

Self-Leveler Plus

Self-Leveling Underlayment



BEFORE

AFTER

DESCRIPTION

Self-Leveler Plus is a high-strength, regular-setting, cement-based, self-leveling underlayment and repair mix for use over interior concrete, plywood and other approved floor surfaces. *Self-Leveler Plus* is convenient and easy to use. Once cured, it provides a smooth, level surface on which to install a variety of floor coverings.

FEATURES AND BENEFITS

- Convenient: Just mix and pour.
- Smooths and flattens interior floors
- Cures to provide a flat, hard, smooth surface to receive a variety of floor-covering materials
- Compatible with a wide variety of tile and stone mortars, floor-covering adhesives, and epoxy and polyurethane adhesives
- Can be installed from 1/8" to 1" (3 mm to 2.5 cm) thick in a single pour
- Ready for ceramic tile or stone in 24 hours
- Ready for other types of floor coverings after 2 to 3 days
- Mix with water only.

SUITABLE FLOOR COVERINGS

- Ceramic tile and natural stone (after a 24-hour cure)
- Engineered or solid wood flooring, carpet, vinyl sheet goods, vinyl tile, vinyl composition tile (VCT), homogenous PVC and rubber flooring

SUITABLE SUBSTRATES

- Sound, dimensionally stable, fully cured concrete at least 28 days old and free from hydrostatic pressure
- Ceramic tile, VCT, cement or epoxy terrazzo, and thin layers of old cutback adhesive residue that are well-bonded and dimensionally stable
- Subfloors of exterior-grade plywood in accordance with the most recent edition of Tile Council of North America (TCNA) Handbook's F185 specification

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

WHERE TO USE

- *Self-Leveler Plus* is well-suited for flattening, smoothing and repairing residential and commercial interior floors before the installation of final floor coverings.

LIMITATIONS

- For use in dry, interior areas only
- Not a wear surface; must be covered with tile, stone or other final floor-covering material
- For substrates with an MVER exceeding 5 lbs. per 1,000 sq. ft. (2.27 kg per 92.9 m²) per 24 hours, using a calcium chloride test (reference ASTM F1869), install a suitable MAPEI moisture-reduction barrier.
- Make sure the substrate and ambient room temperatures are 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 *Self-Leveler Plus*. In cooler conditions, use indirect auxiliary heaters to maintain the ambient and substrate temperatures within the required range. For temperatures above 85°F (29°C), contact MAPEI's Technical Services Department.
- Do not install *Self-Leveler Plus* over particleboard, chipboard, Masonite, Lauan, oriented strand board (OSB), metal, asbestos, gypsum-based patching materials or any other non-dimensionally stable materials.
- Before beginning, test in a small area to ensure compatibility, bond strength and performance of the complete flooring system. Contact MAPEI's Technical Services Department for installation recommendations regarding substrates or conditions not listed.
- Do not install over substrates containing asbestos.
- Before application of *Self-Leveler Plus*, always properly prepare the surface and prime with MAPEI's *Primer T*

SURFACE PREPARATION

1. Concrete surfaces must be mechanically profiled and prepared by shotblasting, sandblasting, water-jetting, scarifying, diamond-grinding or other engineer-approved methods. Reference International Concrete Restoration Institute (ICRI) concrete surface profile (CSP) #3 standards for acceptable profile height.
2. Fill in deep areas, holes and cracks with appropriate concrete restoration materials, 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).
3. Thoroughly clean the surface of any substance that could interfere with bonding of *Self-Leveler Plus*, including dirt, paint, tar, asphalt, wax, oil, grease, latex compounds, sealers, curing compounds, form release agents, loose toppings, foreign substances and adhesive residue.
4. Prime the floor with *Primer T* and let it dry (see Technical Data Sheet for information). Do not apply primer over standing water.
5. If application is taking place over plywood flooring, installation requirements (finished flooring, load, use and/or deflection) specify the use of a lath or diamond mesh (meeting the requirements of ASTM C847), installed according to TCNA F185 guidelines, on top of the primed surface before *Self-Leveler Plus* is applied. Anticipate better performance when using lath. Differential or excessive movement within the plywood substrate may lead to hairline cracks at plywood joints.

MIXING

Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details.

General mixing

1. Into a clean mixing container, add 5 to 5.28 U.S. qts. (4.73 to 5.0 L) of cool, clean, potable water. If the water is not cool, chill it to 70°F (21°C).
2. Add 50 lbs. (22.7 kg) of *Self-Leveler Plus* powder while slowly mixing with an "egg-beater" mixer and electric drill. Once all powder has been added to the water, mix at a high speed (at about 900 to 1,100 rpm) for 2 minutes.
3. Note: The water/powder ratio must remain consistent from container to container. Do not overwater material.

Pump mixing (professional use only).

1. *Self-Leveler Plus* can be mechanically mixed, using the mixing ratio above. Use 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).
2. The mixer and pump must be in good working condition. Periodic cleaning of the pumping equipment is required per the manufacturer's instructions.
3. Pressure-test the rotor and stator for proper mixing.
4. Use a mesh screen "sock" at the end of the hose to catch any foreign material that could enter the hopper of the mixer.

PRODUCT APPLICATION

Read all instructions thoroughly before installation.

1. Application of *Self-Leveler Plus* over large areas can be easier and more efficient by using conventional piston, rotor-stator or underlayment types of pumps. Contact MAPEI's Technical Services Department for recommendations.
2. Before installation, close doors and windows, and turn off HVAC systems to prevent drafts during application and until the pour has cured. Protect areas from direct sunlight.
3. For best results, work as a team to provide a continuous flow of wet material to avoid trapping air or creating a cold joint between mixed batches.
4. Set the width of the pour at a distance that is ideal for maintaining a wet edge throughout placement. Quickly pour or pump *Self-Leveler Plus* onto the properly prepared and primed surface in a ribbon pattern. If a wet edge cannot be maintained, reduce the width of the pour.
5. *Self-Leveler Plus* has a flow time of about 10 minutes at 73°F (23°C) and can be applied from 1/8" to 1" (3 mm to 2.5 cm) in a single application. Temperature and humidity affect the working time, flowability and setting time. Apply enough material to adequately cover all high spots.
6. Immediately after placing *Self-Leveler Plus*, spread with a gauge rake. After achieving the desired depth, smooth the surface with a smoother to obtain an even surface. Do not overwork the material, which could trap air.
7. For professional use only: *Self-Leveler Plus* may be extended with 1/4" to 3/8" (6 to 10 mm) of clean, saturated surface-dry (SSD) aggregate on the primed surface at no more than half of the total pour depth. Pour *Self-Leveler Plus* over placed aggregate and rake aggressively to ensure full contact and bond with the substrate. Immediately pour 1/4" (6 mm) of *Self-Leveler Plus* over the raked aggregate to provide a smooth, level surface. Alternately, one may add aggregate (up to 30% by weight) directly to *Self-Leveler Plus* when mixing; in this case, add the aggregate after reaching a homogenous mix of *Self-Leveler Plus* and water. Note: Use only clean, nonreactive aggregates.

EXPANSION AND CONTROL JOINTS

- Provide for expansion and control joints where specified, including the perimeter of the room, columns, supports and equipment pedestals. If control and expansion joints do not exist in the substrate, provide for movement joints in the system in accordance with TCNA EJ 171.
- Do not bridge the substrate's expansion and control joints. Ensure that such joints are honored completely through *Self-Leveler Plus* and the primer (*Primer T*).
- Cut joints in *Self-Leveler Plus* at least 1/4" (6 mm) wide within 24 hours of application.

CLEANUP

- Wash hands and tools with water promptly before the material hardens. Cured material must be mechanically removed.
- Applications in cooler temperatures may require extra curing time before the installation of floor-covering materials.

CURING

- *Self-Leveler Plus* is self-curing; do not use a damp-curing method or curing and sealing compounds.

PROTECTION

- Protect *Self-Leveler Plus* from excessive heat or draft conditions during curing. Turn off all forced ventilation and radiant-heating systems. Protect for up to 24 hours after completion.
- Protect the installation from traffic, dirt, dust and other trades until *Self-Leveler Plus* has completely cured and the final flooring has been installed.
- Do not expose *Self-Leveler Plus* to heavy loads for at least 72 hours after installation.

Product Performance Properties

Laboratory Tests	Results
Density	About 128 lbs. per cu. ft. (2.1 kg per L)
pH	11
VOC content	0 per L
Compressive strength – ASTM C109 (CAN/CSA-A5)	
7 days	> 2,700 psi (18.6 MPa)
28 days	> 4,200 psi (29.0 MPa)
Pull-out strength (Direct Tensile Bond test – rupture in concrete substrate)	
7 days	> 300 psi (2.07 MPa)

Shelf Life and Product Characteristics

before mixing

Shelf life	1 year in unopened, original bag in a dry, heated and covered area
Physical state	Powder
Color	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	5 to 5.28 U.S. qts. (4.73 to 5.0 L) of water per 50 lbs. (22.7 kg) of powder
Application temperature range	50°F to 95°F (10°C to 35°C)
Flowing time	10 to 15 minutes

Final set	> 4 hours
Time required before installation of tile or stone	Typically 24 hours
Time required before installation of other floor coverings	Up to 1/4" (6 mm) thickness = Typically 24 hours 1/4" to 1/2" (6 to 12 mm) thickness = Typically 2 to 3 days, depending on temperature and humidity

CSI Division Classification

Cast Underlayment	03 54 00
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Packaging

Size
Bag: 50 lbs. (22.7 kg)

Approximate Coverage*

per 50 lbs. (22.7 kg)

Thickness	Coverage
1/8" (3 mm)	48 sq. ft. (4.46 m ²)
1/4" (6 mm)	24 sq. ft. (2.23 m ²)
1/2" (12 mm)	12 sq. ft. (1.11 m ²)
1" (2.5 cm)	6 sq. ft. (0.56 m ²)

* 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.

ADDITIONAL INFORMATION

Refer to the Safety Data Sheet (SDS) for specific data related to health and safety as well as product handling.

For information on MAPEI's commitment to sustainability and transparency, as well as how MAPEI products may contribute to green building standards and certification systems, contact sustainability_USA@mapei.com (USA).

WARNING

The test results shown in the TECHNICAL DATA table were obtained in compliance with test methods and curing cycles, if applicable, defined in the industry standards referenced on the Technical Data Sheet. Please note that the use of test procedures or methods other than those indicated in the table could lead to different values and that, in such cases, any liability of our company is excluded.

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement nor replace requirements per the TDS in effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at www.mapei.com. **ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED MAPEI WARRANTIES.**

Before using, the user must determine the suitability of our products for the intended use, and the user alone assumes all risks and liability. **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.**

CONTACT INFORMATION

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For the most current product data and BEST-BACKEDSM warranty information,
visit www.mapei.com.
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