MAPEI

Mapefloor Finish 451



Two-component, aliphatic, elastic coloured polyurethane finish resistant to wear and UV rays

WHERE TO USE

Thanks to its flexibility, extremely simple application procedure and high resistance to abrasion and UV rays, **Mapefloor Finish 451** is recommended as a protective finish for **Mapefloor Finish 415** or **Mapefloor PU 400** or **Mapefloor PU 400 LV** and/or **Mapefloor PU 410** floor coverings used to protect and waterproof flat and sloping external surfaces for pedestrian and vehicle use.

SOME APPLICATION EXAMPLES

- Protective, wear-resistant finish for external waterproof systems made using **Mapefloor Finish 415** or **Mapefloor PU 400** or **Mapefloor PU 400 LV** broadcast with quartz sand.
- Coloured finish for bridges and walkways after applying flexible polyurethane waterproofing membranes.

TECHNICAL CHARACTERISTICS

Mapefloor Finish 451 is a two-component, aliphatic, elastic polyurethane finish that offers high resistance to wear, abrasion and UV rays. Surfaces treated with **Mapefloor Finish 451** also have an attractive finish. **Mapefloor Finish 451** has the following characteristics:

- good level of elasticity
- high resistance to wear and abrasion
- excellent resistance to UV rays
- excellent resistance to atmospheric agents;
- available in colours RAL. For the complete range of colours please contact MAPEI Head Office.

Thanks to its high resistance to UV rays and weathering, **Mapefloor Finish 451** is ideal for use in external environments.

RECOMMENDATIONS

- Workability of the product is influenced by the surrounding temperature and the temperature of the substrate. Pot-life varies according to the surrounding temperature and reduces as the temperature increases. We recommend, therefore, preparing only the quantity of material that can be applied within the pot-life.
- Do not apply **Mapefloor Finish 451** if the moisture content in the substrate is higher than 4%.
- Only apply **Mapefloor Finish 451** if the temperature of the substrate is at least 3°C higher than the dew-point temperature.
- Protect the product from water for at least 24 hours after application.

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TECHNICAL DATA (typical values)

PRODUCT IDENTITY		
	comp. A	**comp. B**
Colour:	RAL colous	transparent, colourless
Appearance:	liquid	liquid
Brookfield viscosity at +23°C (mPa·s):	6,000 ± 9,000 (rotor 6 - 50 revs)	540 ± 50 (rotor 2 - 50 revs)
Density (g/cm³):	1.63 ± 0.05	1.1 ± 0.05

APPLICATION DATA (at +23°C - 50% R.H.)	
Mixing ratio:	comp. A : comp. B = 70 : 30
Colour of mix:	RAL colous
Colour of mix:	RAL colous
Consistency of mix:	fluid paste
Density of mix (kg/m³):	1480
Viscosity of mix (mPa·s):	1500 ± 200 (rotor 4 - 50 revs)
Pot life at +23°C:	40 mins.
Dust dry at +23°C, 150 microns on glass:	90 mins.
Application temperature:	from +10°C to +30°C
Set to foot traffic at +23°C:	24 h
Final hardening time at +23°C:	3 days

FINAL PERFORMANCE	
Maximum deformation after 7 days at +23°C + 14 days at +50°C (%):	43
Tear strength after 7 days at +23°C + 14 days at +50°C (N/mm):	97
Tensile strength after 7 days at +23°C + 14 days at +50°C (N/mm²):	12.2
Taber abrasion resistance (CS17 disk - 1000 g - 1000 revs) after 7 days at +23°C (mg):	150
Shore A hardness:	85
Tear strength after 7 days at +23°C + 14 days at +50°C (ASTM D1004) (N/mm):	29
Tensile strength after 7 days at +23°C + 14 days at +50°C (ASTM D412) (N/mm²):	2.85
Taber abrasion resistance (CS17 disk - 1000 g - 1000 revs) after 7 days at +23°C (ASTM D4060)(mg):	<50
Elongation (ASTM D412) (%):	>30

APPLICATION PROCEDURE

Substrate preparation

Substrates with a polyurethane elastic membrane

Substrates to be coated must be structurally sound and free of loose parts, dust, dirt, grease, oil and any other material or substance that could compromise adhesion of the finish to the substrate. **Mapefloor Finish 451** must only be applied on hardened **Mapefloor PU 400** or **Mapefloor PU 400 LV** or **Mapefloor PU 410** fully broadcast with quartz. Remove the the excess of quartz sand before the application.

Preparation of the product

Mix the two components separately with an electric mixer at low speed. Then pour component B into the container of component A and mix for several minutes until they are completely blended.
Only prepare the quantity that can be applied within the pot-life (approximately 40 minutes at +23°C).

Application of the product

Mapefloor Finish 451 may be applied in a single coat with a roller or with a straight steel or rubber trowel. If the finish is applied with a roller, we recommend applying the product with criss-cross strokes and to make sure that it is applied evenly to get a good, attractive finish. If the finish is applied with a rubber trowel, consumption will be lower and the surface will be rougher.

Cleaning

Tools used to mix and apply the product may be cleaned with thinners for polyurethane before it hardens. Once hardened, it may only be removed mechanically.

CONSUMPTION

Consumption depends on the roughness of the substrate, the surrounding temperature and the type of tool used to apply the product. The figures indicated are for application on a substrate at a temperature between +15°C and +35°C. Lower temperatures increase the consumption rate and hardening time of the product.

Theoretical consumption: 0.2-0.8 kg/m^2 depending on the selected system. (we recommend carrying out preliminary tests to verify the true consumption rates of the product).

PACKAGING

Component A: 14 kg.
Component B: 6 kg.

STORAGE

Store the product in a covered, dry place at a temperature of between +15°C and +35°C. The product may be stored for 12 months in such conditions.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapefloor Finish 451 component A and B may cause sensitisation if it comes in contact with the skin of predisposed subjects.
Mapefloor Finish 451 component B is inflammable; we recommend storing it away from naked flames and sparks, to avoid smoking, to prevent the build-up of electrostatic energy and to work only in well-ventilated areas.
Furthermore, it is irritant for the eyes and the skin, it is harmful if inhaled and it irritates the respiratory tract. During use, wear protective gloves and goggles and take the usual precautions for handling chemicals. If the product comes in contact with the eyes or skin, wash immediately with plenty of clean water and seek medical attention. Wear a suitable protection for the respiratory system.

Furthermore, **Mapefloor Finish 451** component A is dangerous for aquatic life; do not dispose of it in the environment.
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

LEGAL NOTICE

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

ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

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

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