



# Ultraplan<sup>®</sup> Easy

**High-Performance,  
Easy-Preparation,  
Self-Leveling Underlayment**



## DESCRIPTION

*Ultraplan Easy* is an HCT™ (High-Hydrated Cement Technology)-based, quick-setting, self-leveling underlayment that typically requires only a clean, soundly bonded substrate before application. Typically requiring reduced surface preparation, *Ultraplan Easy* provides lower installation costs and fast turnaround on jobsites. It features high strength and is able to withstand light foot traffic after 2 to 3 hours of installation.

- Just clean, prime and pour
- Ready for tile in 3 to 4 hours

## INDUSTRY STANDARDS AND APPROVALS

LEED (Version 3.0) Points Contribution

LEED Points

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

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

## WHERE TO USE

*Ultraplan Easy* is suited for quick-turnaround leveling, smoothing and repairing of interior floors before the installation of floor coverings. Ceramic tile and natural stone can be installed 3 to 4 hours after application. Floor coverings – such as carpet, vinyl sheet goods, vinyl tile, vinyl composition tile (VCT), homogenous PVC, rubber and engineered wood plank – can typically be installed 16 to 24 hours after application. *Ultraplan Easy* is not recommended for application under surfaces subject to dynamic loading.

## LIMITATIONS

- Do not install over substrates containing asbestos.
- *Ultraplan Easy* is quite fluid once mixed and can be easily installed from featheredge to 2" (5 cm) in a single lift. Refer to the "Suitable Substrates" section of this Technical Data Sheet (TDS).
- *Ultraplan Easy* has a compressive strength greater than 2,000 psi (13,8 MPa) after 1 day and greater than 4,100 psi (28,3 MPa) after 28 days.
- *Ultraplan Easy* provides an ideal level substrate for cement or epoxy terrazzo flooring systems. Review the "Suitable Substrates" section of this TDS.
- *Ultraplan Easy* may be used as a light-duty topping (exposed to foot traffic and light rubber-wheeled traffic such as scissor lifts) when covered with an appropriate acrylic, epoxy or urethane coating that is subsequently maintained. Coatings may typically be applied 16 to 24 hours after *Ultraplan Easy* has been applied. Due to the wide variety of coatings available on the market, a mockup is required to determine compatibility and timing of a coating installation. When used as a topping, *Ultraplan Easy* requires a surface profile, and the use of the appropriate priming system (see MAPEI's "Primers for Self-Leveling Materials" product selection guide) is required to ensure the finest-quality installation. Due to the nature of pigmented cementitious toppings, variation in color and finish should be expected. Make an adequately sized mockup before the installation to ensure the acceptability of variation that is created by finishing and pigment. For the most consistent finish, use product produced from one manufacturing location in sequential batches.



- Before application of *Ultraplan Easy*, always properly prepare the surface and prime it with the appropriate MAPEI primer. For the appropriate primer, see MAPEI's "Primers for Self-Leveling Materials" product selection guide, and refer to the primer's current TDS.
- For use in dry, interior areas only. For exterior use or for areas subject to prolonged exposure to moisture, use an exterior-rated MAPEI topping or screed and consider applicability of a waterproofing membrane.
- *Ultraplan Easy* can only be used between the temperature of 50°F and 95°F (10°C and 35°C). In cooler conditions, use indirect auxiliary heaters to maintain ambient and substrate temperatures within the required range. Ensure that auxiliary heaters are vented externally, particularly if they give off carbon monoxide and other noxious fumes that could contaminate a prepared surface and be a health hazard. Maintain this temperature range for at least 72 hours after applying *Ultraplan Easy*. For temperatures above 85°F (29°C), follow ACI hot-weather application guidelines to ensure a successful installation.
- Provide for expansion and control joints where specified, including the perimeter of the room, columns, supports and equipment pedestals. Do not bridge expansion and control joints. Ensure that such joints are honored completely through *Ultraplan Easy* and primer. Where control or expansion joints do not exist in the substrate, provide for them in the system per industry standards.
- Do not mix *Ultraplan Easy* with other self-leveling products.
- Radiant-heating applications require a CSP #3 or greater as categorized by the ICRI organization as well as an appropriate MAPEI primer. See MAPEI's "Primers for Self-Leveling Materials" product selection guide.

Because not all radiant-heat systems are alike, consult the radiant-heating supplier along with all industry standards to ensure a successful installation.

## SUITABLE SUBSTRATES

- Properly prepared, sound, dry, dimensionally stable, fully cured concrete at least 28 days old
- When using *Ultraplan Easy* over a properly primed sound and stable substrate, profiling the surface is not required.
- *Ultraplan Easy* can be installed over well-bonded coatings, adhesives and glues compatible with *Primer WE* such as cutback, carpet glue and VCT. Excluded are finished surfaces that will be subject to dynamic loading (such as pallet jacks), forklifts or rubber-wheeled traffic.
- When using *Ultraplan Easy* to install over substrates other than clean sound concrete, the installer warrants that the materials being bonded to will be solid, stable and well-bonded, capable of passing 75 psi (0,52 MPa) tensile pull tests throughout the installation. All substrate

materials must be compatible with MAPEI primers. Weak substrates or contaminated surfaces must be removed by shotblasting or scarification, or other industry-approved means.

- *Ultraplan Easy* can be used over ceramic tile, VCT, cement terrazzo and small amounts of old cutback adhesive residue. Surfaces must be properly prepared, bonded, free of dirt and dust, and primed.
- Engineer-approved plywood subfloors may be resurfaced with *Ultraplan Easy*. Subfloors must be properly prepared, bonded, and free from dirt and dust (see Item 11 under "Surface Preparation" for details).
- All substrates must demonstrate a direct tensile bond capability of at least 75 psi (0,52 MPa). Weak substrates (not conforming to at least 75 psi [0,52 MPa] direct tensile bond) must be removed to ensure this minimum substrate strength across the surface before *Ultraplan Easy* is applied.
- *Ultraplan Easy* is compatible with a wide variety of floor-covering adhesives, epoxy adhesives, polyurethane adhesives, and tile and stone installation mortars.

Consult the floor-covering or coating manufacturer's recommendations regarding the maximum allowable moisture vapor emission rate (MVER) and retained moisture content in substrate. For substrates with an MVER exceeding 5 lbs. per 1,000 sq. ft. (2,27 kg per 92,9 m<sup>2</sup>) per 24 hours using a calcium chloride test (reference ASTM F1869), install a suitable MAPEI moisture-reduction barrier (see product TDS for installation procedures and product capabilities).

Note: The maximum allowable MVER is always determined by the complete system installed, including primers, underlayments/toppings, floor coverings and sealers. The wide variety of available substrate conditions, floor coverings and adhesives requires careful analysis of the intended final floor use, as well as compliance with each manufacturer's recommendations for MVER, retained moisture content and adhesive selections. Always install several correctly located test areas to ensure compatibility, bond strength and performance of the complete flooring system. (Test areas may need extended conditioning time to ensure desired performance.)

- Do not install *Ultraplan Easy* over particleboard, chipboard, hardboard (Masonite), Luaun panels, metal, asbestos, gypsum-based patching materials or any other nondimensionally stable materials.
- *Ultraplan Easy* can be installed over steel decking when properly primed with *Planibond EBA* epoxy bonding agent. See MAPEI's "Primers for Self-Leveling Materials" product selection guide and the current TDS for *Planibond EBA*.

To ensure installation success, test a small area for compatibility, bond strength and performance.

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

## SURFACE PREPARATION

1. All substrates must be indoor, structurally sound, stable, solid and dry. The maximum allowable deflection of the supporting surface must not exceed L/360 (or L/720 for installations involving natural stone or their agglomerates) when exposed to live or dead load.
2. Thoroughly clean the surface of any substance that could interfere with the bond of the installation material, including dirt, tar, wax, oil, grease, latex compounds, sealers, curing compounds, form release agents, laitance, loose toppings, or any material that could prevent the proper bonding of *Ultraplan Easy* to the substrate. Well-bonded adhesive residue that has been well-scraped can be covered with *Ultraplan® Easy*, in conjunction with the appropriate primer. Refer to MAPEI's "Primers for Self-Leveling Materials" product selection guide, and to the "Suitable Substrates" section of this TDS.
3. Concrete surfaces that are sound, stable and uncontaminated may be bonded to without mechanical profiling. Note: *Ultraplan Easy* may not be installed over low-psi (low-MPa) concretes, or concrete surfaces that are weak or degraded near the surface. In most cases, weak upper layers of concrete must be removed by mechanical method to produce sound and solid conditions, and then the resulting substrate must be properly primed.
4. After cleaning and mechanically profiling the substrate, test for MVER (calcium chloride test reference ASTM F1869). *Ultraplan Easy* is an underlayment for use with other finished floor systems (such as resilient, VCT and ceramic). Always follow manufacturers' recommendations regarding maximum allowable moisture content and MVER before installation.
5. Concrete substrate and ambient room temperatures must be between 50°F and 95°F (10°C and 35°C) before application. Temperatures must be maintained within this range for at least 72 hours after the installation of *Ultraplan Easy*.
6. Fill in deep areas, holes or cracks with appropriate concrete restoration materials (such as MAPEI's *Mapecem® Quickpatch*) especially when installing on a second-story floor or above where fluid material could leak to a floor below. Contact MAPEI's Technical Services Department for details.
7. Always prime the prepared surface with a MAPEI primer before applying *Ultraplan Easy*.
8. Do not apply primer over wet surfaces.
9. Apply *Ultraplan Easy* only when the primer is in its recommended state as defined in the current primer's TDS.
10. Some mechanically prepared substrates may be more porous than others. This may require a specific application of the primer.
11. *Ultraplan Easy* can be used over engineer-approved plywood or oriented strand board (OSB) subfloors in accordance with the most recent edition of the Tile Council of North America's F185 specification. Subfloors must be properly prepared, bonded, and free from dirt and dust.

When applying MAPEI underlayments to plywood flooring, installation requirements (finished flooring, load, use and/or deflection) may require the utilization of *Mapelath™* or diamond mesh (meeting the requirements of ASTM C847) on top of the primed surface before application of the

underlayment. In all cases, one can anticipate better performance when utilizing lath, particularly over OSB. Refer to the current *Mapelath* TDS for installation instructions. Differential or excessive movement within plywood substrate may lead to hairline cracks at plywood joints.

12. After installation of the moisture-reduction barrier, refer to MAPEI's "Primers for Self-Leveling Materials" product selection guide to select the correct primer before installation of *Ultraplan Easy*.
13. To install *Ultraplan Easy* over properly prepared ceramic tile, VCT, cement or epoxy terrazzo, or small amounts of old cutback adhesive residue, the surface must be properly prepared, bonded, free of dirt and dust, and primed.
14. To install *Ultraplan Easy* over properly prepared steel decking or metal, the surface must not exceed L/360 deflection for tile and L/720 deflection for stone, taking into consideration both live and dead loads (per ASTM C627). Prime the properly prepared surface with a MAPEI 100%-solids epoxy primer. Refer to MAPEI's "Primers for Self-Leveling Materials" product selection guide.

## MIXING

### General mixing

- Into a clean mixing container – typically at least a pail measuring 5 U.S. gals. (18,9 L) – pour the required amount of cool, clean potable water. If available water is not cool, chill the water to 70°F (21°C). Add *Ultraplan Easy* powder while slowly stirring. Mix water and *Ultraplan Easy* powder at a ratio of 5.75 to 6 U.S. qts. (5,44 to 5,68 L) of water per 50-lb. (22,7-kg) bag. Upon combining all of the water and the single bag of *Ultraplan Easy*, begin mixing material together with a high-speed drill (at about 800 to 1,200 rpm) to a homogenous, lump-free consistency. This typically takes 90 to 120 seconds.

The mixing ratio must remain consistent. Do not overwater material. For best results, use the *MAPEI® Self-Leveling Tool Kit*. For details, contact MAPEI's Technical Services Department or a local distributor of MAPEI products.

### Barrel mixing

- Using the appropriate mixing ratio above, use a high-speed mixer (at about 1,200 rpm) with an "egg-beater" mixing paddle. Typically this mixing procedure involves two bags of *Ultraplan Easy* with the water ratio per bag referenced in the instructions for "General mixing". Mix to a homogenous, lump-free consistency, for about 90 to 120 seconds. Do not overmix. Overmixing or moving the mixer up and down during the mixing process could cause air entrapment, which could shorten the pot life or cause pinholing during application and curing.

### Pump mixing

- *Ultraplan Easy* can be mechanically mixed, using the appropriate mixing ratio the instructions for "General mixing". Use a continuous mixer and pump with at least 100 ft. (30,5 m) of hose, or a batch mixer and pump with at least 70 ft. (21,3 m) of hose. Both the mixer and pump must be in good working condition. Periodic cleaning of pumping equipment is required per the manufacturer's instructions. Be sure to pressure-test rotor and stator for proper mixing.

Use a mesh screen "sock" at the end of the hose to catch any foreign material that could enter the hopper of the mixer. To ensure a perfect mix and proper flow, test mixed material from the end of the hose. Apply

to a small test area before general application to ensure a successful installation.

Note: Cool-weather conditions may require longer mixing or additional hose length to ensure the best product performance.

Note: Choose all appropriate safety equipment before use. Refer to Material Safety Data Sheet (MSDS) for more information.

## PRODUCT APPLICATION

1. Read all installation instructions thoroughly before installation.
2. Before installation, close doors and windows, and turn off HVAC systems to prevent drafts during application and until floor is cured. Protect areas from direct sunlight.
3. Make sure concrete substrate and ambient room temperatures are between 50°F and 95°F (10°C and 35°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® Easy*. In cooler conditions, use indirect auxiliary heaters to maintain ambient and substrate temperatures within the required range. For temperatures above 85°F (29°C), follow ACI hot-weather application guidelines to ensure a successful installation.
4. Application of *Ultraplan Easy* over large areas can be made easier and more efficient by using conventional piston, rotor-stator or underlayment-type pumps. Contact MAPEI's Technical Services Department for recommendations.
5. For best results, work as a team to provide a continuous flow of wet material, to avoid trapping air or creating a cold joint.
6. Set the width of the pour at a distance that is ideal for maintaining a wet edge throughout placement. Quickly pour or pump *Ultraplan Easy* onto the properly prepared and primed surface in a ribbon pattern. If a wet edge cannot be maintained, reduce the width of the pour.
7. *Ultraplan Easy* has a flow time of about 15 minutes at 73°F (23°C), is self-leveling and can be applied from featheredge to 2" (5 cm) in a single application. Temperature and humidity will affect working time, flowability and setting time. Apply enough material to adequately cover all high spots. Refer to the "Suitable Substrates" section of this TDS.
8. Shortly after placing the *Ultraplan Easy*, spread the material with a MAPEI Gauge Rake to assist in gauging out the product to the desired depth. After achieving the desired depth, use a MAPEI Smoother to smooth the surface until even.

9. For extended installations of 2" to 5" (5 to 12,5 cm), contact MAPEI's Technical Services Department.
10. *Ultraplan Easy* quickly hardens, within 2 to 3 hours. It is ready to accept installation of ceramic tile and non-moisture-sensitive natural stone in as little as 3 to 4 hours. Floor coverings – such as carpet, vinyl sheet goods, vinyl tile, VCT, homogenous PVC, rubber and engineered wood plank – can typically be installed 16 to 24 hours after application. Protect the surface from contaminants until final flooring installation is complete.

## CURING

1. *Ultraplan Easy* is self-curing; do not use a damp-curing method or curing and sealing compounds.
2. Protect *Ultraplan Easy* from excessive heat or draft conditions during curing. Turn off all forced ventilation and radiant-heating systems. (Some radiant-heating systems should not be tuned on after installation for 7 to 14 days; check with heat manufacturer.) Protect installation for up to 24 hours after completion.
3. Avoid walking on installed surface for at least 2 to 3 hours after installation, depending upon temperature and humidity conditions.
4. Protect installation from traffic, dirt and dust from other trades until *Ultraplan Easy* is completely cured and final flooring has been installed.

## CLEANING

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

## Product Performance Properties

Laboratory Tests		Results
<b>Ultraplan Easy (before mixing)</b>		
Physical state		Powder
Color		Taupe
Flammability		Flame spread: 0 Fuel contribution: 0 Smoke development: 0
<b>Ultraplan Easy (mixed)</b>		
Mixing ratio of water to <i>Ultraplan Easy</i>		5.75 to 6 U.S. qts. per 50-lb. bag (5,44 to 5,68 L per 22,7-kg bag)
Density		About 128 lbs. per cu. ft. (2,06 kg per L)
pH		11
Application temperature range		50°F to 95°F (10°C to 35°C)
Pot life		10 minutes
Flowing time		15 minutes
Final set		2 to 3 hours
Time required before installation of tile or stone		Typically 3 hours
Time required before installation of impervious floor covering		Typically 16 to 24 hours, depending on temperature and humidity
<b>Other Data</b> (material and hardening conditions at 73°F [23°C] and 50% relative humidity without curing)		
Compressive strength – ASTM C109 (CAN/CSA-A5)		
1 day		> 2,000 psi (13,8 MPa)
7 days		> 3,100 psi (21,4 MPa)
28 days		> 4,100 psi (28,3 MPa)
Flexural strength – ASTM C348		
1 day		> 570 psi (3,93 MPa)
7 days		> 850 psi (5,86 MPa)
28 days		> 1,070 psi (7,38 MPa)
Pull-out strength (Direct Tensile Bond test – rupture in concrete substrate) (CAN/CSA-A23.2-6B)		
28 days		> 360 psi (2,48 MPa)



## Shelf Life and Application Properties

Shelf life	6 months in original bag in a dry, heated and covered area
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## CSI Division Classification

Cast Underlayment	03 54 00
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## Packaging

Product Code	Size
24350000	Bag: 50 lbs. (22,7 kg)

## Approximate Product Coverage per thickness for a 50-lb. (22,7-kg) bag

Thickness	Yield
1/8" (3 mm)	48 sq. ft. (4,46 m <sup>2</sup> )
1/4" (6 mm)	24 sq. ft. (2,23 m <sup>2</sup> )
1/2" (12 mm)	12 sq. ft. (1,11 m <sup>2</sup> )

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

# Ultraplan® Easy



## RELATED DOCUMENTS

Product Selection Guide: Primers for Self-Leveling Materials	RGC0609*
Reference Guide: Reduced Surface Preparation for concrete restoration systems	RGC0509*

\* At [www.mapei.com](http://www.mapei.com).

Refer to MAPEI's MSDS for specific data related to VOCs, health and safety, and handling of product.

## 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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(1-888-876-2734)

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**Customer Service**  
1-800-42-MAPEI (1-800-426-2734)

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

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