

MASTERTOP® 110 UNDERLAYMENT

Economical, self-leveling cementitious floor underlayment

NOTE TO SPECIFIERS

The purpose of this suggested specification is to assist the specifier while developing a specification for the use of Master Builders MASTERTOP 110 UNDERLAYMENT. This specification has been prepared to be part of a complete project specification. It has not been prepared to be a “stand alone” item. This document is not intended to be copied directly into project specifications.

PART 1 - GENERAL

1.01 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section.
- B. Provisions of Section 03300, Cast-In-Place Concrete, apply to this Section.

1.02 Summary

- A. This section specifies a self-leveling, poured-in-place, cementitious, non-structural, floor underlayment intended for use over pre-cast concrete and cast-in-place concrete floors.
- B. This product is composed of fast setting portland cement and fine aggregate and proprietary ingredients which, when mixed with clean, potable water, achieves a liquid, self-leveling underlayment and results in a smooth, level floor surface.

1.03 References

ACI 305 R-91	Hot Weather Concreting
ACI 306R-89	Cold Weather Concreting
ASTM C-109 (Modified)	Standard Test Method for Compressive Strength of Hydraulic Cement Mortars
ASTM C-348 (Modified)	Standard Test Method for Flexural Strength of Hydraulic Cement Mortars

1.04 Quality Assurance

- A. When mixed and placed according to currently published application methods, MASTERTOP 110 UNDERLAYMENT shall obtain the specified strength in accordance with ASTM C-109 (Modified), reduce sound transmission and be flowable for proper and easy placement.

PART 2 - PRODUCTS

2.01 Materials

- A. MASTERTOP 110 UNDERLAYMENT from Master Builders, Inc.: Combination of proprietary ingredients, portland cement and fine aggregates.
- B. Primer: M.B. PRIMER from Master Builders, Inc.
- C. Above components of MASTERTOP 110 UNDERLAYMENT system shall be provided by Master Builders, Inc., 23700 Chagrin Blvd., Cleveland, Ohio 44122 or one of its specified distributors.
- D. All components must be presented at the job site in their original unopened packaging and kept from freezing and exposure to direct sunlight.

2.02 Proportioning

- A. Materials shall be mixed and placed as per current printed bag instructions.

2.03 Properties

- A. Flow shall be 5-1/2 in. to 6-1/2 in. (14.0 cm to 16.5 cm) based on flow test using a 7/8 in. (2.2 cm) high, 2 in. (5.1 cm) inside diameter PVC pipe. Pipe is filled with underlayment, lifted, spread and measured for flow reading.
- B. For extended workability, flow potential shall remain 5-1/2 in. to 6-1/2 in. (14.0 cm to 16.5 cm) after a period of 30 minutes.
- C. Floor shall be ready for foot traffic at 4 hours and returned to service at 24 hours.
- D. Material Properties:
 - Compressive Strength: 3000 psi (20.69 MPa) @ 28 days
 - Flexural Strength: 500 psi (3.45 MPa) @ 28 days
 - Self Leveling Time: 15 min. @ 70 °F (21 °C)
 - Initial Set Time: Approximately 2 hours @ 70 °F (21 °C)
 - Final Set Time: Approximately 3 hours @ 70 °F (21 °C)
 - Tensile Bond Strength: Approximately 160 psi (1.10 MPa) @ 28 days

PART 3 - EXECUTION

3.01 Preparation

- A. Dry wall should be in place and taped before the application of underlayment.
- B. Surface to receive underlayment shall be clean and sound, mechanically prepared to remove all dirt, oil, sealers, curing compounds, paint, polymer coatings, dust or other foreign (bond breaking) matter.
- C. All cracks shall be properly caulked to prevent seepage during underlayment placement.
- D. Area shall be primed and allowed to dry completely (at least 3 to 4 hours) prior to underlayment placement. All puddles and thick areas must be removed.
- E. Construction, control or expansion joints must be cut directly over those in the base slab.

3.02 Placement

- A. Underlayment shall be placed at a fluid consistency and pumped to a thickness of not greater than 1/2 in. (1.3 cm) (unextended) in all areas noted on the working drawings.
- B. Underlayment may be extended with the use of 15 lb (6.8 kg) well graded, washed, 1/8 in. (0.3 cm) topsize, clean sand with a corresponding reduction in flow and other properties.
- C. To protect surface, windows and doors in area receiving underlayment shall be closed during and following application until final floor surface is applied.

3.03 Traffic

- A. Underlayment shall have achieved sufficient strength to allow foot traffic in 4 hours and be in service within 24 hours after application at 70% relative humidity and 65 °F (18 °C).

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