Mapefloor System 52

MULTI-LAYERED VAPOUR-PERMEABLE EPOXY COATING SYSTEM IN WATER DISPERSION WITH A MATT NON-SLIP FINISH FOR INDUSTRIAL FLOORS; THICKNESS 5 mm

Products used for the system: Mapefloor I 500 W - Quartz 0.5

DESCRIPTION

MAPEFLOOR SYSTEM 52 is a multi-layered epoxy system used to make coatings on industrial floors with a pronounced non-slip finish that are moderately resistant to chemical products, resistant to frequent cleaning operations and wear from moving trolleys and vehicles and impermeable to oil and aggressive substances. Coatings made from **MAPEFLOOR SYSTEM 52** also have an attractive finish.

WHERE TO USE

Coating industrial floors subjected to heavy traffic such as warehouses, storage areas, garages, covered parking lots, pedestrian zones, areas where forklifts are used and in food processing plants.
THE SYSTEM IS ALSO SUITABLE FOR FLOORS IN INDUSTRIAL ENVIRONMENTS WITHOUT A VAPOUR BARRIER AND MAY BE APPLIED ON CONCRETE AFTER ONLY 4 DAYS OF CURING.

MAPEFLOOR SYSTEM 52 is suitable for the following:

- processing and storage areas in the chemical and pharmaceutical industries;
- processing and storage areas in the foodstuffs industry for surfaces subjected to medium to heavy traffic or where a lot of process water is present;
- all areas of mechanised warehouses;
- underground car parks;
- shopping centres in areas with intense pedestrian traffic and where heavy loads are frequently moved with wheeled vehicles;
- all areas in heavy industry, engineering works and car workshops;
- basements, including damp substrates.

PERFORMANCE AND ADVANTAGES

- Non-slip finish.
- Permeable to water vapour.
- Water-based, contains no solvents.
- Durable, characterised by its high resistance to wear and abrasion from continuous pedestrian traffic and frequent cleaning operations.
- Resistant to most chemical products such as diluted acids, base products, oil and fuel.
- Easy to clean and sterilize which makes it particularly recommended for use in the foodstuffs industry, especially in areas used for walkways or for the passage of normal traffic and fork-lift trucks.
- Forms an attractive, seamless, highly functional surface.
- Guarantees an excellent cost-performance ratio.

CHEMICAL RESISTANCE

At room temperature, floors coated with **MAPEFLOOR SYSTEM 52** are resistant to:

- diluted mineral acids such as hydrochloric, nitric, phosphoric and sulphuric acids and limited resistance to organic acids (refer to the chemical resistance table in the **MAPEFLOOR I 500 W** Technical Data Sheet);
- alkalis, including sodium hydroxide at a concentration of 50%, and detergents normally used for cleaning floors up to a concentration of 20-30%, as long as they do not contain abrasive granules;
- sugars, including when in frequent contact with the floor.

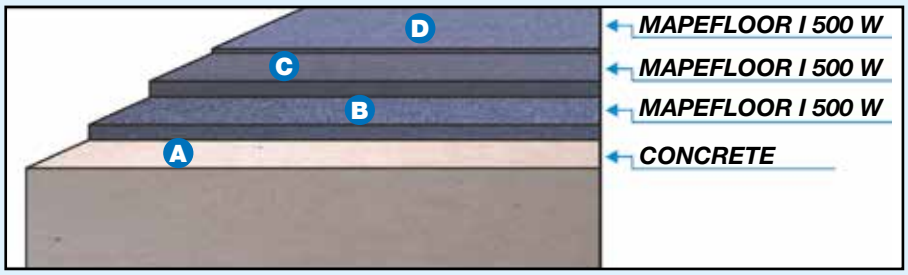
Floors coated with **MAPEFLOOR SYSTEM 52** are not suitable for constant exposure to high temperatures.

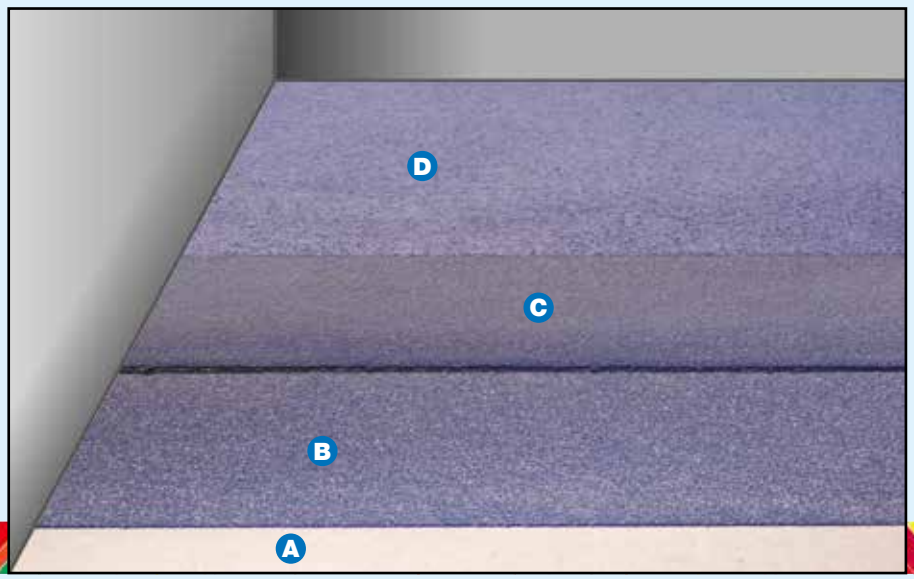
COLOURS AVAILABLE

MAPEFLOOR SYSTEM 52 is available in 19 colours from the RAL colour chart: refer to the colours in the **MAPECOLOR PASTE** range for **MAPEFLOOR I 500 W**.

YIELD

The consumption levels indicated below are for a cycle applied at a temperature of +15°C to +25°C on a smooth, compact, shot-blasted concrete surface with a dry-shake finish of quartz sand. Rougher surfaces, or application at lower temperatures, will lead to an increase in consumption and longer hardening times. The consumption rate for **PRIMER SN** in particular may vary, depending on the type and depth of the method used to prepare the substrate.





Mapefloor System 52

MAPEFLOOR SYSTEM 52	average thickness 5 mm
1° coat:	
MAPEFLOOR I 500 W (A+B)	2.5 kg/m²
Dry-shake finish of **QUARTZ 0.5** on wet product	5.0 kg/m²
2° coat:	
MAPEFLOOR I 500 W (A+B + **MAPECOLOR PASTE**)	2.5 kg/m²
Dry-shake finish of **QUARTZ 0.5** on wet product	5.0 kg/m²
Finishing coat:	
MAPEFLOOR I 500 W (A+B + **MAPECOLOR PASTE**)	0.7 kg/m²

N.B.: *if **MAPEFLOOR I 500 W** is available in the colour required, do not add **MAPECOLOR PASTE**.*

TECHNICAL DATA (after 7 days at +23°C)

Bonding strength (EN 13892-8)	> 1.5 N/mm² - failure of concrete
TABER abrasion resistance (EN ISO 5470-1) (CS 17 disk - 1000 revs - 1000 g)	85 mg
Compressive strength (EN 196)	85 N/mm²
Flexural strength (EN 196)	35 N/mm²
Service temperature (air temperature)	-20/+60°C
Finish	matt

SURFACE PREPARATION

1. Characteristics of the substrate

Before applying the **MAPEFLOOR SYSTEM 52** cycle, the substrate on which the coating is to be applied must be carefully analysed.
The concrete screed for the substrate must be sound, compact, strong and clean and must be dimensioned according to the static and dynamic loads to which it will be subjected when in service. The flatness must be defined according to the final use.
To get the best results, the following must be checked:

- The roughness of the substrate must be a maximum of 1 mm.
- There must be no materials or debris on the substrate which could potentially impede adhesion of the coating, such as:
  – cement laitance;
  – dust or detached or loose material;
  – protective wax, curing products, paraffin or efflorescence;
  – oil stains or layers of dirty resin;
  – traces of paint or chemical products.
- Any other kind of material or substance that could affect adhesion of the coating must be removed before starting work. If such materials or substances are present, the substrate must be prepared by carrying out a specific preparation cycle. Please contact MAPEI Technical Services Department for advice and information.
- The pull-off strength of the substrate must be more than 1.5 MPa.

If all the above conditions are met, **MAPEFLOOR SYSTEM 52** may be applied on concrete industrial floors, conventional or polymer-modified cementitious screeds and shrinkage-compensated screeds such as those made from **MAPECEM** or **TOPCEM**.

2. Substrate preparation

It is very important that the surface is prepared as specified to guarantee correct application and the best performance of the **MAPEFLOOR SYSTEM 52** epoxy cycle.
The most suitable surface preparation method is shot-blasting, being careful not to go too deep down into the substrate. Do not use chemical preparation methods, such as acid rinsing, or aggressive percussion tools, to prevent damaging the substrate. Any defects present, such as holes, pitting, cracking, etc., must be repaired beforehand using either **EPORIP**, **PRIMER SN** or **MAPEFLOOR I 500 W**, depending on the width and depth of the defects and cracks.
If the substrate needs to be consolidated, use diluted **MAPECOAT I 600 W** (the dilution and, therefore, consumption rates depend on the porosity). If deep hollows or highly deteriorated areas are present on the substrate, repair these areas beforehand using **MAPEFLOOR EP19** three-component epoxy mortar or with products from the **MAPEGROUT** range, which may also be used to integrate damaged joints.
If any of the above conditions are not strictly adhered to, the quality of the coating may be poor.

3. Preliminary checks before application

Make sure that all the checks indicated in point 1 "Characteristics of the substrate" have been carried out, and that all the operations indicated in point 2 "Substrate preparation" have been carried out correctly.
The surrounding temperature must be higher than +8°C (the ideal application temperature is +15°C to +25°C) and the temperature of the substrate must at least 3°C higher than the dew-point temperature.

4. Preparation and application of the products

Carefully follow the preparation instructions contained in the Technical Data Sheet for each single product used to form the complete system: **MAPEFLOOR I 500 W**.

Non-slip multi-layered coating - 5 mm

Before applying the cycle wet the surface to be treated, taking care not to form puddles or to leave standing water.

- ***Base layer (MAPEFLOOR I 500 W)***
  Pour component A (2 kg) into component B (24 kg) and mix with a drill at low speed with a spiral mixing attachment to form a smooth, homogenous paste. Slowly add 2 litres of water while mixing and keep mixing to form an even compound. Pour the compound onto the floor to be coated and spread it out evenly and uniformly with a straight steel, or serrated, trowel. Then broadcast in excess with **QUARTZ 0.5** while the product is still wet. For particular requirements, such as if a higher degree of non-slip finish is required, use quartz sand with a particle size of 0.3-0.9 mm or even larger. In such cases the consumption rate of the next coat will be higher. Once **MAPEFLOOR I 500 W** has hardened remove all excess sand with an industrial vacuum cleaner.

- ***Intermediate layer (MAPEFLOOR I 500 W)***
  Pour component A (2 kg) into component B (24 kg), add **MAPECOLOR PASTE** (0.7-1.4 kg of **MAPEFLOOR PASTE** for each kit of **MAPEFLOOR I 500 W**) and mix with a low-speed drill with a spiral mixing attachment to form a smooth, homogenous paste. Slowly add 2 litres of water while mixing and keep mixing to form an even compound. Pour the compound onto the floor to be coated and spread it out evenly and uniformly with a straight trowel or rake, then broadcast in excess with **QUARTZ 0.5** while the product is still wet.
  Once **MAPEFLOOR I 500 W** has hardened remove all excess sand with an industrial vacuum cleaner, sand the surface and remove all traces of dust with a vacuum cleaner.

- ***Finishing coat (MAPEFLOOR I 500 W)***
  Pour component A (2 kg) into component B (24 kg), add **MAPECOLOR PASTE** (1.4 kg of **MAPEFLOOR PASTE** for each kit of **MAPEFLOOR I 500 W**) and mix with a low-speed drill with a spiral mixing attachment to form a smooth, homogenous paste. Slowly add 2 litres of water while mixing and keep mixing to form an even compound. Pour the compound onto the floor to be coated and spread it out evenly and uniformly with a straight trowel or rake, then back-roll with a medium-haired roller to even out the finishing coat.

5. Hardening and step-on times

At +25°C, **MAPEFLOOR SYSTEM 52** sets to foot traffic after 16 hours, may be used by light loads after 1 to 2 days and is ready for final use once fully hardened after approximately 7 days. Lower temperatures lead to longer hardening and step-on times.

CLEANING AND MAINTENANCE

Regular cleaning and maintenance operations increase the life of the treated floor, improves its aesthetic properties and reduces its tendency to collect dirt. Floors created using the **MAPEFLOOR SYSTEM** are generally easy to clean with neutral detergents, or with alkali detergents diluted at a concentration of 5 to 10% in water. Special detergents and cleaning tools are readily available for cleaning resin floors. Manufacturers of these detergents supply all the information required for the cleaning procedures to apply. Our Technical Services Department is available for any information required.

NOTES

Recommendations regarding safe use and handling of the products are contained in the Material Safety Data Sheet for each single material in the cycle. However, we recommend using protective gloves and goggles when mixing and applying the products.

If the cycle is applied on surfaces, in climatic conditions and/or for final uses not mentioned above, please contact the Technical Services Department at MAPEI S.p.A.

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