

Ultraplan Marine Fire [NA]

High-Performance, Quick-Setting, Fiber-Reinforced, Self-Leveling Underlayment



North America [NA]

DESCRIPTION

Ultraplan® Marine Fire [NA] is a self-leveling, quick-setting, fiber-reinforced underlayment for interior ship decks subject to heavy traffic, and is a component of a soundproof floating floor system. It has high compressive strength and can withstand light foot traffic after 3 hours and vehicular rubber-wheel traffic after 3 days. Thanks to MAPEI's High-Hydrated Cement Technology (HCT™), *Ultraplan Marine Fire* [NA] offers superior drying-out characteristics for quick curing and does not contribute to efflorescence.

FEATURES AND BENEFITS

- For leveling interior floors 1/8" to 1-3/16" (3 mm to 3 cm) thick per applied layer
- Ready for foot traffic in 3 hours
- Allows installation of non-moisture-sensitive flooring in 24 hours
- High-performance for high traffic areas with heavy dynamic loads

INDUSTRY STANDARDS AND APPROVALS

Green certifications

- Living Building Challenge (LBC) Red List Free: This product has been verified per the most current Red List on the LBC's Website.

Certified to meet International Maritime Organization (IMO) and U.S. Coast Guard (USCG) standards for noncombustible material

WHERE TO USE

- For leveling and smoothing interior floors before the installation of floor coverings
- Interior applications over well-supported decks
- For leveling areas subject to heavy traffic, high mechanical stress or rolling loads

LIMITATIONS

- Do not install over substrates containing asbestos.
- For interior use only
- Do not apply in thicknesses greater than 1-3/16" (3 cm) in one application.
- Do not apply in more than 2 layers for a maximum total thickness of 2-1/2" (6.35 cm). Contact Marine MAPEI's Technical Services Department for details.
- Do not apply as a wear surface.
- Install *Ultraplan Marine Fire* [NA] between the temperatures of 41°F and 95°F (5°C and 35°C).
- Do not install over structural joints or expansion joints in the substrate.
- Do not install over wet surfaces or standing water.
- Do not install over sheet vinyl; self-stick vinyl tile; luxury vinyl tile (LVT); luxury vinyl plank (LVP); glue-down wood flooring; particleboard; hardboard (Masonite); Lauan panels; waterproofing, crack-isolation or peel-and-stick sound-control membranes; gypsum-based patching materials; or any other non-dimensionally stable materials.
- Do not install if the maximum allowable deflection of the supporting surface, including live or dead load, exceeds L/360 (or L/720 for installations involving natural stone or their agglomerates).
- Do not add any accelerators, cement, gypsum, lime or any other additives to *Ultraplan Marine Fire* [NA]. Mix only with water.
- Do not use for exterior use or areas subject to prolonged exposure to moisture. Instead, use an exterior-rated MAPEI topping or screed.

Note: Provide for and do not bridge expansion and control joints in the substrate including the perimeter, columns and equipment pedestals.

SUITABLE SUBSTRATES

- All substrates must be primed with the appropriate MAPEI primer or bonding agent before applying self-levelers. See primer selection in the "Surface Preparation" section below and on the primer's Technical Data Sheet (TDS).
- Well-supported metal substrates including steel, aluminum copper and lead when primed with the recommended primer
- Properly installed, fully cured, sound and dry cement-based mortar beds, underlayments and patching compounds

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

SURFACE PREPARATION

- All substrates must be properly prepared and primed, structurally sound, stable, solid and dry.
- Metal substrates must be rigid, solidly fixed in place, clean and free of oil, grease dirt, corrosion, or any other substance that would reduce or inhibit bond.
- Prepare steel surfaces by mechanical grinding, brushing or blasting according to SSPC SP2-3-11 (ISO 8501-1 ST2-ST3) to remove all oxidation. For best results, prepare steel surfaces to SSPC-SP6 (ISO 8501-1 SA2) surface quality or better.
- Primer selection:
 - Directly over metal substrates: Use a sand broadcast to rejection with #50 to #60 silica, *Mapesand*TM *Fine* or *Mapesand Coarse*.
 - *Planibond*[®] EBA two-part, high-modulus, epoxy bonding agent – heavy-duty, high-traffic areas
 - Use for additional layers of Ultraplan Marine Fire [NA]:
 - *Primer T*TM – Use only over porous, cement-based substrates.

For details on the use and application of the primer or bonding agent referenced above, see the TDSs at www.mapei.com.

MIXING

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

Manual mixing

1. Measure and pour 4.3 to 4.8 U.S. qts. (4.07 to 4.54 L) of cool, clean, potable water per each 50 lbs. (22.7 kg) of *Ultraplan Marine Fire* [NA] powder into a clean mixing vessel, using a mixing barrel or a plastic pail measuring 5 U.S. gals. (18.9 L). For best results, the water temperature should be about room temperature (73°F or 23°C). The mixing ratio of water to *Ultraplan Marine Fire* [NA] must remain consistent. Do not overwater.
2. Slowly add *Ultraplan Marine Fire* [NA] powder into the premeasured water. Use a low-speed drill (300 to 500 rpm) and an oval mixing paddle to mix *Ultraplan Marine Fire* [NA] for 2 to 3 minutes, until achieving a homogenous, lump-free, flowable consistency.
3. Do not overmix. Overmixing or moving the mixer up and down during the mixing process could trap air, shorten the pot life or cause pinholing during the application and curing process.

Pump mixing

1. *Ultraplan Marine Fire* [NA] can be mechanically mixed, using the appropriate mixing ratio shown above, with a continuous mixer and pump (with at least 140 ft. or 42.7 m of hose) or a batch mixer and pump (with at least 110 ft. or 33.5 m of hose). Periodic cleaning of pumping equipment may be required per the manufacturer's instructions.
2. To ensure a suitable mix and flow, test the mixed material from the pump hose's end in a small test area before general application.
3. During application, monitor the consistency of the mix coming out the end of the hose and adjust if needed.

PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. Substrate and ambient room temperatures should be maintained at between 41°F and 95°F (5°C and 35°C) during the installation as well as for 72 hours afterward.
2. Before installation, close doors and windows, and turn off HVAC systems to prevent drafts during application and until *Ultraplan Marine Fire* [NA] is cured. Protect installation areas from direct sunlight.
3. Quickly pour or pump *Ultraplan Marine Fire* [NA] onto the properly primed surface in a ribbon pattern. Set the width of the pour at a distance that is ideal for maintaining a wet edge throughout placement. If a wet edge cannot be maintained, reduce the width of the pour. For best results, work as a team to provide a continuous flow of wet material, to avoid trapping air or creating a cold joint. Apply enough material to adequately cover all high spots.
4. Shortly after placing *Ultraplan Marine Fire* [NA], spread the material with a gauge rake. After achieving the desired depth, use a smoother to obtain an even surface. An appropriate spike roller can be used as an alternate to the smoother for the final surface.
5. Second-coat applications of *Ultraplan Marine Fire* [NA]: For second-layer application of the product, wait until the product is hardened and can receive foot traffic (after about 3 hours) and apply the second layer. Apply a layer of *Primer T* diluted at 1:2 to promote adhesion. See *Primer T*'s TDS for details.

CLEANUP

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

CURING

- *Ultraplan Marine Fire* [NA] is self-curing; do not use a damp-curing method or cure-and-seal compounds.
- Cool-weather conditions may extend curing or setting times.
- Warm-weather conditions may accelerate setting and curing times as well as reduce flowing time.

PROTECTION

- Protect *Ultraplan Marine Fire* [NA] from direct sunlight, excessive heat and drafty conditions during curing.
- Turn off all forced ventilation and radiant-heating systems, protecting the installation for up to 24 hours after completion.
- Avoid walking on the installed surface for at least 3 hours after installation, depending upon temperature and humidity conditions.
- Protect the installation from construction traffic, dirt and dust from other trades until *Ultraplan Marine Fire* [NA] is completely dry and final flooring has been installed.
- Do not expose *Ultraplan Marine Fire* [NA] to rolling dynamic loads, such as fork lifts or scissor lifts, for at least 3 days after installation.

Product Performance Properties

Laboratory Tests	Results
pH	About 12
Cured density	115.49 lbs. per cu. ft. (1.85 kg per L)
Compressive strength – ASTM C349	
1 day	2,900 psi (20 MPa)
7 days	3,900 psi (27.0 MPa)
28 days	5,075 psi (35 MPa)
Flexural strength – ASTM C348	
1 day	507 psi (3.50 MPa)
7 days	725 psi (5 MPa)
28 days	1,160 psi (8 MPa)

Shelf Life and Product Characteristics

before mixing

Shelf life	1 year when stored in original, unopened packaging at 73°F (23°C) and 50% relative humidity (RH)
Storage conditions	Store in a dry place
Physical state	Powder
Color	Gray
Dry bulk density	81.16 lbs. per cu. ft. (1.30 kg per L)

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% RH

Mixing ratio	4.3 to 4.8 U.S. qts. (4.07 to 4.54 L) of water per 50 lbs. (22.7 kg) of powder, or 18% to 20% by weight
Mixing time	2 to 3 minutes
Density of mix	127.98 lbs. per cu. ft. (2.050 kg per L)
Application temperature range	41°F to 95°F (5°C to 35°C)
Working time	Up to 20 minutes
Setting time	50 to 70 minutes

Time before allowing foot traffic	3 hours
Thickness range for single-lift applications	1/8" to 1-3/16" (3 mm to 3 cm)
Drying time before installation of non-moisture-sensitive floor coverings at 1-3/16" (3 cm) thickness	24 hours
Drying time before installation of moisture-sensitive floor coverings at 1-3/16" (3 cm) thickness	48 to 72 hours

CSI Division Classification

Cast Underlayment	03 54 00

Approximate Coverage*

per 50 lbs. (22.7 kg)

Thickness	Coverage
1/16" (1.5 mm)	96 sq. ft. (8.92 m ²)
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)
Coverage ratio: 0.52 lb. per sq. ft. per 1/16" thickness (1.7 kg per m ² per 1 mm thickness)	

** Coverage shown is for estimating purposes only. Actual jobsite coverage may vary according to substrate conditions and setting practices.*

Packaging

Size
Plastic bag: 50 lbs. (22.7 kg)

ADDITIONAL INFORMATION

Refer to the 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) or sustainability-durabilite@mapei.com (Canada).

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

MAPEI Headquarters of North America

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1-888-US-MAPEI (1-888-876-2734) / (954) 246-8888

Technical Services

U.S. and Puerto Rico:

Flooring: 1-800-992-6273

Concrete and heavy construction: 1-888-365-0614

Canada:

1-800-361-9309

Customer Service

1-800-42-MAPEI (1-800-426-2734)

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