

ULTRAPLAN MARINE 1400

One-component, fibre-reinforced, rapid-hardening
cementitious self-levelling mortar for internal decks
on ships



WHERE TO USE

Ultraplan Marine 1400 is used to level off internal decks on ships before applying floor coverings (tiles, resilient, resin-based, etc.).

Ultraplan Marine 1400 may be used in all areas not exposed to water. Apply the product in a single layer from 3 to 20 mm thick.

TECHNICAL CHARACTERISTICS

Ultraplan Marine 1400 is a mortar made from a mixture of special, rapid-setting and hydrating cement, selected lightweight aggregates, resin, fibres and special additives according to a formulation developed by the MAPEI laboratories. Mix **Ultraplan Marine 1400** with water before use. It forms an hi-flow, rapid-hardening and drying, self-levelling mortar which is easy to apply with both hand tools and a mortar pump.

RECOMMENDATIONS

- Do not add water to the mix once it starts to set.
- Do not add lime, cement, gypsum or any other type of substance or compound.
- Do not use for external applications.
- Apply the product after treating surfaces with **Eco Prim Marine**, which must be dry when the product is applied.
- Do not use the product at temperatures lower than +5°C.

APPLICATION PROCEDURE

Preparation of the substrate

Remove from the substrate all traces of oil, grease, rust, paint, powder, crumbling material and any other compounds or substances which could affect adhesion.

Apply **Eco Prim Marine** on the clean, dry, de-dusted surface with a brush or roller. Pay close attention to the uniformity of the layer applied: the primer is black to make it easier to apply and to avoid areas with an insufficient amount of product. It is equally important not to apply too much primer: both conditions (too thin or too thick a film) may cause the **Ultraplan Marine 1400** layer to detach.

When the **Eco Prim Marine** is dry (approximately 35–40 minutes) apply the **Ultraplan Marine 1400**.

Application

Pour around 5.8-6.2 litres of clean water into a clean container large enough to hold all the mix. Pour the contents of a 20 kg bag of **Ultraplan Marine 1400** into the water while mixing and keep mixing with an electric mixer at low-speed to form a smooth, lump-free, self-levelling mix. Bigger quantities of **Ultraplan Marine 1400** can be prepared using a mortar mixer.

Leave the mix to stand for 2–3 minutes, mix again for a few seconds and spread the mortar within its workability time. The workability time will be lower with temperatures higher than +23°C. It is good practice to prepare quantities of **Ultraplan Marine 1400** that will be used within 30–40 minutes.

Spread **Ultraplan Marine 1400** in a single layer from 3 to 20 mm thick over the dry **Eco Prim Marine** with a metal spreader or rake. Check the consumption rate of the product while spreading to make sure the thickness required is applied.

Ultraplan Marine 1400 may also be applied with a mortar pump.

If a second layer is required, it should be applied as soon as the first one has set to foot traffic (approx. 3 hours at +23°C) and never more than 3 hours after the set to foot traffic time. If this time limit is exceeded, apply a coat of **Eco Prim Marine** as an adhesion promoter.

Ultraplan Marine 1400 is suitable for various types of floor covering. Always adhere to the specified recoating time of the product (at +23°C and 50% R.H, referred to the maximum applicable thickness):

- 3 days for resilient, textile, resin-based and wood coverings
- 1 day for ceramic coverings

These times vary, depending on the thickness of mortar applied, the environment temperature and humidity. It is recommended to check the level of residual moisture in the hardened layer of mortar to make sure it is compatible with the floor coating or dressing to be applied.

In case of resin floor coverings, a layer of **Mapedek Epofloor** mixed with 20-30% by weight of quartz (particle size depending on the desired thickness) must be applied with a smooth steel trowel on a duly prepared and dust-free surface. Then sprinkle quartz with a particle size of no more than 0-0.5 mm onto the product while it is still fresh to saturation.

If the mortar needs to be applied over several days, it is necessary to create suitable joints with a two-component epoxy product (i.e. **Mapedek Epofloor**).

CLEANING

Clean **Ultraplan Marine 1400** from hands and tools with water while still wet.

CONSUMPTION

The consumption rate for **Ultraplan Marine 1400** is 1.2 kg/m² per mm of thickness.

STORAGE

Ultraplan Marine 1400 remains stable for 12 months if stored in a dry place. If stored for longer than 12 months it may take longer to set but this will not affect its final characteristics.

PACKAGING

Ultraplan Marine 1400 is available in 20 kg bags.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instructions for the safe use of our products can be found on the latest version of the Safety Data Sheet, available from our website www.mapei.com.

PRODUCT FOR PROFESSIONAL USE

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

Consistency:

fine powder



Colour:	grey
Bulk density:	1.1 g/cm ³
Dry solids content:	100%

APPLICATION DATA (at +23°C and 50% R.H.)

Mixing ratio:	29-31 parts of water per 100 parts in weight of Ultraplan Marine 1400 (5.8-6.2 litres of clean water for 20 kg of Ultraplan Marine 1400)
Thickness applied per layer:	3 to 20 mm
Density of mix:	1.6 g/cm ³
pH of mix:	approx. 11
Application temperature:	+5°C to +35°C
Workability time:	20-30 mins.
Setting time:	45-60 mins.
Set to foot traffic:	3 hours
Recoating time:	– 1 day for ceramic floors – 3 days for resilient, textile, resin-based and wood floor covering (for a thickness of 20mm)

FINAL PERFORMANCE

Compressive strength:	
– after 1 day:	15 N/mm ²
– after 7 days:	22 N/mm ²
– after 28 days:	30 N/mm ²
Flexural strength:	
– after 1 day:	3 N/mm ²
– after 7 days:	4 N/mm ²
– after 28 days:	7 N/mm ²
Taber Test (H 22 - 500 g - 200 revs):	2 g
Density of product after 28 days:	1.35-1.45 g/cm ³

CERTIFICATION AND CLASSIFICATION

IMO MED:	non-combustible material
EMICODE:	EC1 Plus – very low emission

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

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The most up-to-date TDS can be downloaded from our website www.mapei.com.

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