

NATIONAL TERRAZZO AND MOSAIC ASSOCIATION, INC.

3166 Des Plaines Avenue, Des Plaines, IL 60018

Call toll-free: 1-800-323-9736, in Illinois call: 1-847-635-7744

Fax: (847) 635-9127

SECTION 09

EPOXY TERRAZZO

1/4" or 3/8" nominal thickness.

PART 1 - GENERAL

1.01 RELATED WORK SPECIFIED IN OTHER SECTIONS

Note: Delete nonapplicable items.

A. Furnishing and installation of metal lath and scratch coat, Section_____.

B. Attachment of metal stairs, any welding and/or reinforcing, Section_____.

C. Furnishing and setting floor drains, Section_____.

D. Furnishing and setting surface hardware, Section_____.

E. Setting of metal base beads and wood grounds, Section_____.

Note: Delete in cases where jurisdiction permits terrazzo contractor to install.

F. Backing for Epoxy Terrazzo base must be a cement board or exterior grade plywood, concrete block, concrete or cement plaster.

G. Concrete subfloor, Section_____.

Note: Subfloor shall not vary more than 1.4 inch from true plane in 10 foot span with float finish.

H. Broom clean area to receive terrazzo of loose chips and all foreign matter.

I. Sufficient water, temporary heat and light, and adequate electric power with suitable outlets connected and distributed for use within 100 feet of any working space.

Note: Ambient temperatures shall be maintained at minimum of 50 degrees Fahrenheit.

1.02 QUALITY ASSURANCE

A. Acceptable Suppliers:

1. Suppliers shall provide materials in accordance with the NTMA standards.

B. Acceptable Installer:

1. Installer shall be a contractor member of NTMA to perform all work in accordance with NTMA standards.

2. If installer is not a contractor member of NTMA, installer shall submit a list of completed projects of similar magnitude and complexity.

1.03 SUBMITTAL

A. Samples:

1. Submit a maximum of three samples, sizes 6 inches x 6 inches for each color and type of terrazzo specified.

2. Submit two, 6-inch lengths of each type and kind of divider strip as specified.

B. Maintenance Literature:

1. Submit two copies of NTMA maintenance recommendations.

C. Certification:

1. Suppliers shall furnish certification attesting that materials meet specification requirements.
2. Suppliers shall furnish properly labeled material and Material Safety Data Sheets which comply to current state and federal requirements.

1.04 DELIVERY, STORAGE AND HANDLING

A. Delivery of Materials:

1. Deliver materials in a manner to prevent damage to containers and/or bags.

B. Storage of Materials:

1. Store materials in a clean, dry, temperature controlled location (50-90 degrees Fahrenheit) furnished by others.

1.05 GUARANTEE

One year from date of completion of terrazzo installation.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Primer: As recommended by Epoxy Resin Supplier.

B. Epoxy resin mixed according to manufacturer's recommendation and tested without aggregate added. All specimens cured for 7 days at 75 degrees plus or minus 2 degrees Fahrenheit and 50% plus or minus 2% R.H. The product shall meet the following requirements:

PROPERTY: Hardness

TEST METHOD: ASTM D-2240 using Shore D Durometer

REQUIREMENT: 60 - 85

PROPERTY: Tensile Strength

TEST METHOD: ASTM D-638 run at .2"/min.

REQUIREMENT: 3,000 PSI min.

PROPERTY: Compressive Strength

TEST METHOD: ASTM D-695, Specimen B

REQUIREMENT: 10,000 PSI min.

PROPERTY: Chemical Resistance

TEST METHOD: ASTM D-1308 7 days at room temperature by immersion method have no deleterious effects. The following contaminants used:

Distilled Water - 1% Soap Solution

Mineral Oil - 10% Sodium Hydroxide

Isopropanol - 10% Hydrochloric Acid

Ethanol - 30% Sulfuric Acid

.025 Detergent Solution - 5% Acetic Acid

C. Epoxy Resin mixed according to manufacturer's recommendations and blended with 3

volumes of Georgia White marble blended 60% #1 chip and 40% #0 chip, ground and grouted with epoxy resin according to 3.02 C-2-Finishing to a nominal 1/4" thickness. All specimens cured 7 days at 75 degrees plus or minus 2 degrees Fahrenheit and 50% plus or minus 2% R.H. The finished epoxy terrazzo shall meet the following requirements:

1. Flammability: When tested in accordance with ASTM D-635, the Epoxy terrazzo shall comply with the following value: Self extinguishing, extent of burning 0.25 inches maximum.
2. Thermal Coefficient of Linear Expansion: When tested in accordance with ASTM D-696, the Epoxy terrazzo will comply with the following value: 25×10^{-6} inches per inch per degree Fahrenheit maximum. Temperature range -12 degrees to 140 degrees Fahrenheit.
3. Bond Strength: When tested in accordance with Field Test Method for surface soundness and adhesion as described in ACI Committee No. 403 Bulletin Title No. 59-43 (Pages 1139-1141) the Epoxy terrazzo shall comply with the following value: 100% concrete failure minimum, with 200 PSI minimum tensile strength.

Note: This test is intended to evaluate the bond to the concrete subfloor and is to be tested at the discretion of the architect. A 100% concrete failure indicates a good bond.

D. Marble Chips:

1. Size: To conform with NTMA gradation standards.

Note: See product information.

2. Hardness according to ASTM C-241 Ha-10 minimum.

Note: This test indicates the abrasion resistance of marble chips.

3. 24 hour absorption rate not to exceed 0.75 percent.
4. Chips shall contain no deleterious or foreign matter.
5. Dust content less than 1% by weight.

E. Strips:

1. Stop and divider "L" strips: _____ gauge. (Select gauge white alloy of zinc or plastic. Consult with manufacturer of epoxy resin if brass strips are desired.)

Note: SELECT GAUGE FROM FOLLOWING GAUGE: 18, 16, OR 14 B & S gauge or 1/8, 1/4, or 3/8 inch heavy top "L" or "K" type 2. Construction joint double "L" strips, back to back... 16 gauge white alloy of zinc material.

F. Terrazzo Cleaner:

1. pH factor between 7 and 10 where applicable.
2. Biodegradable and phosphate free.

J. Sealer:

1. pH factor between 7 and 10, where applicable.
2. Shall not discolor or amber.
3. Flash Point: ASTM D 56, 80 degrees Fahrenheit minimum, where applicable.

2.02 MIXES

A. Terrazzo Selection:

1. NTMA Plate # _____.

Note: Select color and design from NTMA Information Guide or Color Palette. Any deviation from NTMA plates must be clearly stipulated.

B. Proportions:

1. Epoxy Terrazzo Topping: In accordance with resin supplier's recommendations.

C. Mixing:

1. Terrazzo Topping:

- a: Charge and mix marble chips, and epoxy resin in accordance with supplier's instructions.

PART 3 - EXECUTION

3.01 INSPECTION

A. Examine areas to receive terrazzo for:

1. Defects in existing work that affect proper execution of terrazzo work.

Note: Cracks in substrate will usually be transmitted through topping to surface.

2. Deviations beyond allowable tolerances for the concrete slab work.

Note: Subfloor not to vary more than 1/4 inch from true plane in 10 feet. Epoxy thin-set terrazzo, as specified is not intended to level substrate and will only follow the contour of the concrete slab. If for any reason the subcontractor questions the suitability of the substrate for bonding, any work required to eliminate nonconformity of subsurface specifications is the responsibility of others. Any material used to correct nonconformity must be compatible with epoxy system selected and be approved by the terrazzo contractor.

B. Start work only when all defects have been corrected by others.

3.02 INSTALLATION

A. Subfloor:

1. Prepare substrate to receive epoxy terrazzo in accordance with manufacturer's recommendation.
2. Install control strips directly above control joints in subfloor.
3. Install divider strips as shown on drawings.

B. Placing Terrazzo:

1. Prime subfloor in accordance with resin supplier's instructions.
2. Place terrazzo mixture and trowel to a dense flat surface to top of divider strips.

C. Finishing:

1. Rough Grinding:

- a. Grind with 24 or finer grit stones or with comparable diamond plates.
- b. Follow initial grind with 80 or finer grit stones.

2. Grouting:

- a. Cleanse floor with clean water and rinse.
- b. Remove excess rinse water, dry and apply epoxy grout, supplied by epoxy manufacturer, to fill voids.

3. Cure Grout:

Note: Grout may be left on terrazzo until all heavy and messy work in project is completed.

4. Fine Grinding:

- a. Grind with 80 or finer grit stones until all grout is removed from surface.
- b. Upon completion, terrazzo shall show a minimum of 70% marble chips.

D. Cleaning and Sealing:

1. Wash all surfaces with a neutral cleaner.
2. Rinse with clean water and allow surface to dry.
3. Apply sealer in accordance with manufacturer's directions.

E. Protection:

1. Upon completion, the work shall be ready for final inspection and acceptance by the owner or his agent.

2. The General Contractor shall protect the finished floor from the time that the terrazzo contractor completes the work.