

Mapecem Marine 1000 [NA]

Ready-to-Use, Shrinkage-Compensated, Lightweight
Cementitious Screed for Leveling Internal Decks



NORTH AMERICA [NA]

FOR PROFESSIONAL USE ONLY

DESCRIPTION

Mapecem® Marine 1000 [NA] is a lightweight, high-performance, rapid-setting mortar used for leveling internal decks on ships before installing floor coverings such as tiles, resilient, textiles, carpet and resin flooring.

WHERE TO USE

- Leveling of internal decks prior to installation of floor coverings such as tiles, resilient, textiles, carpet and resin flooring

TECHNICAL CHARACTERISTICS

Mapecem Marine 1000 [NA] is a shrinkage-compensated, rapid-setting and rapid-drying mortar made with special hydraulic binders and select-grade aggregates, applied in layers up to 2" (50 mm) thick.

LIMITATIONS/RECOMMENDATIONS

- Mixing water temperature must always be maintained at between 41°F and 95°F (5°C and 35°C). If the ambient temperature is high, up to 95°F (35°C), the use of cool mixing water will extend the working time and improve

application properties of **Mapecem Marine 1000** [NA].

- Do not mix **Mapecem Marine 1000** [NA] with accelerators, cement, gypsum, lime or any other non-MAPEI additives.
- Do not use on exterior surfaces.
- Only install **Mapecem Marine 1000** [NA] on surfaces that are primed with **Eco Prim Marine**, which must be applied and dry per the Technical Data Sheet for **Eco Prim Marine**.
- Do not add additional water (re-temper) once **Mapecem Marine 1000** [NA] has started to set.
- Do not apply if the ambient temperature is lower than 41°F (5°C) or higher than 95°F (35°C).

SUBSTRATE PREPARATION

Remove all traces of oil, grease, rust, paint, powder, crumbling material and any other adhesion-reducing or adhesion-inhibiting compounds or substances from the application surface.

Prepare the surface with power tools, removing all dust and making sure that it is clean and dry. Then apply **Eco Prim Marine** by roller and/or brush according to instructions in the Technical Data Sheet. Allow to dry for approximately 35 to 40 minutes, depending on ambient conditions, before beginning application of **Mapecem Marine 1000** [NA].

Note: **Eco Prim Marine** must be applied in an even coat. The primer is colored black to make it easier during application to observe that there is an evenly applied coating. Applying **Eco Prim Marine** in an application thickness too thin or too thick can result in failure of the adhesion between the substrate and **Mapecem Marine 1000** [NA].

MIXING

Begin by adding 2 U.S. qts. (1.89 L) of clean, clear water to a suitable, clean mixing container. Then slowly add the 25-lb. (11.34-kg) bag of **Mapecem Marine 1000** [NA] while mixing, using a low-speed (300-450 rpm) electric mixer, until a smooth and compact mix is obtained.

The mix must be applied and floated as soon as possible after mixing, and within 30 minutes from the start of mixing.

Do not modify the amount of mixing water added to the mix. Altering the mixing ratio of **Mapecem Marine 1000** [NA] can negatively impact the product's application properties and final performance properties.

Temperatures above 73°F (23°C) will shorten the product's open time. Only mix quantities of **Mapecem Marine 1000** [NA] that will be applied within 30 minutes.

PRODUCT APPLICATION

Spread **Mapecem Marine 1000** [NA] on the surface prepared with **Eco Prim Marine** (dried according to instructions) in a single layer of 3/16" to 2" (5 mm to 50 mm) with a float or trowel. For leveling the surface, a straightedge with thickness gauge (or curbs previously made with **Mapecem Marine 1000** [NA]) can be used to apply **Mapecem Marine 1000** [NA] in the thickness required.

When a second coat of **Mapecem Marine 1000** [NA] is required, allow the first coat to cure sufficiently to support foot traffic (for approximately 3 hours at 73°F or 23°C and 50% relative humidity). Then, before applying the

second coat of **Mapecem Marine 1000** [NA], apply a coat of **Eco Prim Marine** to promote good adhesion between the pours (reference the Technical Data Sheet for drying time).

When **Mapecem Marine 1000** [NA] will be applied over more than one day, create a vertical joint where the work will stop and start again. To prevent a cold joint in this location, apply a layer of **Mapedeck Epofloor** to the edge surface of the previous pour. While **Mapedeck Epofloor** is still wet, apply **Mapecem Marine 1000** [NA] in the thickness specified.

Mapecem Marine 1000 [NA] provides a suitable substrate for various types of floor coverings. When cured at 73°F (23°C) and 50% RH, at the maximum recommended application thickness, time before flooring installation is listed below.

- 1 day: For ceramic tile or non-moisture sensitive types of stone
- 3 days: For resin, resilient, textile, moisture-sensitive stone and wood flooring

Curing time will vary depending on the thickness of the product applied, ambient temperature, humidity and the type of flooring installed. For the best results, check the level of residual moisture in the hardened layer of **Mapecem Marine 1000** [NA] to ensure compatibility with the floor covering or coating to be applied.

If **Mapecem Marine 1000** [NA] is to be coated with resin flooring, apply a layer of **Mapedeck Epofloor** mixed with 20% to 30% by weight of quartz sand (selecting the grain size based on the thickness to be applied). The mixture of **Mapedeck Epofloor** and quartz sand must be applied with a smooth steel trowel on a properly prepared surface free from dust. To complete this process, broadcast the surface with quartz sand, to rejection, with a maximum grain size of 0.5 mm, on the freshly applied product.

CLEANUP

Mapecem Marine 1000 [NA], while still fresh, can be removed from tools with water.

COVERAGE/CONSUMPTION

- 0.3578 lb./sq. ft. per 1/16" (1.1 kg/m² per mm) of thickness
- 4.36 sq. ft. (0.405 m²) per 1" (25 mm) of thickness per 25-lb. (11.3-kg) bag

PACKAGING

Mapecem Marine 1000 [NA] is available in 25-lb. (11.3-kg) bags.

STORAGE

Store **Mapecem Marine 1000** [NA] in a cool dry location at 73°F (23°C) and 50% RH. Shelf life is 1 year in original, unopened packaging.

Product Performance Properties

Test Method	Test Results
Consistency	Powder

Color	Gray-brown
Density	
Bulk density of dry powder	0.8 g/cm ³
Wet density of mix	1.25 g/cm ³
Cured density (after 28 days)	0.95 to 1.1 g/cm ³
Dry-solids content	100%
Compressive strength	
After 1 day	1,740 psi (12 N/mm ²)
After 7 days	2,320 psi (16 N/mm ²)
After 28 days	2,900 psi (20 N/mm ²)
Flexural strength	
After 1 day	362 psi (2.5 N/mm ²)
After 7 days	435 psi (3 N/mm ²)
After 28 days	580 psi (4 N/mm ²)

Application Properties

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

Mixed at 2 U.S. qt. (1.89 L) of water per 25 lbs. (11.3 kg) of <i>Mapecem Marine 1000</i> [NA]	
Thickness per coat	3/16" to 2" (5 mm to 50 mm)
pH of mix	Approx. 11
Application temperature	41°F to 95°F (5°C to 35°C)
Workability time	20 to 30 minutes
Setting time	45 to 60 minutes
Ready after application for light foot traffic	3 hours
Curing time at 2" (50 mm) in thickness before flooring installation	1 day: For ceramic tile or non-moisture sensitive types of stone 3 days: For resin, resilient, textile, moisture-sensitive stone and wood flooring

Certifications and Classifications

IMO-MED	Non-combustible material
EMICODE	EC1 Plus (very low emission)

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.**

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