

Section 09722
MASTERTOP®
MERFLEX B
INTERIOR POLYMER WATER PROTECTION SYSTEM

NOTE TO SPECIFIER

The purpose of this suggested specification is to assist the specifier in developing a specification for the use of Master Builders *MASTERTOP MERFLEX B FLOORING 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 for new construction or can be used as a standalone document for existing structures.

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 system that binds a water protection flexible membrane to a wear-resistant topcoat surface for containment applications that must withstand pedestrian and light wheeled traffic.
- B. This product is a monolithic flooring material that consists of an elastomeric membrane polymer modified topping and a resinous topcoat.

1.03 References

ASTM D 412-87	Test Method for Rubber Properties in Tension
ASTM D 570-81 (1988)	Test Method for Water Absorption of Plastics
ASTM D 2240-91	Test Method for Rubber Property - Durometer Hardness
ASTM D 4060-90	Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser
ASTM E 84-91	Test Method for Surface Burning Characteristics of Building Materials
ASTM E 96-92	Test Method for Water Vapor Transmission of Materials

1.04 System Performance Requirements

- A. Provide an interior polymer water protection system that, when cured, produces the following typical properties:

<u>PROPERTY</u>	<u>TEST METHOD</u>	<u>RESULT</u>
Tensile Strength, Mortar	ASTM C 307	1,000 psi (7 MPa)
Water Absorption	ASTM C 413	2.0%
Comprehensive Yield Strength, Mortar	ASTM C 579	8,000 psi (55 MPa)
Taber Abrasion CS 17 Wheels, 1000 gm - 1000 cycles	ASTM D 4060	0.070 gm
Flammability	ASTM E 84	Class "A"
Impact Resistance No chipping, cracking, spalling, or loss of adhesion	Gardner Impact	130 in•lb

1.05 Submittals

- A. Submit manufacturer's data and product literature indicating that the products comply with specified requirements.
- B. Submit two mock up sample coupons that are representative of 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 of 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 sq. m.) to demonstrate quality of flooring system, complying with manufacturer's 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 manufacturer's identification, printed instructions, lot numbers and shelf life expiration date for each component.
- B. Store materials at 50 to 90 degrees F (10 to 32 degrees C) in dry environment away from sunlight, heat, or other hazards.

1.08 Project Conditions

- A. Maintain minimum concrete surface temperature of 55 degrees F (12 degrees C) for 48 hours before, during and after installation, or until cured.
- B. Concrete must be free of hydrostatic, capillary or moisture vapor pressure. Substrate 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 MASTERTOP MERFLEX B flooring 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. Interior Polymer Water Protection System: MASTERTOP MERFLEX B floor system by Master Builders.
- B. Elastomeric Membrane: NEO V II C latex neoprene by Master Builders for water protection 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 at time of installation.
- 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 system.

3.02 Surface Preparation

- A. Prepare surfaces in accordance with manufacturer's printed instructions.
- B. Remove concrete laitance by steel shotblasting, gritblasting or other method approved by manufacturer.
- C. Prefill 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 II C to minimum width of 3 inches (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 II C 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. Prime entire surface with recommended primer.
- G. Apply MASTERTOP MERFLEX B flooring in accordance with manufacturer's instruction to a total thickness of 1/8 inch (3 mm) to 1/4 inch (6.4 mm).
- H. Apply grout coat(s) and topcoat(s) at manufacturer's recommended coverage to provide uniform, dense surface.
- I. Allow proper cure time for each installation step.
- J. Allow the finished epoxy flooring to cure for a minimum of seven (7) days from completion before putting into service.
- K. Use temporary protection until flooring is fully cured.

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