

SECTION - DESCO QUARTZ CREMONA FLOORING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Sections, apply to work of this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Seamless resinous flooring. ***(This can either be a trowel, broadcast or combination system. The Architect should select the type required.)***
 - 2. Coved seamless wall base. (OPTIONAL)

1.3 QUALITY ASSURANCE

- A. All materials must be recommended and manufactured by a single supplier to insure compatibility and proper chemical and mechanical bond.
- B. Surfacing shall be applied by a surfacing applicator approved by the Architect, with a minimum of seven (7) years experience installing the brand of surfacing in similar size and function projects. A list of ten (10) completed projects using the specified materials must be submitted proving seven (7) years experience by the lead mechanic.
- C. Surfacing applicator shall provide to the architect a completed list of jobs including the names of the Architect, General Contractor, Owner, telephone numbers of all concerned, materials used, quantity installed and date completed on similar projects.
- D. Surfacing applicator must provide a written joint guarantee for materials and workmanship between applicator and surfacing manufacturer for one (1) year.
- E. Surfacing applicator or manufacturer seeking approval of products other than what is specified must supply samples, full product information, technical data with specifications, certification from an independent testing laboratory that the product being submitted for approval meets all requirements of the performance properties specified within this specification, installation instructions and comply with the above quality assurances in writing fourteen (14) days before bid letting. Omission of any item will result in an automatic rejection.
- F. Bidders will be notified by addendum of substitute surfacing materials, if approved.

1.4 SUBMITTALS

- A. Surfacing applicator shall submit samples of color and textures for Architect's approval.
- B. Prior to commencing work, at architect's discretion, applicator shall install a 100 square foot sample on the job of desired color and texture and when approved, this will serve as the standard for the entire project.

1.5 PRODUCT STORAGE AND ENVIRONMENTAL CONDITIONS

- A. Material temperatures shall be a minimum of 55°F before use.
- B. Work on seamless flooring shall not commence until the building can be maintained at a minimum temperature of 55°F for 48 hours before, during and 48 hours after application. Areas shall also be broom clean and reasonably dust free and shall have adequately controlled ventilation with bright, uniform lighting.

1.6 PROJECT CONDITIONS

- A. Before commencing work, ensure environmental and site conditions are suitable for application and curing.
- B. Surfaces shall be acceptable in accordance with flooring manufacturer's recommendations.
- C. Notify Architect and Contractor in writing of unsuitable surfaces and conditions. Commencement of work shall imply acceptance of surfaces and working conditions.
- D. Recommended Moisture Vapor Transmission Considerations:
 - 1. Placement of on-grade slabs over a Class A vapor retarder as defined by ASTM E-145.
 - 2. A water cement ratio of 0.45 and 0.5.
 - 3. Curing by ASTM C-171 sheet materials for curing concrete.
 - 4. A slump in the range of 3 to 4 inches which can be increased by the use of super plasticizers.

- E. Substrate requirements (See Appendix A).

1.7 PROTECTION

- A. Protect adjacent surfaces from damage resulting from work of this trade. If necessary, mask and/or cover adjacent surfaces, fixtures, cabinet work, equipment, etc. by suitable means.

1.8 WARRANTY

- A. Applicator shall notify manufacturer of project requirements before bidding. Manufacturer shall provide written statement before bidding to the Architect that they accept single source warranty for entire installation including labor for one year. Warranty shall include removal and replacement if proven defective. Defective items are, but not limited to debonding, regionalized discoloration, excessive wear and staining by bodily fluids. Non-acceptance in writing by manufacturer is grounds for rejection of product.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Seamless Floor Covering where called for on the drawings, install a **Desco Quartz Cremona** Floor manufactured by Desco Coatings, Inc. **1-800-426-4164**.
- B. Provide 4" high turned up coved base with 1" radius cove as indicated on drawings. (OPTIONAL)
- C. Provide elastomeric waterproof membrane. (OPTIONAL)
- D. Binder and all successive grout and top coats shall be 100% solids clear/epoxy resin. Ceramic coated quartz aggregates as supplied by Desco Coatings are to be used to achieve all color. No pigmented epoxy base or top coats allowed.
- E. Minimum Performance Characteristics:
- | | |
|--------------------------------------|-------------|
| 1. Compressive Strength (ASTM C-579) | 10,000 psi |
| 2. Tensile Strength (ASTM C-307) | 2,250 psi |
| 3. Flexural Strength | 4,000 psi |
| 4. Shore D Hardness (ASTM D-2240) | 85-90 |
| 5. Bond Strength (ASTM D-4541) | 425 psi |
| 6. Abrasion Resistance (ASTM D-4060) | 0.08 gm |
| 7. Pot Life | 35 min |
| 8. Cure Time @ 77° F | 10-12 hours |
- Epoxy top coats shall produce no color shift after exposure to fluorescent lighting on the "b" axis yellow index after 3 weeks exposure.

20% Hydrochloric Acid	10% Lactic Acid
Urine	Tea
Coffee	Mustard
Ethyl Alcohol	Mercurochrome
	Betadyne

PART 3 – EXECUTION

3.1 TESTING OF CONCRETE SUBSTRATE

One of the following three methods shall be used to determine moisture content of slab at time of application. These test only measure the specific area tested at the time of the test and are not predictors of future substrate conditions.

- A. Using a Tramax concrete moisture detection device, firmly apply the test apparatus to concrete that has had sealers or other subsequent coatings removed. The readings shall be 4.5% or less. If readings are higher, use ASTM F-2170 for non conditional spaces and/or ASTM F1869 for conditioned spaces.
- B. ASTM F-2170 in sites Relative Humidity Test. Follow test procedures of manufacturer of testing equipment. Reading should be below 80%. If above 80%, use the next test method below. (Only if space is conditioned.)
- C. ASTM F-1869 Calcium Chloride Moisture Vapor Transmission Test. Follow test procedures of manufacturers of MVT kits. Results should be below 3 to 4 lbs/1,000 square feet/24 hours.

3.2 FLOORING PREPARATION

- A. Surface must be clean, sound and dry.
- B. Effectively remove concrete laitance on accessible floor surfaces by mechanical shot blast. Acid etching is not acceptable.
- C. Areas where flooring is existing must be cleaned to remove all floor material, grease or any residue that might retard interfacial adhesion between substrate and surfacing.

3.3 FLOORING APPLICATION

- A. Apply flooring in accordance with manufacturer's printed instructions, employing lead mechanic qualified under the quality assurance portion of this specification, using equipment specifically designed for this purpose.
- B. Thickness varies with System selected. Choose one of the following.
 - 1. Desco Quartz Cremona T is a hand troweled grade 11 Desco quartz aggregate with 20% of grade 28 as a filler. The system should be hand troweled to 3/16" thickness over epoxy primer. ***(This system is normally used in Restrooms and areas requiring a smooth floor for ease of maintenance. A slip resistant aggregate can be included in the final topcoat but may loose some of the texture over time in high traffic areas).***

2. Desco Quartz Cremona DB is a double broadcast floor consisting of Desco quartz grade 28 aggregates. The system should be applied as a double broadcast to produce a nominal 1/8" surfacing. Texture can be coarse, medium or smooth. ***(The DB system is normally used in showers, locker rooms, light duty kitchens and other areas where permanent slip resistance is required.)***

C. Install OPTIONAL integral cove base to height of 4" with 1" radius cove. (OPTIONAL as designated in the finish schedule.)

1. Trowel apply vertical cove base.
2. Hand sand cove base.
3. Apply three coats of resin to assure a smooth surface and cove.
4. Do not allow resin to puddle in cove.

D. Install OPTIONAL waterproof membrane to a dry mil thickness of 20 mils. (OPTIONAL as designated in the finish schedule.)

E. Finished work shall match approved samples; be uniform in thickness, sheen, color, pattern, and texture; and be free from defects detrimental to performance.

3.2 PROTECTION

A. After completion of flooring the General Contractor/Owner shall protect flooring from damage by other trades.

END OF SECTION

APPENDIX A

GENERAL SUBFLOOR REQUIREMENTS

CONCRETE -- Section 03300

1.
 1. Concrete should have been designed and installed to minimize random cracking and slab deflections; provide sufficient control joints and isolation joints.
 2. Placement of on-grade slabs over a Class A vapor retarder as defined by ASTM E-1745.
 3. A water cement ratio of 0.45 and 0.5.
 4. Curing by ASTM C-171 sheet materials for curing concrete.
 5. A slump in the range of 3 to 4 inches which can be increased by the use of super plasticizers.
 6. Variation in plane shall be determined by the specifier and be in accordance with ACI 302, Guide for Concrete Floor and Slab, as well as ASTM E 1155-87, Determining floor Flatness and Levelness Using the F Number System.
 7. Proper slope to drain(s) must be maintained.
 8. Steel trowel finish, but not burnished to a high sheen
 9. Concrete to be clean, crack free, sound and durable (minimum compressive strength of 3,000 psi) and dry (3% maximum moisture content by mass.)
 10. Concrete must be free of hydrostatic and/or capillary moisture pressure and should not be in direct contact with the ground. An effective vapor barrier and properly engineered soil are required.
 11. Allow concrete to cure 28 days minimum before applying floor system.
 12. Concrete after surface preparation is to be free from sealers or membrane curing agents.
 13. Light weight and insulating concrete not recommended under flooring system.
(See applicator and manufacturer for alternate recommendations.)

APPENDIX A (Continued)

CONTROL JOINTS -- Section 03250

1. Install control and expansion joints in accordance with standard practice per ACI-501.
2. The floor contractor may fill non-moving control joint(s) with approved elastomeric sealant or full depth semi-rigid two-component epoxy joint filler, designed specifically for this purpose (use full depth joint filler when reinforcement of the joint edges is desirable), or two-component epoxy and filler (epoxy to be same material as flooring). Movement may crack surfacing unless proper detailing has been done.
3. Filling of moving isolation joints or expansion joints is not recommended.
4. Filling of non-moving isolation joints with elastomeric caulking and sealants or with a semi-rigid epoxy joint filler or two-component epoxy and filler is acceptable. Movement may crack surfacing unless proper detailing has been done.
5. Joint identified by owner/designer or general contractor as moving joints shall be treated by terminating flooring on each side of joint. After flooring is completed, joint shall then be filled by sealant contractor.

BACKING FOR COVE BASE

Surface to receive cove and/or base shall be strong, durable and dry. Suitable backings include; concrete, cement plaster, standard light-weight block, clay, sand-lime, cement bricks and drywall with a toe plate. Masonry surface(s) to be free of voids, irregularities and recessed joints (if present, fill with recommended epoxy plaster).