MAPEI

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** as a wear-resistant coating for the intermediate **Mapefloor PU 400** layer, within 24 hours of application.

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 research 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.
Sprinkling 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 Department).
- Do not dilute **Mapefloor PU 410** with solvents or water.
- Do not apply **Mapefloor PU 410** on dusty or crumbly 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 anti-wear layer in the **Mapefloor Parking System**;
- as a flexible multi-layer coating;
- as a flexible self-levelling coating.

1. Intermediate wear layer in the Mapefloor Parking System coating

- Within 24 hours of applying the flexible **Mapefloor PU 400** layer, spread on **Mapefloor PU 410** prepared beforehand, add **Mapecolor Paste** and mix with a low-speed drill to avoid the entrapment of air (for each 19.2 kg kit of **Mapefloor PU 410**, add 1.4 kg of coloured paste according to the colour required). 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.

Mapefloor PU 410

- Pour the product onto the floor and spread it out evenly on the surface to be treated with a smooth trowel. While the product is still fresh, pass over the layer with a spiked roller. As soon as the product has been applied, and while still fresh, saturate it 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/m^2.
- 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 51** mixed beforehand, with 10% by weight of **Mapecolor Paste** colouring paste. Mix with a low-speed drill fitted with a spiral mixing attachment until a homogenous mix is obtained. Apply the mix uniformly and continuously using a smooth rake followed by a medium-haired roller, making sure that the roll strokes criss-cross over each other to obtain a defect-free surface.

2. 1.5-3 mm-thick multi-layer, flexible non-slip coating

- **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 sprinkled 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 and carefully mix the **Mapefloor PU 410**, add the **Mapecolor Paste** colouring paste and mix with a low-speed drill to avoid entrapment of air (for each 19.2 kg kit of **Mapefloor PU 410**, add 1.4 kg of coloured paste according to the colour required). Continue mixing for a few minutes until a lump-free, homogenous mix is obtained. Add 30% by weight of **Quartz 0.5** 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 51** mixed beforehand, with 10% by weight of **Mapecolor Paste** colouring paste. Mix with a low-speed drill fitted with a spiral mixing attachment until a homogenous mix is obtained. Apply the mix uniformly and continuously using a smooth rake followed by a medium-haired roller, making sure that the roll strokes criss-cross over each other to obtain a defect-free surface.

3. 2-3 mm-thick self-levelling flexible coating

- **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 removed mechanically.
- 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 sprinkled with **Quartz 0.5** (approximately 1 kg/m^2) to guarantee perfect bonding of the successive resin coating.
- When the product has hardened, remove the excess sand and carefully mix the **Mapefloor PU 410**, add the **Mapecolor Paste** colouring paste and mix with a low-speed drill to avoid entrapment of air (for each 19.2 kg kit of **Mapefloor PU 410**, add 1.4 kg of coloured paste according to the colour required).
  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 on the floor and spread it out evenly and homogenously using a 5 mm-pitch notched trowel.
- Pass over the surface while still fresh using a spiked roller to even out the thickness, and to help remove all the air trapped in the mix during preparation.
- When the product has hardened, apply a finishing layer of **Mapefloor Finish 51** mixed beforehand, with 10% by weight of **Mapecolor Paste** colouring paste. Mix with a low-speed drill fitted with a spiral mixing attachment until a homogenous mix is obtained. Apply the mix uniformly and continuously using a medium-haired roller, making sure that the roll strokes criss-cross over each other to obtain a defect-free surface. If only a light non-slip finish is required, add 3-10% by weight of **Mapefloor Filler**.

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.*

TECHNICAL DATA (typical values)

PRODUCT IDENTITY		
	component A	**component B**
Colour:	neutral	straw-coloured
Appearance:	viscous liquid	liquid
Density (g/cm^3):	1.43	1.21
Viscosity at +23°C (mPa·s):	2,600 (# 4 - rpm 50)	20 ± 50
APPLICATION DATA (at +23°C and 50% R.H.)		
Mixing ratio:	component A : component B : = 100 : 28	
Colour of mix:	neutral	
Consistency of the mix:	fluid	
Density of the mix (kg/m^3):	1.34	
Pot life at +20°C:	41 minutes	
Viscosity of mix (mPa·s):	750 (# 3 - rpm 50)	
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 (DIN 53504) (%):	approximately 180	
Shore A hardness after 28 days:	89	
Crack Bridging -10°C (UNI EN 1062-7 static method A):	class A1 > 100 µm	
Crack Bridging +23°C (UNI EN 1062-7 static method B):	class B2	

Mapefloor PU 410

CONSUMPTION

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

- FIRST COAT

Mapefloor PU 410	1 kg/m²
+ **Mapecolor Paste**	
mixed with **Quartz 0.25**	0.3 kg/m²
Sprinkling of quartz 0.1-0.5	4.0 kg/m²

- FINISH

Mapefloor Finish 51	0.200 kg/m²
+ **Mapecolor Paste**	

2. *As a 1.5-3 mm-thick multi-layer, flexible non-slip coating*

- FIRST COAT

Primer SN	0.700 kg/m²
Sprinkling of **Quartz 0.5**	
while still fresh	3 kg/m²

- INTERMEDIATE LAYER

Mapefloor PU 410 +	
Mapecolor Paste	0.9 kg/m²
mixed with **Quartz 0.5**	0.27 kg/m²
Sprinkling of quartz	
0.1-0.5 mm while still fresh	3 kg/m²

- FINISH

Mapefloor Finish 51	0.200 kg/m²
+ **Mapecolor Paste**	

3. *As a 2-3 mm-thick self-levelling, flexible coating*

- FIRST COAT

Primer SN	0.700 kg/m²
Sprinkling of **Quartz 0.5**	
while still fresh	0.5 kg/m²

- INTERMEDIATE LAYER

Mapefloor PU 410	4 kg/m²
(including **Quartz 0.25**)	
+ **Mapecolor Paste**	

- FINISH

Mapefloor Finish 51	0.200 kg/m²
+ **Mapecolor Paste**	

PACKAGING

19.2 kg kits:
– component A = 15 kg;
– component B = 4.2 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 dangerous, while component B is harmful if inhaled and may cause allergic reactions in those subjects sensitive to isocyanates.
While using the products, we recommend protecting the respiratory system and the use of protective gloves and goggles. Only apply the product in well-ventilated areas.
Seek medical attention in the event of accidents or giddiness.
For further and complete information about the safe use of our product please refer to our latest version of the Material Safety Data Sheet.

PRODUCT 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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