

GUIDE SPECIFICATION FOR UNBONDED RUSTIC TERRAZZO (Unbonded system with setting bed over concrete slab with waterproof membrane)
(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 System with underbed and Monolithic System suitable for this type of installation.

Minimum thickness 4 inches unbonded system with setting bed over waterproof 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 _____
- D. Expansion joints in concrete substrate slab.
Section _____
- E. Provision of floor drains.
Section _____

NOTE: TYPE WITH WEEP HOLES TO DRAIN WATER FROM SUBSTRATE SLAB. WEEP HOLES MUST BE AT LEAST 1" IN DIAMETER. 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.
- G. Concrete slab and waterproof membrane by others.

1.02 QUALITY ASSURANCE

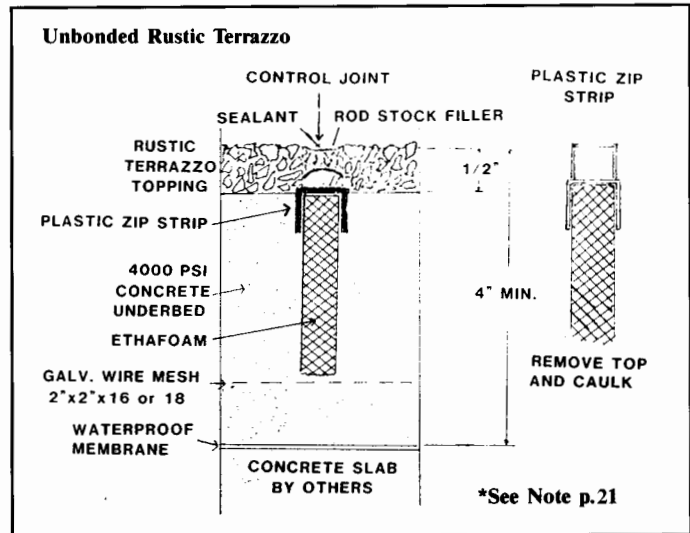
- A. Acceptable supplier:
 - 1. Materials furnished shall meet NTMA Specifications.
- B. Installer qualifications:
 - 1. Installer shall be a contractor member of NTMA and shall perform all work in accordance with NTMA standards.
 - 2. If installer is not a contractor member of NTMA, installer shall 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 CLIMATIC CONDITIONS SO 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. Aggregate: 3/8" - 1/2" crushed stone.
- D. 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 POOL 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 0.75%.
 - 3. Chips: Contain no deleterious or foreign matter.
- E. Strips:
 - 1. Expansion joints; Plastic with a cap strip top with a depth of 1 1/4"; Thickness: _____, Color: _____ or saw cuts, inserting straight strips into cuts.
NOTE: SPECIFY MATERIAL AND SIZE. USE ETHAFOAM,

BUTYL RUBBER OR CORK. 1/2" IS RECOMMENDED WIDTH, FULL DEPTH OF TOPPING. PLACE DIRECTLY ABOVE EXPANSION JOINTS IN CONCRETE SUBSTRATE SLAB. SEE STRIP GUIDE.

2. Divider Strips:

Material _____

Gauge _____

F. Curing materials: 4-mil polyethylene sheeting or water.

G. Sealant: Polyurethane with appropriate backer rod.

H. 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.

I. Isolation Membrane: ASTM D 2103 Type 13300, 4 MIL. Polyethylene sheeting.

J. Reinforcement: ASTM A185, 2" x 2" x 16 Gauge or 18 gauge galvanized mesh.

2.02 MIXES

A. NTMA Plate: _____

NOTE: SPECIFY COLOR AND DESIGN FROM NTMA COLOR PLATE. 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%).

NOTE: RECOMMEND MIX: 3 1/8" - 1 1/2" CRUSHED STONE, COURSE SAND, PORTLAND CEMENT, CLEAN WATER, AIR ENTRAINMENT AGENT (6% AIR PLUS OR MINUS 1%) OR AS DESIGNED FOR SPECIFIC SLAB LOAD REQUIREMENTS TO ACHIEVE 4,000 PSI AT A 3" SLUMP.

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 terrazzo for defects in existing work that affect proper execution of Rustic Terrazzo.

B. Check cleanliness of substrate.

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

3.02 INSTALLATION

A. Concrete underbed:

1. Set expansion material around building perimeter, around all column bases, and directly above expansion joints in concrete structural slab.

NOTE: 1/2" WIDE, UNLESS OTHERWISE INDICATED, INSTALLED APPROXIMATELY 10' x 10' BUT NOT TO EXCEED 125 SQ. FT. OF INCLUDED AREA.

2. Place and screed to an elevation of 1/2" to 3/4" below finished surface, depending on size of aggregate.

3. 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 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 laitance, and rinse immediately with clean water to remove 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 dry, apply the sealer in accordance with manufacturers directions for use on rustic terrazzo.

G. Caulking:

1. Place sealant in joint 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, "MATERIAL AND EQUIPMENT"

**NOTE: SCHEMATIC DESIGN ILLUSTRATED IN THIS SECTION IS NOT INTENDED TO INDICATE SCALE OR VERTICAL POSITION OF THE WIRE REINFORCEMENT MESH. THE LOCATION OF THE MESH NORMALLY VARIES UP AND DOWN IN THE CONCRETE UNDERBED.*