



Mapefloor PU 410

**Two-component,
neutral-coloured,
self-levelling, flexible
polyurethane
fillerized binder**



WHERE TO USE

Solvent-free, two-component, medium-flexibility polyurethane resin-based flooring system with crack-bridging capability, with low viscosity and good wear resistance.

Suitable for internal and external applications on floors in multi-storey car-parks and garages.

Thanks to its special formulation, **Mapefloor PU 410** is used in the **Mapefloor Parking System HE** as a wear-resistant coating for the intermediate **Mapefloor PU 400** layer, within 24 hours of application. **Mapefloor PU 410** is also used for **Mapefloor Parking System ID** for protecting and waterproofing the road surface of internal car parks.

TECHNICAL CHARACTERISTICS

Mapefloor PU 410 is a two-component, polyurethane resin-based fillerized formulate, made according to a special formula developed in MAPEI's own R&D laboratories.

Mapefloor PU 410 is highly resistant to the formation of cracks in concrete, even at low temperatures (up to -10°C).

Mapefloor PU 410 also contains good resistance to mechanical strength.

Broadcasting quartz sand on **Mapefloor PU 410** increases its anti-wear properties, and leaves a slip-resistant finish on the surface.

RECOMMENDATIONS

- Do not apply **Mapefloor PU 410** on substrates without primer with a moisture level higher than 4%, or on those which are subject to capillary rising damp (consult our Technical Services Department).

- Do not dilute **Mapefloor PU 410** with solvents or water.
- Do not apply **Mapefloor PU 410** on dusty or crumbling substrates.
- Do not apply **Mapefloor PU 410** on substrates which have traces of oil, grease and dirt in general.
- Do not mix partial quantities of the components, in order to avoid mistakes in the blending ratios. The product may not set correctly.
- Once blended, do not expose the product to sources of heat.

APPLICATION PROCEDURE

Mapefloor PU 410 may be used for the following applications:

- as an intermediate layer in the **Mapefloor Parking System HE**;
- as a wear layer in the **Mapefloor Parking System ID**.

1. Intermediate wear layer in the Mapefloor Parking System HE coating

- Within 24 hours of applying the **Mapefloor PU 410** elastic coating, spread on a coat of **Mapefloor PU 410** made by mixing components A and B with an electric mixer at low speed and then adding **Mapecolor Paste** (add 1.4 kg of the required colour of **Mapecolor Paste** for each 19.9 kg bag of **Mapefloor PU 410**). Continue mixing for a few minutes until a lump-free, homogenous mix is obtained. Add 30% by weight

- of **Quartz 0.25** while still mixing until a homogenous mix is obtained.
- Pour the product onto the floor and spread it out evenly on the surface to be treated with a straight steel trowel. While the product is still fresh, back-roll with a spiked roller. As soon as the product has been applied, and while still fresh, broadcast with quartz sand with a grain size of 0.1-0.5 mm or 0.3-0.9 mm, according to the degree of non-slip finish required, approximately 4 kg/m².
- When the product has hardened, remove the excess sand, sandpaper the surface and remove the dust with a heavy-duty vacuum cleaner.
- Apply a finishing layer of **Mapefloor Finish 451** to prepare the product, mix the two components separately with a drill at low speed, then pour component B into the container of component A and mix for several minutes until they are thoroughly blended. Apply in an even, uniform coat using a straight steel trowel and back-roll with a short-haired roller, such as mohair, making sure that the roll strokes criss-cross over each other to obtain a defect-free surface.

2. Wear layer for the Mapefloor Parking System ID coating cycle

- **Preparation of the substrate**
The surfaces to be treated must be smooth, clean and dry and must not be subject to capillary rising damp. The screed of the substrate must be strong enough to withstand the loads foreseen when in service. Cement laitance present on the surface to be treated must be eliminated mechanically.
Before applying **Mapefloor PU 410**, any dust present on the substrate must be completely removed.
- After carefully preparing the substrate, apply **Primer SN** mixed with 0.4 parts of **Quartz 0.5**, making sure that it is applied evenly with a flat trowel or smooth rake. Immediately after application, the fresh surface of **Primer SN** must be broadcast with **Quartz 0.5** to guarantee perfect bonding of the successive resin coating.
- When the product has hardened, remove the excess sand with a vacuum cleaner. Within 24 hours of applying the **Mapefloor PU 410** elastic coating, spread on a coat of **Mapefloor PU 410** made by mixing components A and B with an electric mixer at low speed and then adding **Mapecolor Paste** (add 1.4 kg of the required colour of paste for each 19.9 kg bag of **Mapefloor PU 410**). Continue mixing for a few minutes until a lump-free, homogenous mix is obtained. Add 30% by weight of **Quartz 0.25** while still mixing until a homogenous mix is obtained, and spread the product evenly on the surface to be treated.
- While the surface of **Mapefloor PU 410** is still fresh, sprinkle with quartz sand with a grain size of 0.1-0.5 mm or 0.3-0.9 mm (according to the degree of non-slip required) until saturated.
- When the product has hardened, remove the excess sand, sandpaper the surface

and remove the dust with a heavy-duty vacuum cleaner.

- Apply a finishing layer of **Mapefloor Finish 415** to prepare the product, mix each of the two components separately with an electric mixer at low speed. Pour component B into the container of component A. Apply an even coat by straight steel trowel, then back-roll with a short-piled roller, such as mohair, making sure that the roll strokes criss-cross over each other to obtain a defect-free surface.

N.B.: the examples described above are for indication purposes only. The amount of **Primer SN** required may vary according to the surrounding temperature. At low temperatures, the amount required may be less, while at higher temperatures, the amount required may be more.

CONSUMPTION

1. As an anti-wear layer in the Mapefloor Parking System HE

- POLYURETHANE MEMBRANE
 - **Mapefloor PU 410** + **Mapecolor Paste** mixed with **Quartz 0.25** Broadcast with quartz 0.1-0.5 / 0.3-0.9 mm 4 kg/m²
- FINISH
 - **Mapefloor Finish 451** 0.6 kg/m²

2. As an anti-wear layer in the Mapefloor Parking System ID

- PRIMER
 - **Primer SN** Broadcast with **Quartz 0.5** while still fresh 0.7 kg/m² 0.3 kg/m²
- POLYURETHANE MEMBRANE
 - **Mapefloor PU 410** + **Mapecolor Paste** mixed with **Quartz 0.25** Broadcast with quartz 0.1-0.5 mm / 0.3-0.9 while still fresh 1 kg/m² 0.3 kg/m² 4 kg/m²
- FINISH
 - **Mapefloor Finish 415** 0.6 kg/m²

PACKAGING

- 19.9 kg kits:
– component A = 16 kg;
– component B = 3.9 kg.

STORAGE

12 months in its original packaging at a temperature of between +10°C and +30°C.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapefloor PU 410 component A is not considered as dangerous according to the current regulation regarding the classification of mixtures.

Mapefloor PU 410 component B is irritant for the skin, eyes and respiratory track. It can cause irreversible damages if used for lengthy periods. Then, it can cause sensitization when in contact with the skin of those subjects sensitive to isocyanates. Component B may become harmful and may

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

	component A	component B
Colour:	neutral	amber
Appearance:	viscous liquid	liquid
Density (g/cm³):	1.40	1.22
Viscosity at +23°C (mPa-s):	4,000 (# 4 - rpm 20)	190 (# 2 - rpm 100)

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

Mixing ratio:	component A : component B = 16 : 3.9
Colour of mix:	neutral
Consistency of the mix:	fluid
Density of the mix (kg/m³):	1.30
Pot life at +20°C:	30 minutes
Viscosity of mix (mPa-s):	1,800 (# 3 - rpm 20)
Application temperature range:	from +8°C to +35°C

FINAL PERFORMANCES (at +23°C and 50% R.H.)

Dust dry:	2-4 hours
Set to light foot traffic:	24 hours
Final hardening time:	7 days
Elongation (neat) (DIN 53504) (7 days at +23°C) (%):	ca. 112
Elongation fillerized with 30% Quartz 0.25 (7 days at +23°C) (DIN 53505) (%):	80
Shore A hardness (after 7 days at +23°C):	90
Shore A hardness fillerized with 30% Quartz 0.25 (7 days at +23°C):	90
Crack Bridging -10°C (EN 1062-7 static method A):	class A1 > 100 µm
Crack Bridging +23°C (EN 1062-7 dynamic method B):	class B2
Tensile strength (neat) after 7 days at +23°C (N/mm):	37
Tensile strength fillerized with 30% Quartz 0.25 after 7 days at +23°C (N/mm):	27
Tensile strength (neat) after 7 days at +23°C (N/mm²):	10
Tensile strength fillerized with 30% Quartz 0.25 after 7 days at +23°C (N/mm²):	6,5

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cause sensitization if inhaled if the product is applied at a surrounding temperature higher than +60°C. In case of sickness, seek medical attention.

When applying the product, we recommend using protective clothes, gloves and goggles, protecting the respiratory tracks, wearing a mask and working in well ventilated areas.

If the product comes into contact with the eyes or skin, wash immediately with plenty of clean water and seek medical attention.

For further and complete information about the safe use of our product please refer to the latest version of our Material Safety Data Sheet.

PRODUCT ONLY FOR PROFESSIONAL USE.

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

**All relevant references
for the product are available
upon request and from
www.mapei.com**



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