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Mapefloor PU 410

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



WHERE TO USE

Solvent-free, two-component, flexible 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** and **Mapefloor Parking System WD** for protecting the road surface of internal car parks.

TECHNICAL CHARACTERISTICS

Mapefloor PU 410 is a two-component, polyurethane resin-based, 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 is waterproof and has 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 an intermediate layer in the **Mapefloor Parking System ID**.
- as an intermediate layer in the **Mapefloor Parking System WD**.

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

- Within 24 hours of applying the **Mapefloor PU 400** elastic coating, spread on a coat of **Mapefloor PU 410** made by mixing components A and B with a low speed electric mixer 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, fully broadcast with **Quartz 0.5** or **Quartz 0.9** 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 low speed electric mixer, then pour component B into the container of component A and mix for several minutes until they are thoroughly blended. Apply in an even coat using a straight steel trowel and back-roll with a short-pile roller, such as mohair, making sure that the roll strokes criss-cross over each other to obtain a defect-free surface.

2. Intermediate 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**. 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** prepared by mixing components A and B with a low speed 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 broadcast in excess with **Quartz 0.5** or **Quartz 0.9** (according to the degree of non-slip require).
- When the product has hardened, remove the excess sand, sandpaper the surface and remove the dust with a heavy-duty vacuum cleaner.
- Apply a layer of **Mapefloor Finish 415**. To prepare the product, mix each of the two components separately with a low speed electric mixer.

Pour component B into the container of component A and mix for several minutes until

they are thoroughly blended. Apply an even coat by straight steel trowel, then back-roll with a short-pile 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 temperature

3. Intermediate layer for the Mapefloor Parking System WD 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**. 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, prepared by mixing components A and B with a low speed electric mixer. Continue mixing for a few minutes until a lump-free, homogenous mix is obtained. Spread the product evenly on the surface to be treated.
- While the surface of **Mapefloor PU 410** is still fresh, broadcast in excess with **Quartz 0.5** or **Quartz 0.9** (according to the degree of non-slip required).
- When the product has hardened, remove the excess sand, sandpaper the surface and remove the dust with a heavy-duty vacuum cleaner.
- Apply a 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 and mix for several minutes until they are thoroughly blended. Apply an even coat by straight steel trowel, then back-roll with a short-pile roller, such as mohair, making sure that the roll strokes criss-cross over each other to obtain a defect-free surface.
- 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-pile 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

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

	component A	component B
Colour:	neutral	amber
Appearance:	viscous liquid	liquid
Density (g/cm ³):	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/m ³):	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/mm ²):	10
Tensile strength fillerized with 30% Quartz 0.25 after 7 days at +23°C (N/mm ²):	6.5
Elongation (7 days at +23°C) (ASTM D412) (%):	86
Tensile strength (neat) after 7 days at +23°C (ASTM D412) (N/mm ²):	5.8

Mapefloor PU 410



Primer SN required may vary according to the surrounding temperature. At low temperatures, the amount required may be less, while at higher temperature

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 0.5** or **Quartz 0.9** 1 kg/m² 0.3 kg/m² 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 0.5** or **Quartz 0.9** while still fresh 1 kg/m² 0.3 kg/m² 4 kg/m²
- FINISH
- **Mapefloor Finish 415** 0.6 kg/m²

3. As an anti-wear layer in the **Mapefloor**

Parking System WD

- PRIMER
- **Primer SN** Broadcast with **Quartz 0.5** while still fresh 0.25-0.35 kg/m² 0.6 kg/m²
- POLYURETHANE MEMBRANE
- **Mapefloor PU 410 + Mapecolor Paste** mixed with **Quartz 0.25** Broadcast with **Quartz 0.5** or **Quartz 0.9** while still fresh 0.5 kg/m² 2 kg/m²
- INTERMEDIATE LAYER
- **Mapefloor Finish 415** 0.6 kg/m²
- FINISH
- **Mapefloor Finish 451** 0.2 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. The product does not give off hazardous vapours at room temperature and under normal condition of use. Component B may become harmful and may cause sensitization if inhaled if the product is applied at a surrounding temperature higher than +60°C. In case of sickness, seek medical attention.

During use wear protective clothes, gloves and goggles, protect the respiratory tracks, wearing a mask and work 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.

IMPORTANT NOTES

Whilst we try to ensure that any advice, recommendations or information given in our literature is accurate and correct, we have no control over the circumstances in which our product is used. It is therefore important that installers satisfy themselves that the product and conditions are suitable for the envisaged application. No warranty can be given or responsibility accepted other than, that the product supplied by us will meet our written specification. The installer should ensure that our latest product data and safety information sheets have been consulted prior to use.

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

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The contents of this Technical Data Sheet ("TDS") may be copied into other project-related documents, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.

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



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