work, installer shall prepare two 6" x 6" samples of the resinous flooring chosen for the project showing actual color, thickness and texture. These samples shall serve as a basis for comparison throughout the duration of the work.

1.04 QUALITY ASSURANCE

- A. All materials used in CastorCrete RT-B flooring system shall be manufactured by a single manufacturer to ensure compatibility and proper bonding.
- B. Applicator shall have a minimum of 3 years experience in the installation of urethane mortar flooring and be certified by the manufacturer.
- C. Owner reserves the right to core drill the finished flooring system in 3 locations to verify the thickness of the application. If the specified thickness has not been achieved, the contractor may be directed to pay for testing and reapply flooring materials until the desired thickness is obtained.

1.05 DELIVERY, STORAGE AND HANDLING

- A. All material shall be delivered to the job site in unopened containers clearly labeled by the manufacturer and stored in a dry location at a 65 - 85 degrees Fahrenheit.

1.06 WARRANTY

- A. Manufacturer shall warrant that the materials are free from defects and comply with written specifications.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. CastorCrete RT-B shall be supplied by Arizona Polymer Flooring, Inc., Phoenix, Arizona. Aggregate fillers shall be supplied by Arizona Polymer Flooring, Inc. or other suitable sources approved by the manufacturer.

2.01 MATERIALS

- A. Castorcrete RT-B urethane mortar.
- B. Aggregate shall be 30 mesh silica or color quartz sand as specified by the manufacturer to meet system requirements.
- C. Optional topcoat of a 100% solids epoxy novolac.
- D. Elastomeric caulking compounds shall be supplied by Vulkem, SIKA or Sonneborn.

2.03 SYSTEM DESCRIPTION

- A. Flooring system to be a minimum 1/4" thick with color and texture to match the sample chosen.
- B. Finished flooring system shall have the following performance characteristics:
 - 1. Compressive Strength (ASTM C 579): 9500 psi.
 - 2. Tensile Strength (ASTM C 307): 2500 psi.
 - 3. Flexural Strength (ASTM C 580): 4200 psi.
 - 4. Hardness, Shore D (ASTM D 2240): 85
 - 5. Impact Resistance (ASTM D 2794): passes 160 inch pounds.
 - 6. Thermal Shock Resistance (ASTM D 1044): passes.
 - 7. Tabor Abrasion (ASTM D 1044): 34 mg. loss.
 - 8. Water Absorption (ASTM D543): 0.2%
 - 9. Bond Strength (ACI 503.4-2.3.2): 350 psi, concrete failure.
 - 10. USDA Approval: Approved
- C. Chemical Resistance: (ASTM D 1308, 24 hour exposure).

- Key:
- 1. - Suitable for continuous contact
 - 2. - Suitable for intermittent spills and continuous contact up to 72 hours
 - 3. - Suitable for intermittent spills if followed promptly by water flushing
 - 4. - Not recommended

*Coating stains when exposed to this chemical

Acetic Acid, 15%	1	Formaldehyde.....	1
Acetic Acid, 25%	1	Formic Acid 25%	1
Acetic Acid, Glacial.....	2	Hydrobromic Acid, 48%	*1
Acetone	4	Hydrochloric Acid, 37%	*1
Aluminum Chloride.....	1	Hydrofluoric Acid 25%	*2
Aluminum Nitrate.....	1	Hydrogen Peroxide, 30%.....	1
Aluminum Sulfate	1	Lactic Acid, 50%	1
Ammonium Hydroxide.....	1	Lactic Acid, 85%	2
Ammonium Nitrate	1	Jet Fuel.....	3
Ammonium Sulfate.....	1	Isopropyl Alcohol	1
Aniline.....	2	Maleic Acid, 40%	2

Barium Chloride	1	Methanol.....	2
Barium Hydroxide.....	1	Methylene Chloride.....	3
Barium Sulfide.....	1	Methyl Ethyl Ketone	3
Beer.....	1	Nitric Acid, 15%	*1
Benzene	1	Oleic Acid	1
Brake Fluid.....	1	Phosphoric Acid, 85%	1
Boric Acid	1	Potassium Chloride	1
N-Butyric Acid, 50%	2	Potassium Cyanide.....	1
Calcium Chloride	1	Potassium Hydroxide.....	1
Calcium Hydroxide	1	Potassium Nitrate	1
Calcium Nitrate.....	1	Potassium Sulfate.....	1
Calcium Sulfate	1	Skydrol.....	1
Chloroform	1	Sodium Hydroxide, 50%	1
Chromic Acid, 50%.....	*1	Sodium Chloride	1
Citric acid, 50%	1	Sulfuric Acid, 50%	*1
Cola Syrup.....	1	Tetrahydrofuran	3
Copper Chloride	1	Toluene.....	3
Copper Nitrate	1	Trichlorethylene	3
Copper Sulfate	1	Trichlorethane.....	2
Diesel Fuel	2	Urea.....	1
Ethyl Acetate	2	Xylene.....	1
Ethyl Alcohol.....	2		

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions:
1. Inspect surfaces to receive epoxy flooring.
 2. Conduct relative humidity probe testing for concrete moisture according to ASTM 2170.
 3. Before starting work, report in writing to the Architect any unsatisfactory condition.
 4. Application of any material shall signify that surfaces have been inspected and are satisfactory.

3.02 SURFACE PREPARATION

- A. Remove old coatings, substrate ridges and protrusions by grinding or sanding. Surfaces to receive flooring system shall be profiled to a minimum of 20 mils using mechanical scarification or shot blasting. Follow all manufacturers' written surface preparation instructions.

3.03 INSTALLATION

- A. Allow sufficient time for the installation of the flooring system. At no time shall the speed of project completion be allowed to detrimentally affect the application.
- B. Provide sufficient light, power, heat and working conditions to permit proper materials of the coating. Substrate temperature shall be at a minimum of 45 degrees F during application and for 48 hours thereafter.
- C. Apply CastorCrete RT using a gauge rake set at 3/16th of an inch.
- D. Immediately upon placement, use a trowel to remove major imperfections and back roll with a looped roller to aid in leveling.

- E. Colored quartz or 30 mesh silica sand shall be broadcasted to refusal into the wet material at a rate of .75 pound per square foot.
- F. Once the mortar is cured, remove all excess aggregate.
- G. An optional topcoat consisting of Polyurea 5000,5001 or Epoxy 900 Novolac may be installed at a rate of 125-175 square feet per gallon.
- H. After the system has cured, saw cut completely through the urethane mortar at the premarked expansion joints. Fill the joint with elastomeric polyurethane caulking according to manufacturer's instructions.

3.04 FIELD QUALITY CONTROL

- A. Installer shall monitor the thickness of the system as the work progresses. Areas found to not meet the required thickness shall receive additional material until specified thickness is attained.

3.05 PROTECTION

- A. Installation areas must be kept free from traffic and other trades during the application procedure and cure time.

END OF SECTION