

EPOXY TERRAZZO FLOORING

This document is intended to note the Owners Design Requirements (ODR) for the titled specification section. Design professional to review and integrate ODR into the project's technical specifications. This ODR document should not be viewed as a standalone technical specification.

PART 1 - GENERAL REQUIREMENTS

- ◆ Samples:
 - Submit 2 samples, 6 inches square minimum, of each different pattern, color and type of terrazzo required
 - Submit 1 samples of actual size base, 6 inches in length minimum, of each different pattern, color and type of terrazzo base required.
 - Submit 1 samples, each 6 inches in length of each type and kind of divider strip required.
- ◆ Control and collect dust produced by grinding operations and protect adjacent construction from detrimental effects of grinding operations. Provide dustproof partitions and other enclosures as necessary.
- ◆ Extra Materials:
 - Provide the following at no additional cost to the owner:
 - 1 gallon of the primer used in the Work, in the original containers
 - Enough material to mix 5 gallons of each of the Epoxy Matrix colors and patterns described in Part 2, in the original containers, to include:
 - Decorative aggregate materials
 - Epoxy resin
 - Colorants
 - 1 gallon of Terroxy Fill in the original containers
 - 1 gallon of the epoxy joint compound used in the Work, in the original containers
 - Any other ingredients used in making the various Matrix colors and patterns
 - 50 lineal feet of the flexible reinforcing membrane used in the Work, in the original containers
 - 1 gallon of the cleaner used in the Work in the original containers
 - 1 gallon of the sealer used in the Work in the original containers

PART 2 - PRODUCTS AND MATERIALS

- ◆ Primer: Terroxy Primer or Terroxy Moisture Vapor Primer, or equivalent as recommended by the Epoxy Resin Supplier.
 - Physical properties of moisture mitigating primer shall have a maximum of 0.3 perms with 100 percent RH.
- ◆ Flexible Reinforcing Membrane: Terroxy Iso-Crack Epoxy Membrane, or equivalent as recommended by the Epoxy Resin Supplier, for substrate crack preparation and reflective crack reduction.
 - Reinforcement: Fiberglass scrim.
- ◆ Epoxy Matrix:
 - Epoxy resin mixed according to manufacturer's recommendation and tested without aggregate added. Specimens cured for 7 days at 75 degrees plus or minus 2 degrees F and 50 percent plus or minus 2 R.H. T
 - Colorants: Alkali-resistant, color-stable pigments.
 - Epoxy Resin mixed according to manufacturer's recommendations and blended with marble chips, ground and grouted with epoxy resin according to the grouting requirements specified herein, to a nominal 3/8-inch thickness. Specimens cured 7 days at 75 degrees plus or minus 2 degrees F and 50 percent plus or minus 2 percent.

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Comply with the following value: 100 percent concrete failure minimum, with 300 PSI minimum tensile strength.

- Approved Manufacturers: Manufacturers that meet or exceed these requirements are Terroxy Resin Systems and Key Resin Co.
- ◆ Decorative Aggregate Materials:
 - Gradation to conform to NTMA gradation standards for custom mix designs to match OWNER'S sample
 - Hardness according to ASTM C 241 Ha-10 minimum.
 - 24-hour absorption rate not to exceed 0.75 percent.
 - Chips shall contain no deleterious or foreign matter
 - Dust content shall be less than 1 percent by weight
 - Materials: Marble, onyx, recycled clear glass, double-sided mirror, and other decorative aggregates as necessary to achieve approved terrazzo colors to match Architects approved samples and colors scheduled on Drawings.
- ◆ Colors and Patterns:
 - Custom color/mix designs to match OWNER's approved samples
 - Provide the following aggregate breakdown:
 - TF-01 Light Blue Aggregates (Corradini sample #: 9097-3 / Arcon sample # S-18011):
 - #1 Clear Plate Glass 15%
 - #2 Mirror Chips (GB Thin 1-sided mirror) 15%
 - #1 Mother of Pearl 20%
 - "B" Mix Blanco Mexicano 50%
 - TF-02 Burgundy Aggregates (Corradini sample #: 9098-1/ Arcon sample # S-18012):
 - #2 Clear Plate Glass 25%
 - #1 Mirror Chips (GB Thin 1-sided mirror) 25%
 - #1 Mother of Pearl 30%
 - #3 Mother of Pearl 20%
 - TF-03 Light Grey Aggregates (Corradini sample #: 9099-1/ Arcon sample # S-18013):
 - #1 Clear Plate Glass 15%
 - #2 Mirror Chips (GB Thin 1-sided mirror) 15%
 - #1 Mother of Pearl 20%
 - "B" Mix Blanco Mexicano 50%
 - TF-04 Beige Aggregates (Corradini sample #: 9306-1/ Arcon sample # S-18014):
 - #1 Clear Plate Glass 20%
 - #2 Clear Plate Glass 20%
 - #2 Mirror Chips (GB Thin 1-sided mirror) 25%
 - #1 Mother of Pearl 35%
 - TF-05 Dark Blue Aggregates (Corradini sample #: 9859-5/ Arcon sample # S-18015):
 - #1 Clear Plate Glass 20%
 - #2 Clear Plate Glass 20%
 - #2 Mirror Chips (GB Thin 1-sided mirror) 25%
 - #1 Mother of Pearl 35%

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2.03 TERRAZZO ACCESSORIES

- A. Patching and Fill Material: Terroxy Fill and selected aggregates, or equivalent as recommended by the Epoxy Resin Supplier.
 - 1. Epoxy Floor Fill: ¼" Fill material shall be installed above the existing Concrete Slab over Metal Deck Slab .
 - 2. The 'Basis of Design' used for the new Terrazo Substrate is a Terroxy Resin Systems Terroxy Fill.
 - 3. Install Terroxy Primer over the complete existing concrete slab area.
 - 4. Install an Epoxy Sand mix up to the appropriate level and slope in the field.
 - 5. The material shall be an iron silicate copper slag, black in color, mixed thoroughly at the rate of five hundred (500) pounds of slag to eight (8) gallons of epoxy resin. Confirm that ratio with the Product Data Sheets provided by Terroxy and their representatives for this application. Minimum ¼".
 - 6. The iron silicate material is by Kleen Industrial Services, the product is HK402 Kleen Blast Abrasives – (16-30).
- B. Divider and Accent Strips: Provide divider and accent strips of depth required for depth of terrazzo finish, and as follows:
 - 1. Stops, Edge and Divider Strips: "L" strips, 3/8-inch strip height. Strip widths 1/8 inch at back to back divider strips and 1/4 inch at stops and edge strips as indicated on Drawings. Provide tapered edge strips at edges where required to transition to height of adjacent finish flooring materials.
 - 2. Control Joints: Separate double "L" strips, positioned back-to-back, 3/8-inch strip height, 1/8-inch-wide back to back. Provide units with suitable attachment leg length to span joint widths encountered.
 - 3. Impact Protection Transition Edge: Extruded aluminum or stainless-steel transition edge of size and profile indicated on Drawings.
 - 4. Material:
 - a. Bottom Section: Galvanized steel or matching top-section material.
 - b. Top Section: White zinc alloy, aluminum,
 - 5. Acceptable Manufacturers: Manhattan American, National Metal Shapes, or as otherwise acceptable to Owner.
 - 6. Construction Phase Separation: "L" strips, 3/8" high, 1/8" wide at edges where Terrazzo will be installed in construction phases.
- C. Divider and Accent Strip Adhesive: 100 percent solids epoxy resin adhesive recommended by the Epoxy Resin Supplier.
- D. Divider and Accent Strip Anchoring Devices: Where required to provide secure attachment, provide mechanical anchoring devices for strip materials as required for secure attachment to substrate.
- E. Expansion Joint Strips: Separate double "L" strips, positioned back-to-back, 1/8-inch thickness. Provide units with suitable attachment leg length to span joint widths encountered.

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- F. Epoxy Joint Compound: 2-component, self-leveling 100 percent solids, flexible control joint and crack resin sealer, color to be selected by architect to match/compliment terrazzo.
 - 1. Acceptable Products:
 - a. Terroxy Joint Filler Hardener
- G. Cleaner: As recommended by the Epoxy Resin Supplier, complying with the following
 - 1. Neutral cleaner with pH factor between 7 and 10 specifically designed for terrazzo.
 - 2. Biodegradable and phosphate free.
 - 3. Flash Point: ASTM D-56, 80 degrees F. minimum.
- H. Sealer for use in Restrooms only: Microguard AD2000 by Hermetic Coatings; Sealer in Concourse: Spartan Terra Glaze. All Sealers shall be CFCI, non-yellowing, clear sealer that is chemically neutral; does not impair terrazzo aesthetics or physical properties; is recommended by terrazzo matrix manufacturer.
 - 1. Microguard shall be installed only by a manufacturer-approved installer; contact information for Hermetic Coatings:
 - a. David Young
(801) 920-4405_
Djy100@aol.com
www.hermeticcoatings.com
 - 1. All Restrooms: Contractor to carry pricing for up to one and one-half (1-1/2) inches of epoxy sand fill under terrazzo
 - 2. All Other Areas: Contractor to carry pricing for three-eighths (3/8) inch of epoxy sand fill under terrazzo.
- B. Protect other work from dust generated by grinding operations. Control dust to prevent air pollution and comply with environmental protection regulations.
- C. Flexible Reinforcing Membrane: Terrazzo contractor, Architect and Owner shall examine substrate after profiling to evaluate cracking of existing concrete substrate and to determine method of crack treatment. Treat cracks in accordance with one of the following methods, as determined at time of examination of substrate, as approved by Owner:
 - 1. Isolated Cracking: Route out visible cracks and fill with semi-flexible joint filler. Apply epoxy membrane at manufacturer's recommended spread rate and thickness over cracks, 12 inches on either side. Imbed fiberglass scrim into wet membrane and saturate with additional membrane material.
 - 2. Extensive Cracking: Route out all cracks and fill with semi-flexible joint filler. Apply epoxy membrane at manufacturer's recommended spread rate and thickness over substrate to produce full coverage in areas to receive terrazzo.
- D. Primer: Apply to terrazzo substrates according to primer terrazzo matrix and primer manufacturer's instructions.

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- E. Provide for control-joint and expansion joints where indicated or required by installing angle type divider strips back to back with removable backer rod filler of the width indicated, minimum of 1/4-inch, between strips. Expansion void shall be filled with a self-leveling traffic grade Elastomeric joint sealant.
- F. Mixing: Charge and mix marble chips, filler and epoxy resin in accordance with terrazzo manufacturer's recommendations.

3.02 APPLICATION OF SEALER

- A. Seal surfaces using four (4) coats of specified proprietary acrylic polymer sealer in strict accordance with manufacturer's written installation instructions and applicable recommendations of the NTMA, before turning over area to Owner.
- B. Upon Owner's acceptance at each Phase, Owner's custodial staff will clean and apply additional sealers/finishes as necessary and burnish flooring (machine buff) to achieve sealer and acceptable surface finish/sheen before each Phase is re-opened to public traffic. The Contractor shall allow three days for Owner to accomplish the burnishing before starting the next phase within allotted time per phase.