

PRODUCT DATA

3 03 54 00 **Cast Underlayments**

MASTERTOP® 110 PLUS UNDERLAYMENT

Economical self-leveling cementitious floor underlayment

Description

Mastertop® 110 Plus Underlayment is a self-leveling poured-in-place cementitious nonstructural floor underlayment. It is used over precast and cast-in-place concrete floors.

Mastertop® 110 Plus Underlayment contains fast-setting cement and fine aggregate to meet ASTM C 33 standards.

Yield

45 ft²/50 lb (4 m²/23 kg) bag at 1/8" (3 mm) thickness.

Cured Underlayment produces a bulk density of 120 – 125 lbs/ft³ (1,922 – 2,002 kg/m³).

0.46 ft³/50 lbs (0.013 m³/23 kg) of Underlayment mixed with 5-1/4 quarts (5.0 L) of water

Mortar:

0.64 – 0.69 ft³/50 lbs (0.018 – 0.02 m³/23 kg) when extended with 25 – 50 lbs (11 – 23 kg) of 1/8" (3 mm) course-graded, washed sand

Packaging

50 lb (22.7 kg) multi-wall bags

Features

- High flow consistency
- High strength
- Highly fluid; pumpable or pourable
- Remains workable for more than 30 minutes with slight agitation
- Compatible with most carpet and tile adhesives
- Not a gypsum-based product
- Requires only the addition of water
- Fast curing
- Contains fine aggregate
- Creates a dense substrate under carpet or tile

Benefits

- Self-levels for flat, smooth installations
- Handles repetitive foot traffic
- Fast installation times
- Facilitates proper application
- Can be tiled or carpeted over
- More stable under varying environmental conditions
- Simplifies mixing; lowers in-place cost
- Floors ready for foot traffic after 4 hours; ready for service in 24 hours
- Volumetrically stable
- Reduces sound transmission

Shelf Life

1 year when properly stored

Storage

Store in unopened containers in a clean, dry area between 45 and 90° F (7 and 32° C).

Where to Use

APPLICATION

- Under carpeting, tile, linoleum, and hardwood floors
- For leveling rough or rain-damaged concrete substrates
- Where rapid turnaround is needed
- Multi-unit residential structures
- Schools
- Office complexes
- Commercial enterprises
- Hospitals

- Correctional institutions

SUBSTRATE

- Over cast-in-place and precast floors

How to Apply

Surface Preparation

1. Be certain drywall is in place, taped, and protected before beginning the application.
2. Make certain the subfloor is properly constructed (i.e., proper thickness and grade).
3. Substrate must be sound, clean, and free of oil, sealers, curing compounds, cutback, paint, polymer coatings, dust, or other foreign (bondbreaking) matter. Remove all weak or broken pieces of concrete. Use mechanical cleaning equipment such as sandblasting, shotblasting, or hydroblasting to ensure adequate surface preparation.
4. Fill (grout) joints and cracks to prevent seepage

Technical Data

Composition

Mastertop® 110 Plus Underlayment consists of cement, fine aggregate, fillers, and additives.

Test Data¹

PROPERTY	RESULTS	TEST METHODS
Compressive Strength , psi (MPa), (Mix water: 5.5 qts/50 lb bag)		ASTM C 109
1 day	2,700 (18.6)	
7 day	3,600 (24.8)	
28 day	4,400 (30.3)	
Flexural Strength , psi (MPa)		ASTM C 348
28 day	1,000 (6.9)	
Set Time , hrs:min		ASTM C 266
Initial	2:00	
Final	3:00	

¹The data shown are based on controlled laboratory tests. Atmospheric and jobsite conditions may cause reasonable variations from the results shown. Mix entire bag of Mastertop® 110 Plus Underlayment when preparing cubes for strength tests.

into bottom areas. Consult your BASF representative for product recommendations.

5. To avoid reflective cracking in toppings, always cut or form joints directly above those in the base slab.

Priming

1. Dilute MB Primer II with water at a 1 to 1 ratio and apply to properly prepared substrate using a push broom. One gallon (3.6 L) of diluted MB Primer II will cover approximately 350 – 400 ft² (32 – 37 m²). Apply a thin film of mixed MB Primer II, avoiding puddling.

2. Allow MB Primer II to dry completely to a blue film (3 – 4 hours at 70° F [21° C] and 50% relative humidity). Because MB Primer II will re-emulsify when in contact with the wet underlayment, the primed surface may be left for up to 12 hours without repriming.

IMPORTANT: MB Primer II must be dry before application of Mastertop® 110 Plus Underlayment. Extremely porous concrete may require 2 coats of primer. The surface must remain clean and free of any debris. If area becomes dirty or contaminated, the surface must be cleaned and reprimed.

Mixing

1. Add the Mastertop® 110 Plus Underlayment to the water (not water to material). Mix 5.25 qts (5.0 L) of clean, potable water to a 50 lb (22.7 kg) bag of material.

2. The best way to evaluate flow consistency is to measure with a flow ring based on a flow test using a 7/8" (21 mm) high, 2" (5 cm) inside-diameter PVC pipe. The optimal flow is 5-1/2 – 6-1/2" (14 – 16

cm).

3. Mix with high-shearing action, e.g., using a drill with Jiffy blade at 600 rpm, for 3 – 5 minutes. For larger jobs, an appropriately sized mortar mixer and pump has proven suitable for placement.

4. Do not add water in amounts that cause segregation or bleeding. Once the water content is determined, use a calibrated bucket with holes drilled at the proper height to spill out excess and maintain constant water content.

5. Before the actual job, make trial mixes to familiarize the applicator with the product in relation to local job conditions.

Application

1. Pour the product over the prepared substrate or pump through suitable equipment to desired thickness, not less than 1/8" (3 mm). If the product is not extended, avoid depths greater than 1/2" (13 mm). For hard-to-reach areas and touch-ups, use an epoxy spreader, porcupine roller, or a gage rake.

2. Mastertop® 110 Plus Underlayment will seek its own level in approximately 15 minutes at 70° F (21° C).

Curing

No special curing is required.

Do not apply a sealer if bonding agents for tile, carpeting, or other flooring materials will later be applied. Sealers may act as a bondbreaker.

For Best Performance

- DO NOT apply Mastertop® 110 Plus Underlayment over fresh, plastic concrete.
- DO NOT apply Mastertop® 110 Plus Underlayment over wood.
- DO NOT apply outdoors or anywhere exposed to rain or snow.
- DO NOT apply indoors where exposed to standing water.
- Consult your local BASF representative for placement over substrates not mentioned in this product data sheet.
- To ensure proper bond, apply MB Primer II to mechanically prepared substrates before applying Mastertop® 110 Plus Underlayment.
- Use only clean, potable water when mixing Mastertop® 110 Plus Underlayment.
- Do not use more than the recommended amount of water.
- Protect from moisture until surface is covered with tile, carpet, or other flooring materials.
- This is a cement-based product. DO NOT install Mastertop® 110 Plus Underlayment if base slab temperature is below 40° F (4° C). In warm weather, use cool water for mixing; proceed quickly with application and take adequate measures to protect Mastertop® 110 Plus

Underlayment from exposure to direct, strong sunlight and wind.

- Conduct a 10 by 10 ft (3 by 3 m) test application to become familiar with product characteristics.
- For thicknesses over 1/2" (13 mm), add 25 – 50 lbs (11.3 – 22.7 kg) of washed, coarse-graded 1/8" (3 mm) topsize sand per 50 lb (22.7 kg) bag of Mastertop® 110 Plus Underlayment.
- When extending Mastertop® 110 Plus Underlayment, follow the given mixing instructions and add the prescribed amount of sand. Then remix to achieve a homogeneous mixture.
- Extending the product will lower its flow and compressive strengths.
- If Mastertop® 110 Plus Underlayment begins to set before placement, dispose of it immediately. DO NOT attempt to retemper Mastertop® 110 Plus Underlayment.
- Where possible, pump Mastertop® 110 Plus Underlayment according to pump-manufacturer's directions.
- Use polyethylene or tarps to protect set Mastertop® 110 Plus Underlayment from rain, snow, water, and other forms of moisture.
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current versions.
- Proper application is the responsibility of the

user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

Health and Safety

MASTERTOP® 110 PLUS UNDERLAYMENT

WARNING!

Mastertop® 110 Plus Underlayment contains Silica, crystalline quartz; portland cement; alumina cement; anhydrite; limestone.

Risks

Product is alkaline on contact with water and may cause injury to skin or eyes. Ingestion or inhalation of dust may cause irritation. Contains small amount of free respirable quartz which has been listed as a suspected human carcinogen by NTP and IARC. Repeated or prolonged overexposure to free respirable quartz may cause silicosis or other serious and delayed lung injury.

Precautions

Avoid contact with skin, eyes and clothing. Prevent inhalation of dust. Wash thoroughly after handling. Keep container closed when not in use. DO NOT take internally. Use only with adequate ventilation. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable Federal, state and local regulations.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

Refer to Material Safety Data Sheet (MSDS) for further information.

Proposition 65

This product contains material listed by the State of California as known to cause cancer, birth defects or other reproductive harm.

VOC Content

0 g/L or 0 lbs/gal less water and exempt solvents.

**For medical emergencies only,
call ChemTrec (1-800-424-9300).**

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