

GUIDE SPECIFICATION FOR RUSTIC TERRAZZO (Bonded system with setting bed over concrete)

(Revised 6/94 Supersedes all previous specifications)

SECTION 09 RUSTIC TERRAZZO

Rustic Terrazzo can utilize any cementitious terrazzo system. Most Rustic Terrazzo is installed on exterior, on-grade locations. NTMA considers the Structural System, Bonded or Unbonded Systems with underbed and monolithic System suitable for this type of installation. Minimum thickness 1 3/4" Bonded System with setting bed over concrete substrate slab.

PART 1-GENERAL

1.01 RELATED WORK SPECIFIED IN OTHER SECTIONS

NOTE: DELETE NONAPPLICABLE ITEMS.

- A. Furnishing temporary power.
Section _____
- B. Furnishing clean water.
Section _____
- C. Structural Concrete slab to receive terrazzo topping.
Section _____

NOTE: SURFACE MUST NOT BE CURED WITH A LIQUID MEMBRANE OR CONTAIN OTHER ADDITIVES WHICH COULD INHIBIT BOND OF TERRAZZO TOPPING.

- D. Expansion joints in concrete substrate slab.
 - E. Provision of surface drains.
Section _____
- NOTE: SLAB MUST SLOPE A MINIMUM OF 1/8" PER FOOT TO OBTAIN PROPER DRAINAGE.

- F. If required, provide enclosure with temporary heat maintained at a minimum of 45 degrees Fahrenheit.

1.02 QUALITY ASSURANCE

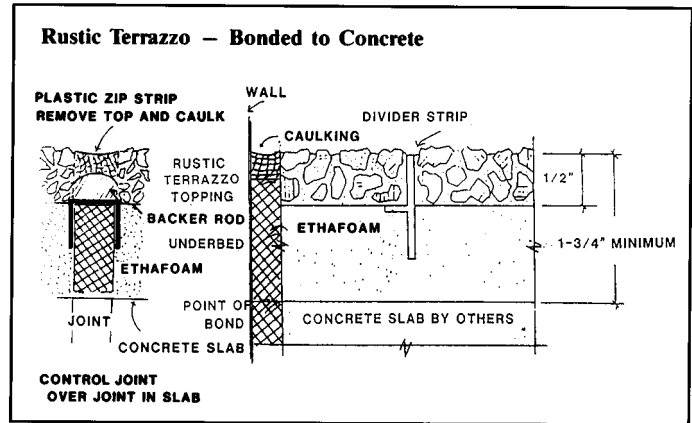
- A. Acceptable supplier:
 - 1. Materials furnished shall meet NTMA Specifications.
- B. Installer qualifications:
 - 1. Installer shall be a contractor member of NTMA and shall perform all work in accordance with NTMA standards.
 - 2. If installer is not a contractor member of NTMA, installer shall submit a list of completed projects of a similar magnitude and complexity.

1.03 SUBMITTAL

- A. Samples:
 - 1. Submit a maximum of three samples, minimum 6" x 6" for each color and type of rustic terrazzo.
 - 2. Submit two, 6" minimum lengths of each type and kind of divider strips.
- B. Maintenance Literature:
 - 1. Submit two copies of maintenance recommendations of NTMA or maintenance product members of NTMA.
- C. Certification:
 - 1. Suppliers shall furnish certification attesting that materials meet specification 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 and heated (if necessary) location.

1.05 GUARANTEE

One year from date of substantial completion of Terrazzo installation.

PART 2-PRODUCTS

2.01 MATERIALS

- A. Portland cement: ASTM C 150, Color _____
NOTE: SELECT AND SPECIFY WHITE OR GRAY FOR TERRAZZO TOPPING. WHITE CEMENT IS UNIFORM IN COLOR. GRAY CEMENT MAY NOT BE UNIFORM IN COLOR AND MAY PRODUCE A VARIATION OF SHADE IN THE MATRIX. WHERE CLIMACTIC CONDITIONS DO DEMAND, SPECIFY AN AIR ENTRAINING AGENT (6% AIR PLUS OR MINUS 1%) FOR STRUCTURAL SLAB TO MINIMIZE FREEZE-THAW CYCLE DAMAGE. PACKAGE AIR ENTRAINING CEMENT MUST NOT BE USED.
- B. Sand: Coarse, clean, washed, locally available sand.
- C. Marble, Quartz, Granite and/or Gravel.
NOTE: SELECT HARD, DURABLE AGGREGATES, PARTICULARLY IN AREAS WHERE FREEZING OCCURS. CONSULT LOCAL TERRAZZO INSTALLER. IN AREAS SUCH AS SWIMMING POOLS DECKS, WHERE A SMOOTHER FINISH MAY BE DESIRED, OVAL AGGREGATE SHOULD BE CONSIDERED.
 - 1. Size: Conform to NTMA standards.
 - 2. 24-hour absorption rate: Not to exceed 0.25%.
 - 3. Chips: Contain no deleterious or foreign matter.
- D. Strips:
 - 1. Expansion joints: Plastic with a cap strip top with a depth of 1 1/4"; Thickness _____ Color: _____
NOTE: SPECIFY MATERIAL AND SIZE. USE ETHAFOAM, BUTYL RUBBER OR CORK. 1/2" IS RECOMMENDED WIDTH, FULL DEPTH OF UNDERBED AND TERRAZZO TOPPING. PLACE DIRECTLY ABOVE EXPANSION JOINTS IN CONCRETE STRUCTURAL SLAB. SEE STRIP GUIDE.
 - 2. Divider strips:
Materials _____
Gauge _____
- E. Curing materials: 4-mil polyethylene sheeting or water.
- F. Sealant: Polyurethane with appropriate backer rod.
- G. Sealer:

1. Shall not discolor or amber.
 2. Penetrating type specifically prepared for use with rustic terrazzo.
 - NOTE: SOLVENT ACRYLIC TYPE PREFERRED.
 3. Flash point: ASTM D 56, 95 degrees Fahrenheit.
- H. Bonding Agent: Neat Portland Cement.

2.02 MIXES

- A. NTMA Plate: _____
 NOTE: SPECIFY COLOR AND DESIGN FROM NTMA INFORMATION GUIDE COLOR PLATES. ANY DEVIATION FROM NTMA PLATE MUST BE CLEARLY STIPULATED.
- B. Proportions:
1. Underbed: One part portland cement to 4 parts course sand. Air entrainment agent (6% plus or minus 1% air).
 2. Terrazzo topping:
 NOTE: RECOMMENDED MIX: ONE BAG (94 LBS) OF PORTLAND CEMENT PER 200 LBS OF AGGREGATE AND 4 1/2 TO 5 GALLONS OF CLEAN WATER. DEPTH OF TOPPING 1/2 " TO 3/4 ", DEPENDING ON THE SIZE OF AGGREGATE. CLEAN WHITE FINE SAND MAY BE ADDED TO MIX.
- C. Mixing: Add aggregate, water, and portland cement in proper proportions, and mix thoroughly to uniform consistency. Maintain consistency by using same amount of water for all batches.

PART 3-EXECUTION

3.01 INSPECTION

- A. Examine areas to receive rustic terrazzo for:
1. Defects in existing work that affect proper execution of terrazzo work.
 NOTE: STRUCTURAL CRACKS IN SUBSTRATE WILL USUALLY BE TRANSMITTED THROUGH TOPPING TO SURFACE.
 2. Deviations beyond allowable tolerances for the concrete slab work.
- B. Start work only when all defects have been corrected by others.

3.02 INSTALLATIONS

- A. Concrete underbed:
1. Set expansion material around building perimeter, around all

column bases, and directly above expansion joints in concrete structural slab.

2. Soak surface of concrete structural slab with clean water.
 3. Place concrete and screed to an elevation of 1/2 " to 3/4 " below finished surface, depending on size of aggregate.
 4. Install plastic divider strips before concrete hardens.
- B. Placing Rustic terrazzo topping:
 NOTE: 1/2 " TO 3/4 " THICKNESS DEPENDING ON SIZE OF AGGREGATE.
1. Soak underbed surface thoroughly with clean water.
 2. Place rustic terrazzo.
 3. Roll and compact surface until all excess cement and water has been extracted.
- C. Finishing
1. Expose aggregate by hosing, absorbent rolling, or use of a retarder.
- D. Curing:
1. Flood with clean water, or cover with 4 mil. polyethylene sheeting.
- E. Cleaning:
1. When topping is sufficiently cured, in the opinion of the terrazzo installer, apply a 1 to 10 solution of muriatic acid in water, scrub with a stiff broom to remove all laitance, and rinse immediately with clean water to remove all traces of the acid.
 NOTE: ACID WASH NO SOONER THAN 7 DAYS AFTER INSTALLATION.
- F. Sealing:
1. Rinse floor with clean water and allow to dry.
 2. When floor is thoroughly dry, apply the sealer in accordance with manufacturer's directions for use on rustic terrazzo.
- G. Caulking:
1. Place sealant in joints with backer rod as required.
- H. 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 rustic terrazzo installer completes the work.
 NOTE: COORDINATE WITH THE SPECIFICATIONS FOR PROTECTION IN SECTION 01600, "MATERIALS AND EQUIPMENT."

IMPORTANT NOTE TO SPECIFIER FOR TRANSMITTAL TO OWNER OR OWNER'S AGENT: DE-ICING CHEMICALS AND SALT CAN BE INJURIOUS TO PORTLAND CEMENT SURFACES AND SHOULD NOT BE USED ON RUSTIC TERRAZZO.