

**Section 09722**  
**MASTERTOP**  
*MORRICITE THIN-SET EPOXY TERRAZZO FLOOR SYSTEM*

**NOTES TO SPECIFIER**

The purpose of this suggested specification is to assist the specifier in developing a specification for the use of Master Builders *MASTERTOP MORRICITE THIN-SET EPOXY TERRAZZO SYSTEM*. Questions regarding the selection, installation, or intended end use of Master Builders materials should be directed to a Master Builders technical representative. This specification is prepared to be a part of a complete project specification.

**PART 1 - GENERAL**

**1.01 Related Documents**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section.

**1.02 Summary**

- A. This Section specifies a highly decorative, seamless thin-set epoxy flooring system utilizing marble aggregate to provide an aesthetic, chemical resistant and durable wearing surface.
- B. MASTERTOP MORRICITE thin-set epoxy terrazzo system is a monolithic flooring system that can be specified and installed between 1/4" (6.4 mm) and 3/8" (9.5 mm) thick.

**1.03 References**

ASTM C 531-90	Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical Resistant Mortars, Grouts and Monolithic Surfacing
ASTM C 580-90	Test Method for Flexural Strength and Modulus of Elasticity of Chemical Resistant Mortars, Grouts and Monolithic Surfacing
ASTM D 635-81	Test Method for Rate of Burning and/or Extent and Time of Burning of Self-Supported Plastics in a Horizontal Position
ASTM D 638-91	Test Method for Tensile Properties of Plastics
ASTM D 695-91	Test Method for Compressive Properties of Plastics
ASTM D 1864-88	Test Method for Moisture in Mineral Aggregates
ASTM D 2240-91	Test Method for Rubber Property - Durometer Hardness
ASTM D 2566-79	Test Method for Linear Shrinkage of Cured Thermosetting Casting Resins During Cure
ASTM D 4060-90	Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser
ASTM D 4263-88	Test Method for Indicating Moisture in Concrete by The Plastic Sheet Method



**1.04 System Performance Requirements**

A. Provide a thin-set epoxy terrazzo flooring that, when cured, produces the following typical properties:

<u>PROPERTY</u>	<u>TEST METHOD</u>	<u>RESULT</u>
Compressive Strength	ASTM D 695	12,000 psi (83 MPa)
Tensile Strength	ASTM D 638	4800 psi (33 MPa)
Flexural Strength	ASTM C 580	6700 psi (46 MPa)
Coefficient of Thermal Expansion	ASTM C 531	$2.0 \times 10^{-5}$ in/in/°F
Shore D Hardness	ASTM D 2240	88
Abrasion Resistance	ASTM D 4060	0.045 gram
Curing Shrinkage	ASTM D 2566	<0.005 in/in
Impact Resistance	Gardner Impact	100 in•lb
Flammability	ASTM D 635	Extent= <0.25 in. Self-extinguishing

**1.05 Submittals**

- A. Submit manufacturer's technical data and product literature indicating the products comply with specified requirements.
- B. Submit two mock-up sample coupons that are representative of the finished floor surface, texture and color.

**1.06 Quality Assurance**

- A. Installer Qualification: Use only an installer that is certified in writing by the flooring system manufacturer of having completed a program of instruction in proper methods for preparation of substrate, possible delaminated areas, crack and joint repair and complete flooring installation.
- B. Mock-up: On site, fabricate a panel approximately 100 sq. ft. (10 m sq.) to demonstrate quality of finished floor system, complying with manufacturers instructions. Install panel where directed by architect/engineer. Maintain panel as a standard of quality for all installations.

### **1.07 Delivery, Storage, And Handling**

- A. Deliver product in factory packages, clearly marked with manufacturers identification, printed instructions, lot numbers and shelf-life expiration date for each component.
- B. Store materials at 50°F-90°F (10°C-32°C) in dry environment away from sunlight, heat or other hazard.

### **1.08 Project Conditions**

- A. Maintain minimum concrete surface temperature of 55°F (12°C) for a minimum of 48 hours before, during and after installation, or until cured.
- B. Concrete must be free of hydrostatic, capillary or moisture vapor pressure. Substrates in contact with ground must have a properly installed, effective vapor barrier to help prevent potential problems resulting from hydrostatic, capillary or moisture vapor pressure. Concrete must contain less than 3% moisture when tested per ASTM D 1864.
- C. Concrete to receive a MASTERTOP MORRICITE Thin-Set Epoxy Terrazzo floor should have been designed and installed as approved by architect/engineer to minimize random cracking, curling, slab deflections and shall contain well designed control and isolation joints as approved by architect/engineer.
- D. Do not apply sealers or membrane curing agents to concrete. Moisture curing of concrete is recommended.
- E. Concretes containing lightweight aggregates are not recommended substrates.
- F. Provide ventilation, lighting and clean, drinkable water supply.
- G. Advise other trades of fixtures and fittings not to be installed until floor is cured, such as: radiators, painting, decorating, floor-supported equipment or cabinetwork, caulking, plumbing, fixtures, etc.
- H. Floors shall be kept free of traffic, and no trades shall be permitted in rooms during the application and curing of the coating.
- I. Protect adjacent surfaces from damage resulting from work of this trade. If necessary, mask and/or cover adjacent surfaces, fixtures, equipment, etc. by suitable means.

## **PART 2 - PRODUCTS**

### **2.01 Materials**

- A. Thin-set Epoxy Terrazzo Flooring: "MASTERTOP MORRICITE" by Master Builders, Inc.
- B. (OPTIONAL) Thin-set, Conductive Epoxy Terrazzo: " MASTERTOP MORRICITE CONDUCTIVE" by Master Builders, Inc.
- C. (OPTIONAL) Elastomeric Membrane: "NEO-V" by Master Builders, Inc. for waterproofing and to reduce reflective cracking from the substrate.

## **PART 3 - EXECUTION**

### **3.01 Inspection**

- A. Before starting work, ensure that environmental and site conditions are suitable for application and curing.
- B. Inspect surfaces for acceptability of levelness, moisture content, pitch to drains and other critical factors.
- C. Report in writing to architect/engineer, with copy to manufacturer, of deficiencies that could impair work. Surfaces must be approved by the Certified Contractor prior to application of flooring.

### **3.02 Surface Preparation**

- A. Prepare surfaces in accordance with manufacturer's instructions.
- B. Remove concrete laitance by steel shot blasting, grit blasting or other method approved by manufacturer.
- C. Surface must be clean, sound and dry prior to application.
- D. Pre-fill surface irregularities, holes and cracks in accordance with manufacturer's recommendations.

### **3.03 Mixing**

- A. Comply with manufacturer's instructions for mixing procedures.
- B. Premix each component before every batch to ensure uniformity.
- C. Carefully measure and mix the components together.

### **3.04 Installation**

- A. Follow manufacturer's written instructions.
- B. (OPTIONAL) Apply stretch coat of NEO-V to minimum width of 3" (75 mm) wide and 20 mils (0.4 mm) dry thickness over cracks in substrate.
- C. (OPTIONAL) Embed Pennflex tape or similar reinforcing fabric in NEO-V over cracks in substrate.
- D. (OPTIONAL) Install elastomeric membrane in multiple coats to a dry film thickness of 20 to 30 mils (0.4 to 0.6 mm).
- E. (OPTIONAL) Install cove and/or base in accordance with manufacturer's instructions.
- F. Set divider, control and edge strips with adhesive setting material, in patterns indicated on drawings.
- G. Prime entire surface with recommended primer.

**3.04 Installation, continued**

- H. Apply epoxy and aggregate matrix in accordance with manufacturer's instruction to a total thickness of 1/4 inch (6.4 mm).
- I. After curing, grind surface to expose divider and edge strips and approximately 70% of the aggregate.
- J. Apply grout coat(s) and top coat(s) at manufacturer's recommended coverage, to provide uniform, dense surface.
- K. Polish surface and apply surface sealer in accordance with manufacturer's instructions.
- L. Allow proper cure time for each installation step.
- M. Allow the finished epoxy flooring to cure for a minimum of 7 days from completion before putting into service.

**Master Builders, Inc.**

**United States**

23700 Chagrin Boulevard  
Cleveland, Ohio 44122-5554  
(800) MBT-9990  
Fax: (216) 831-6910

**Canada**

3637 Weston Road  
Toronto, Ontario M9L 1W1  
(800) 387-5862  
Fax: (416) 741-7925

**Mexico**

Blvd. M. Avila Camacho 80, 3er Piso  
53390 Naucalpan, México  
011-525-557-5544  
Fax: 011-525-395-7903