



# Ultraplan<sup>®</sup> Extreme 2

**Weather-Resistant,  
High-Compressive-Strength,  
Self-Leveling Underlayment**



## DESCRIPTION

*Ultraplan Extreme 2* is an advanced hydraulic-cement-based, self-leveling compound designed for fast-track underlayment applications. It is especially formulated for leveling interior horizontal concrete surfaces where environmental controls are not operational or the building is not enclosed. Once installed, *Ultraplan Extreme 2* is not affected by exposure to intermittent rain exposure after 6 hours or to freezing temperatures after 3 days of curing. Its high compressive strength is designed to allow it to be exposed to traffic as a temporary wear layer until the floor is covered with floor covering. *Ultraplan Extreme 2* has no moisture vapor emission limitations and can be installed without testing on properly prepared concrete substrates. It is the self-leveling compound of choice for use under moisture-controlling adhesive systems and epoxy moisture barriers.

## INDUSTRY STANDARDS AND APPROVALS

LEED Points Contribution

LEED Points

MR Credit 5, Regional Materials\* ..... Up to 2 points

*\* Using this product may help contribute to LEED certification of projects in the category shown above. Points are awarded based on contributions of all project materials.*

## FEATURES AND BENEFITS

- Moisture- and freeze/thaw-resistant when cured
- Can be placed before HVAC systems or interior finishes are installed
- High compressive strength for extreme durability during construction
- Reduces subfloor preparation time for floor-covering applications

## WHERE TO USE

- *Ultraplan Extreme 2* can be used for fast-track leveling, smoothing and repairing of interior floors before installation of HVAC or interior finishes.
- *Ultraplan Extreme 2* can be used under moisture-controlling adhesive systems and epoxy moisture-control barriers.
- Interior residential (rental apartments, condominiums and homes)
- Interior commercial (office buildings, hotel rooms/hallways, restaurants and cafeterias)
- Interior heavy commercial (hotel lobbies, convention centers, airports, shopping malls, grocery stores and department stores)
- Interior institutional (hospitals, schools, universities, libraries and government buildings)

## LIMITATIONS

- Do not install over substrates containing asbestos.
- Use when the substrate temperature is between 40°F and 90°F (4°C and 32°C). For temperatures above 90°F (32°C), follow American Concrete Institute (ACI) hot-weather application guidelines to ensure a successful installation.
- Do not apply over self-stick tile, strip wood, particleboard, flakeboard, plank or other dimensionally unstable substrates.
- Do not use warm or hot water to mix with *Ultraplan Extreme 2*.
- Do not use in areas prone to hydrostatic pressure.



## SUITABLE SUBSTRATES

- Properly prepared concrete at least 7 days old
- Properly installed, primed and intact epoxy moisture barriers over concrete substrates

Consult MAPEI's Technical Services Department for installation recommendations regarding substrates and conditions not listed.

## SURFACE PREPARATION

- All substrates must be structurally sound, dry, solid and stable.
- Substrate should be clean and free of dust, dirt, oil, grease, paint, curing agents, concrete sealers, loosely bonded toppings, loose particles, old adhesive residues, and any other substance or condition that may prevent or reduce adhesion.
- Concrete surfaces must either have a broom finish or be mechanically profiled and prepared by shotblasting, sandblasting, water-jetting, scarifying, diamond grinding or other engineered-approved methods. Reference International Concrete Repair Institute (ICRI) concrete surface profile (CSP) #3 standard for acceptable profile height. Prime the properly profiled surface with any MAPEI primer used according to its respective Technical Data Sheets.
- For concrete surfaces that are smooth or cannot be mechanically profiled, as well as for intact epoxy moisture barriers, prime the surface with MAPEI's *Primer T™* at full strength or *Primer E™* with a sand broadcast.

See MAPEI's "Surface Preparation Requirements" document in the Reference & Installation Guides section of the Floor Covering Installation Systems page on MAPEI's Website.

## MIXING

Choose all appropriate safety equipment before use. Refer to the Safety Data Sheet for details.

### General mixing:

Pour the required amount of cool, clean potable water into a clean pail and add *Ultraplan Extreme 2* while slowly stirring. Mix water and powder at a ratio of 4.4 to 4.6 U.S. qts. (4,16 to 4,35 L) of water per 50-lb. (22,7-kg) bag of *Ultraplan Extreme 2*. Mix with a drill at about 600 to 900 rpm to a homogenous, lump-free consistency for 1 to 2 minutes. Do not overmix.

### Pump mixing:

*Ultraplan Extreme 2* can be mechanically mixed, using the appropriate mixing ratio above, with a continuous mixer and pump (with at least 140 ft. [42,7 m] of hose) or a batch mixer and pump (with at least 110 ft. [33,5 m] of hose). Adhere to the pump manufacturer's specifications. Mixer and pump must be in good working condition, and periodic cleaning of pumping equipment is required per the manufacturer's instructions. Pressure-test the rotor and stator pump

before mixing. To ensure a suitable mix and flow, test mixed material from the pump hose's end in a small test area before general application.

## PRODUCT APPLICATION

Read all instructions thoroughly before installation.

1. Use plastic sheeting to temporarily cover window and door openings, thereby helping to prevent drafts and protecting areas from direct sunlight.
2. Make sure that concrete substrate and ambient room temperatures are between 40°F and 90°F (4°C and 32°C) before application. In large applications, allow for indirect air circulation to dissipate humidity created by leveler application. Temperatures must be maintained within this range for at least 72 hours after the installation of *Ultraplan Extreme 2*. In cooler conditions, use indirect auxiliary heaters that are properly ventilated to maintain ambient and substrate temperatures within the required range for at least 24 hours before installation.
3. Set the width of the pour at a distance that is ideal for maintaining a wet edge throughout placement, and in consideration of expansion joints. Quickly pour or pump *Ultraplan Extreme 2* onto the properly prepared and primed surface in a ribbon pattern. If a wet edge cannot be maintained, reduce the width of the pour.
4. Spread the material with a gauge rake to assist in gauging out *Ultraplan Extreme 2* to the desired depth.
5. Smooth the surface with a smoother to obtain an even surface.

## CURING AND PROTECTION

- *Ultraplan Extreme 2* is self-curing. Do not use a damp-curing method, or curing or sealing compounds.
- Avoid walking on the installed surface for at least 2 to 3 hours after installation, depending upon temperature and humidity conditions.
- Do not expose *Ultraplan Extreme 2* to rolling dynamic loads, such as forklifts or scissor lifts, for at least 72 hours after installation.
- Do not expose *Ultraplan Extreme 2* to direct rain for at least 6 hours after installation.
- Do not allow *Ultraplan Extreme 2* to freeze temperatures for at least 3 days after installation.

## CLEANUP

Wash hands and tools with water promptly before material hardens. Cured material must be mechanically removed.

## Product Performance Properties

Laboratory Tests	Results
Compressive strength – ASTM C109 (CAN/CSA-A5)	
At 4 hours	> 1,740 psi (12 MPa)
At 28 days	> 5,600 psi (38,6 MPa)
Flexural strength – ASTM C348 (CAN/CSA-A23.2-8C)	
At 28 days	≥ 1,160 psi (8 MPa)
Pullout strength (rupture of concrete) – EN1348	
At 28 days	> 550 psi (3,79 MPa)
VOCs	0 g per L (calculated)
Density (wet)	128 lbs. per cu. ft. (2,06 kg per L)
pH	11 to 13

## Shelf Life and Product Characteristics (before mixing)

Shelf life	1 year when stored in original, unopened packaging at 73°F (23°C) in a dry area
Physical state	Powder
Color	Light gray

Protect containers from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

## Application Properties at 73°F (23°C) and 50% relative humidity

Mixing ratio of water per <i>Ultraplan Extreme 2</i> powder	4.4 to 4.6 U.S. qts. per 50 lbs. (4,16 to 4,35 L per 22,7 kg)
Application temperature range	40°F to 90°F (4°C to 32°C)
Application thickness	1/8" to 1" (3 mm to 2,5 cm)
Working time	< 15 minutes
Final set	60 to 75 minutes
Time required before installation of tile or stone	3 hours, depending on temperature and humidity
Time required before installation of impervious resilient, textile or wood-floor covering	24 to 36 hours, depending on temperature, humidity and thickness of application
Time required before exposure to freezing temperatures	3 days

## Packaging

Size
Bag: 50 lbs. (22,7 kg)
Super sack: 1,000 lbs. (454 kg)
Super sack: 2,000 lbs. (907 kg)

## Approximate Coverage\* per 50 lbs. (22,7 kg)

At a thickness of 1/8" (3 mm)	48 sq. ft. (4,46 m <sup>2</sup> )
At a thickness of 1/4" (6 mm)	24 sq. ft. (2,23 m <sup>2</sup> )
At a thickness of 1/2" (12 mm)	12 sq. ft. (1,11 m <sup>2</sup> )
At a thickness of 1" (2,5 cm)	6 sq. ft. (0,56 m <sup>2</sup> )

\* Coverage shown is for estimating purposes only. Actual jobsite coverage may vary according to substrate conditions, type of equipment, thickness applied and application methods used.

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Refer to the SDS for specific data related to health and safety as well as product handling.

## STATEMENT OF RESPONSIBILITY

Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith.

**ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

We proudly support the following industry organizations:



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For the most current BEST-BACKED<sup>™</sup> product data and warranty information, visit [www.mapei.com](http://www.mapei.com).

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