

ULTRAPLAN MARINE 1400

Self-levelling, one-component, fiber-reinforced, quick hardening cementitious mortar for ship interior decks



WHERE TO USE

Ultraplan Marine 1400 is used for levelling off internal decks on ships before installing floor coverings (tiles, resilients, resin, etc.).

Ultraplan Marine 1400 can be applied in all areas not exposed to water. The applicable thickness, in a single layer, ranges from 3 mm to 20 mm.

TECHNICAL CHARACTERISTICS

Ultraplan Marine 1400 is a mortar composed of fast-setting and fast-hydrating special cements, selected lightweight aggregates, resins, fibres and special additives mixed according to a formulation developed at MAPEI laboratories.

Ultraplan Marine 1400 should be mixed with water before application. The mixed mortar is free-flowing, self-levelling, fast hardening and fast drying, and easily applied either manually or with pumps.

RECOMMENDATIONS

- Do not add more water to the mix once it has started to set.
- Do not add lime, cement, gypsum or any other type of substance or compound.
- Do not use on exterior surfaces.
- Only apply the product on surfaces treated with **Eco Prim Marine**, which must be dry when the product is applied.
- Do not apply if the temperature is lower than +5°C.

APPLICATION PROCEDURE

Preparation of the substrate

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

Prepare the surface with power tools, remove all dust and make sure it is clean and dry, then apply **Eco Prim Marine** by roller and/or brush. Make sure the product is applied in an even coat: the primer is black to make it easier to apply and to avoid leaving areas without enough product. It is just as important to avoid applying too

much primer: both conditions (layers too thin or too thick) could lead to detachment of the layer of **Ultraplan Marine 1400**.

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

Application

Pour about 5.8 to 6.2 liters of clean water into a clean container, having a suitable volume to hold the entire mixture, and then pour a 20-kg bag of **Ultraplan Marine 1400 while mixing**. Use an electric mixer at low speed until a homogeneous, lump-free, self-levelling mix is obtained.

Larger quantities of **Ultraplan Marine 1400** can be prepared in mixers for mortar.

After 2–3 minutes of resting, stir the mixture for a few seconds and spread the product, which should be applied within its pot life. Temperatures above +23°C extend the product's pot life; it is good practice to only mix quantities of **Ultraplan Marine 1400** that will be applied within 30–40 minutes.

Spread a layer of **Ultraplan Marine 1400** between 5 and 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 only the thickness required is applied.

Ultraplan Marine 1400 can also be applied with a rendering machine.

When a second coat is required, it is recommended to apply it as soon as the first one is set to foot traffic (approximately 3 hours at +23°C and 50% R.H.). Before applying the second coat, it is necessary to reapply **Eco Prim Marine** as an adhesion promoter, proceeding with the second coat only after the primer has dried (make reference to the Technical Data Sheet of **Eco Prim Marine** for drying times).

Various floor coverings can be applied to the **Ultraplan Marine 1400** surface. Different recoating times (referring to +23°C and 50% R.H. and maximum applicable thickness) must be observed:

- 3 days for resilient, textile, resin and wood coatings
- 1 day for ceramics

These times vary according to the thickness of the layer of mortar applied and the surrounding temperature and level of humidity. Check the level of residual moisture in the hardened layer to ensure compatibility with the covering or coating to be applied.

In case of recoating with resin flooring, a layer of **Mapedeck Epofloor** mixed with 20-30% by weight of quartz (grain size to be selected depending on the thickness to be applied) must be applied in between. **Mapedeck Epofloor** must be applied with a smooth steel trowel on a properly prepared surface free from dust. Then broadcast in excess the surface with quartz with grain size max. 0-0.5 mm on the fresh product.

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

CLEANING

When still fresh, **Ultraplan Marine 1400** can be removed from tools with water.

CONSUMPTION

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 without affecting 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 SDS 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/cm³

Dry solids content: 100%

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

Mixing ratio: 29-31 parts of water per 100 parts by weight of **Ultraplan Marine 1400** (5.8-6.2 liters of clean water per 20 kg of **Ultraplan Marine 1400**)

Thickness per coat: from 3 to 20 mm

Density of mix: 1.6 g/cm³

pH of mix: approx. 11

Application temperature: from +5°C to +35°C

Workability time: 20-30 minutes

Setting time: 45-60 minutes

Set to light foot traffic: 3 hours

Coating:
- 1 day for ceramic floors
- 3 days for resilient, textile, resin and wood (times are based on a thickness of 20 mm)

FINAL PERFORMANCE

Compressive strength:

– after 1 day: 15 N/mm²

– after 7 days: 22 N/mm²

– after 28 days: 30 N/mm²

Flexural strength:

– after 1 day: 3 N/mm²

– after 7 days: 4 N/mm²

– after 28 days: 7 N/mm²

Taber Test (H 22 - 500 g - 200 rpm):

2 g

Bulk density after 28 days:

1.35-1.45 g/cm³

CERTIFICATIONS AND CLASSIFICATIONS

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.

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

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 or replace requirements per the TDS in force at the time of the MAPEI product installation.

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

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