

GUIDE SPECIFICATION
POLYACRYLATE MODIFIED THINSET TERRAZZO - REVISED AUG 02

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Section includes thin set Polyacrylate Modified Terrazzo flooring (and integral cove base) as shown on the drawings.
- B. General provisions of Contract, including General and Supplementary Conditions apply to this Section.

1.2 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Product data for each type of terrazzo, accessory item, and component material specified.
- C. Shop Drawings: Showing layout of divider strips, control joint strips, border strips and typical strip details.
- D. Samples: 6 inch-square samples of each different pattern, color, and type of terrazzo required. Provide __ minimum 6 inch-long samples of each type accessory item specified.
- E. Material Certification: Supplier's/manufacturer's written certification that terrazzo materials provided meet or exceed specified NTMA properties.
- F. Maintenance Instructions: Submit __ copies of (NTMA) written instructions for recommended periodic maintenance of each type of terrazzo.

1.3 QUALITY ASSURANCE

- A. NTMA Standards: Comply with specified provisions and recommendations of National Terrazzo and Mosaic Association, Inc. (NTMA).
- B. Installer Qualifications: Engage an experienced Installer who is a Contractor Member of the NTMA and has completed terrazzo installations within the past 5 years similar in material and extent to that indicated for Project.
- C. Manufacturer's Instructions: In addition to specified requirements, comply with polyacrylate resin manufacturer's instructions and recommendations for substrate preparation, materials storage, mixing and application, finishing, and curing.
- D. Store materials in a clean, dry, heated location (minimum 50 degrees Fahrenheit).

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1.4 WARRANTY

- A. NTMA Member Applicator 1 (or two) year guarantee.
- B. Polyacrylate resin manufacturer 1 (or two) year guarantee.

PART 2 - PRODUCTS

2.1 POLYACRYLATE MODIFIED TERRAZZO MATERIALS

- A. Primer: As recommended by Polyacrylate Resin supplier.
- B. Polyacrylate Binder: Formulated to meet physical properties of MIL-D-3134F.
- C. Polyacrylate Terrazzo:
 - 1. Odor, Fire and Toxicity Hazards: The Polyacrylate terrazzo, both before and after setting, shall not constitute an undue fire hazard, fumes from volatile substances contained in the material shall not be more toxic than those resulting from the use of ordinary latex paint and free from objectionable odors under ordinary service conditions.
 - 2. Weight: Polyacrylate terrazzo shall normally weigh 4.5 pounds per sq. ft. for 3/8" thickness.
 - 3. Resistance to impact: The Polyacrylate terrazzo shall, when bonded securely to concrete, show no visible signs of chipping, cracking, or loss of bond when tested with 16 ft. lbs. (16 ft. lbs. is the dropping of a 2 pound steel ball from a height of eight feet).
 - 4. Indentation: The Polyacrylate terrazzo shall, when bonded securely to concrete, show no signs of cracking or detachment. Initial indentation of the Polyacrylate terrazzo shall be less than 7% and more than 1% when tested in accordance with MIL-D-3134F, Section 4.7.4.
 - 5. Resistance to Elevated Temperature: The Polyacrylate terrazzo shall, when securely bonded to concrete, not flow or slip in any part more than 1/16 inch or soften when tested in accordance with MIL-D-3134F, Section 4.7.5.
 - 6. Moisture Absorption: The Polyacrylate terrazzo shall not absorb more than 5% moisture based on its weight at normal atmospheric conditions when tested in accordance with MIL-D-3134F, Section 4.7.8.
 - 7. Resistance to Wear: The Polyacrylate terrazzo shall show wear not to exceed 0.150 inch when tested in accordance with MIL-D-3134F, Section 4.7.10.
 - 8. Tensile Strength: Shall be at least 700 psi after aging 28 days when tested in accordance with ASTM C-190.
 - 9. Bond Strength: To damp, cured concrete, after aging 28 days, shall be at least 300 psi with failure in the concrete when tested in accordance with ACT Committee #403.
 - 10. Flexural Strength: Shall have a minimum flexural strength of 2000 psi when tested according to ASTM C-348.
 - 11. Thermal Coefficient of Expansion: Matrix material shall develop a coefficient of thermal expansion no greater than 10×10^{-6} (Test Method ASTM C-157).
 - 12. Flammability: Matrix material shall not support combustion. (Test Method 15 minute suspension of sample at top of flame from Fisher Burner).

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D. Manufacturers that meet or exceed these requirements are PolyAmerica Incorporated, Crossfield Products (Dex-O-Tex) and Key Resin Co.

E. Marble Chips

1. Size to conform with NTMA graduation standards. The marble size shall be NTMA #0 and/or #1 and/or #2.
2. Hardness according to ASTM C-241 Ha-10 minimum.
3. Chips shall contain no deleterious or foreign matter.
4. Dust content less than 1% by weight.

2.2 TERRAZZO ACCESSORIES

A. Divider Strips:

1. Stop and divider "L" strips; white alloy of zinc materials (or brass or plastic) with a depth of 3/8 inch and a topping width of – (choose 16 gauge, 1/8" HT, " HT, " HT or whatever larger width is required).
2. Control joints double "L" strips 16 gauge, white alloy of zinc material, 3/8 inch depth laid back-to-back " apart with a flexible sealant insert.

B. Colorants: Alkali-resistant, color-stable powder pigments.

C. Terrazzo Cleaner:

1. Ph factor between 7 and 10.
2. Biodegradable and phosphate free.
3. Flash Point: ASTM D-56, 80 degrees Fahrenheit minimum, where applicable.

D. Anti-Fracture Membrane: Elastomeric crack-bridging membrane, 12 inches wide, self-adhering. Flex Guard or approved equal.

E. Sealer:

1. Penetrating solvent acrylic sealer, which shall not discolor or amber (Key Acrylic Sealer or approved equal).
2. Hard Surface Seal (FORTIFY by Johnson Professional)
3. Synthetic polymer finisher (VECTRA by Johnson Professional)

PART 3 - EXECUTION

3.1 PREPARATION

A. Examine concrete substrate to ensure that surface levelness tolerances are within tolerance ranges required by NTMA for type of terrazzo application specified.

1. Concrete sub-floor shall be level (maximum variation not to exceed " on 10'-0") and shall have a steel trowel finished surface. No curing agents or other additives which could prevent bonding should be used. Saw-cutting of control joints (done by Others) must be done between 12 and 24 hours after placement of structural concrete.

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2. Notify Contractor of unsatisfactory levelness tolerances. Do not begin installation until unsatisfactory tolerances have been corrected and are ready to receive terrazzo.
 3. General Contractor will modify or replace concrete not properly placed, resulting in excessive honeycombing, cracking, or other defects.
- B. Clean and prepare substrate to comply with NTMA specifications for type of terrazzo application indicated. Clean substrate of loose chips and foreign matter.
1. Clean and prepare concrete substrate using a BLASTRAC machine.
 2. After cleaning, rout cracks of 1/16" width or greater to create a "v" shape opening. Insert concrete pins to hold the cracks open. Pour self-leveling 100% solids epoxy filler into the cracks.
 3. After epoxy has cured, apply elastomeric crack bridging membrane (Flex Guard) to treated cracks.
 4. Fill holes in the floor with an epoxy filler as needed.

3.2 INSTALLATION, GENERAL

- A. For Polyacrylate terrazzo, comply with resin manufacturer's recommendations for proportioning mixes, installing strips, and placing, curing, grinding, and finishing.
- B. Terrazzo selection: Matrix color(s) and aggregate blend(s) to be selected by Architect.
- C. Clean and prepare concrete subfloor by the use of a BLASTRAC cleaning machine.
- D. Install divider strips with construction adhesive as shown on drawings, directly above control joints in the sub-floor or where necessary to prevent irregular cracking.
- F. Provide for expansion joints where indicated by installing angel-type divider strips back-to-back with removable backer rod filler of the width indicated (but not less than _ inch wide) between strips. Expansion void is to be filled with a self-leveling traffic grade flexible elastomeric joint sealant.
- G. Provide terrazzo bases and thresholds, where scheduled, without interruptions of seams, except where control joints, and expansion joints are indicated. Place and finish terrazzo around obstructions to achieve continuous color, pattern, and finish.
- H. Placing Terrazzo:
1. Prime sub-floor with bonding primer.
 2. Place terrazzo mixture in panels formed by divider strips. Trowel mixture to top of strips.
- I. Curing: Allow material to cure min. 24 hours before grinding terrazzo.

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J. Finishing:

1. Rough grinding:
 - a. Grind with 24-grit or finer stones or with comparable diamond plugs.
 - b. Follow initial grind with 80-grit or finer stones.
2. Grouting:
 - a. Rinse floor with clean water.
 - b. Remove excess rinse water, dry and apply Polyacrylate grout to fill voids.
 - c. Cure grout.
3. Fine Grinding:
 - a. Grind with 80-grit or finer stones until all grout is removed from surface.
 - b. Upon completion, terrazzo shall show a minimum of 70% marble chips.

K. Cleaning and Sealing:

1. Wash all surfaces with a neutral cleaner
2. Rinse with clean water and allow surface to dry.
3. Apply two coats of solvent based acrylic sealer (KEY ACRYLIC) to comply with the manufacturers instructions.

3.4 CLEANING, FINISHING, AND PROTECTING

- A. Clean terrazzo after installing and sealing operations are completed complying with sealer manufacturer's instructions.
- B. Apply 2 coats of acrylic hard surface sealer (FORTIFY) to comply with manufacturer's instructions.
- C. Apply 2 coats of liquid finish (VECTRA) and buff to desired sheen to comply with manufacturer's instructions.
- D. Protection:
 1. Upon completion, the work shall be ready for final inspection and acceptance by the Owner.
 2. The General Contractor shall protect the finished floor from damage and wear from the time that the terrazzo installer completes the work.

4.1 FINAL CLEANING

- A. Clean terrazzo floor as recommended by manufacturer of sealer and finisher and machine buff terrazzo as required when building is ready for occupancy (optional).