



# Mapecofloor I 500 W

**Two-component,  
multi-purpose,  
neutral-coloured epoxy  
treatment in water  
dispersion which is  
permeable to vapour,  
for industrial floors**



## WHERE TO USE

**Mapecofloor I 500 W** is a two-component, multi-purpose, neutral-coloured epoxy treatment in water dispersion which is permeable to water vapour, suitable for creating self-levelling and/or multi-layered resin floorings with an attractive smooth or non-slip surface finish.

### Some application examples

Dressing floors:

- in the chemical processing and pharmaceutical industries;
- in the food manufacturing industry;
- in laboratories, sterile rooms and hospitals;
- in aseptic areas;
- in automated warehouses;
- in shopping centres;
- which do not have a vapour barrier;
- in underground car parks.

## TECHNICAL CHARACTERISTICS

**Mapecofloor I 500 W** is a two-component, epoxy resin-based filler treatment in water dispersion, made according to a special formula developed in MAPEI's own research laboratories.

**Mapecofloor I 500 W** is versatile, permeable to water vapour and has an innovative characteristic by which,

even though the product is water-based, it is not subject to shrinkage. Once dry, the thickness of the layer remains the same as when the product is applied.

**Mapecofloor I 500 W** is water-based and, therefore, safe for the environment. It is particularly suitable for application in the food manufacturing industry. After application, the surfaces are single-spread, flat and have an attractive finish.

**Mapecofloor I 500 W** sets at temperatures as low as +5°C, and may be applied on concrete after only 4 days of curing.

**Mapecofloor I 500 W** is strong, resistant to chemicals and abrasion and may be used for both self-levelling systems and multi-layered systems.

## RECOMMENDATIONS

- Do not dilute **Mapecofloor I 500 W** with solvents.
- Do not use **Mapecofloor I 500 W** for outdoor applications.
- Do not apply **Mapecofloor I 500 W** on dusty, flaky or irregular surfaces.
- Do not apply **Mapecofloor I 500 W** 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.

TECHNICAL DATA (typical values)		
PRODUCT DETAILS		
	component A	component B
Colour:	neutral	straw-coloured
Appearance:	liquid	pasty
Density (g/cm³):	1	2.8
Viscosity at 23°C (mPa·s):	3,000	88,000
Hazard classification according to EC 99/45:	irritant, dangerous for the environment. Before using refer to the “Safety instructions for preparation and application” paragraph and the information on the packing and Safety Data Sheet	
Shelf life:	12 months in its original, unopened packaging	
Customs class:	3209 90 00	
APPLICATION DATA at +23°C and 50% R.H.		
Mixing ratio:	component A : component B: = 1 : 12	
Colour of mix:	neutral	
Consistency of the mix:	dense fluid	
Density of mix (kg/m³):	2,150	
Viscosity of the mix (mPa·s):	2,000	
Pot life of mix at 20°C:	20 minutes	
Surface temperature:	from +8°C to +30°C	
FINAL PERFORMANCES		
Dust dry at +23°C and 50% R.H.:	3-4 hours	
Step-on time at +23°C and 50% R.H.:	16 hours	
Final setting time:	7 days	
Taber Test after 7 days (at +23°C and 50% R.H., 1000 cycles/1000 revs, CS 17 abrasive disk) (mg):	110	

## APPLICATION PROCEDURE

### Preparation of the substrate

Concrete surfaces which are to be treated must be as flat as possible or with a maximum slope of 1.5%, clean and free of loose material. The substrate must be strong enough to withstand the loads to which the floor will be subject during normal service. The substrate must be prepared by shot-blasting, followed by removal of the dust with a vacuum cleaner.

Any cracks present in the surface must be repaired by using **Eporip**. If necessary, deteriorated areas of the concrete must be repaired with either **Mapefloor EP19**, a cementitious mortar from the **Mapegrout** range or **Planitop 400**.

Before applying **Mapefloor I 500 W**, any dust present on the substrate must be completely removed.

### Preparation and application of Mapefloor I 500 W as a self-levelling layer

#### 1. Preparation and application of Mapefloor I 600 W primer

Pour component A into the container of

component B and mix with a low-speed mixer fitted with a spiral mixing attachment until a homogenous mix is obtained. Slowly dilute the product with water at a ratio of up to a maximum of 1:1, and keep mixing until a homogenous mix is obtained. Spread the mix out evenly and uniformly using a medium-haired roller, and sprinkle on a fine layer of **0.5 Quartz** in order to guarantee a perfect bond with the successive resin layer.

#### 2. 2-4 mm thick self-levelling layer (Mapefloor System 53)

The two components which make up **Mapefloor I 500 W** must be mixed together. Pour component A into the container with component B, and carefully mix the two components together using a low-speed drill with a blending attachment until a homogenous mix is obtained. Add **Mapecolor Paste** colorant and, while mixing, slowly add max. 2 litres of water (0.700 kg of **Mapecolor Paste** is required for each 26 kg mix (A+B) of **Mapefloor I 500 W**). Pour the mix on the floor to be dressed and spread it out evenly and homogeneously using either a trowel or a serrated rake, and then pass over the surface with a spike-roller while

## CHEMICAL RESISTANCE TABLE

Detail of chemical elements	Mapefloor I 500 W	
5% vinegar (red)	2	
5% vinegar (white)	1	
10% acetic acid	1	
5% acetic acid	1	
10% hydrochloric acid	2	yellowing
5% hydrochloric acid	2	
Concentrated hydrochloric acid	1	severe green staining
10% formic acid	1	
Concentrated phosphoric acid	2	intense orange/white colour
Lactic acid	3	
10% nitric acid	2	
30% nitric acid	1	intense red colour
5% nitric acid	2	
Oxalic acid (pH = 1)	2	
10% sulphuric acid	2	
50% sulphuric acid	1	Intense bleaching
10% tannic acid	1	
Water	1	
Alcohol	–	
10% ammonium	1	
Petrol	1	
Petrol	1	
Petrol (lead-free)	1	
Beer	2	bleaching
20% sodium carbonate	1	
20% sodium chloride	1	
Coca cola	1	
Diesel	1	
Potassium nitrate thinner	1	
Dimethyl-formamide	3	
10% ethanol	1	
95% ethanol	3	
Ethyl acetate	2	
Ethyl methylketone	3	
36% formaldehyde	1	Intense bleaching
20% and 10% sodium hydroxide	1	
40% sodium hydroxide	1	
Isopropyl alcohol	3	
Milk	1	
30% methanol	2	
Engine oil	1	
Olive oil	1	
Kerosene	1	
Pig's blood	2	
1% sodium sulphate	1	
Orange juice	1	
Concentrated lemon juice	1	
Toluene	1	
Wine	1	
Whisky	2	severe yellowing

### KEY:

#### Class 1:

The surface is subject to exposure to chemical substances due to spillages and leaks, and without regular cleaning.

#### Class 2:

The surface is subject to exposure to chemical substances as in class 1 which may cause variations and irregularities in colour.

#### Class 3:

The surface may come into contact for brief periods with the chemical substances which must be completely removed within 8 hours.

still fresh to help completely eliminate any air entrapped in the product.

**Mapefloor I 500 W**'s level of resistance to abrasion and streaking may be further improved after only 24 hours, by painting over the surface with a coat of

**Mapefloor Finish 50** two-component, aliphatic polyurethane finishing compound (0.10 kg/m<sup>2</sup>). It is also possible to give a non-slip finish to the flooring by adding from 5 to 10% of **Mapefloor Filler** to the **Mapefloor Finish 50**.

### Preparation and application of Mapecoat I 500 W as a 3-5 mm thick multi-layered flooring coat (Mapefloor System 51 and Mapefloor System 52)

After preparing the surface as described in the section "Preparation of the substrate", it must be thoroughly dampened with water; avoid the formation of puddles and/or stagnating water.

#### First layer

The two components which make up **Mapefloor I 500 W** must be mixed together. Pour component A into the container of component B and mix with a low-speed drill until a homogenous mix is obtained. While still mixing, slowly add 2 litres of water and continue mixing until a homogenous blend is obtained.

Pour the mix on the floor and spread it out evenly and homogeneously using either a trowel or a serrated rake.

While the product is still fresh, sprinkle **0.5 Quartz** on the surface until it is completely saturated and wait until the product sets.

#### Second layer

(required for thicknesses of more than 3 mm)

The two components which make up **Mapefloor I 500 W** must be mixed together. Pour component A into the container with component B, and carefully mix the two components together using a low-speed drill with a blending attachment until a homogenous mix is obtained. Add **Mapecolor Paste** colorant and, while mixing, slowly add 2 litres of water (0.700 kg of **Mapecolor Paste** is required for each mix of **Mapefloor I 500 W**).

Pour the mix on the floor and spread it out evenly and homogeneously using either a trowel or a serrated rake.

While the product is still fresh, sprinkle **0.5 Quartz** on the surface until it is completely saturated and wait until the product sets.

#### Finishing layer

Remove the excess sand with a heavy-duty vacuum cleaner and prepare the **Mapefloor I 500 W**.

Pour component A into the container with component B, and carefully mix the two components together using a low-speed drill with a blending attachment until a homogenous mix is obtained. Add **Mapecolor Paste** colorant and, while mixing, add 3 litres of water (0.700 kg of **Mapecolor Paste** is required for each mix of **Mapefloor I 500 W**).

Pour the mix on the floor and spread it out evenly and homogenously using a smooth spreader.

## Consumption

- Used as a 2 mm-thick smooth self-levelling layer on a substrate primed with **Mapeccoat I 600 W**: 4 kg/m<sup>2</sup>.
- Used as a multi-layered, non-slip dressing for a thickness of 5 mm:
  - As first layer
 

<b>Mapecfloor I 500 W</b>	2.5 kg/m <sup>2</sup>
<b>0.5 Quartz</b>	5 kg/m <sup>2</sup>
  - As second layer
 

<b>Mapecfloor I 500 W</b>	2.5 kg/m <sup>2</sup>
<b>0.5 Quartz</b>	5 kg/m <sup>2</sup>
  - As finishing layer
 

<b>Mapecfloor I 500 W</b>	0.7 kg/m <sup>2</sup>
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## Cleaning

Tools and equipment used to prepare and apply **Mapeccoat I 500 W** must be cleaned with water immediately after use. Once it has set, the product may only be removed mechanically.

## PACKAGING

26 kg kits:  
component A = 2 kg; component B = 24 kg.

## STORAGE

The product must be stored in its original packaging in a dry place, and at a temperature of at least 5°C.

## SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

**Mapecfloor I 500 W** irritates if it comes into contact with the eyes or skin. Component A may provoke rashes in those who are allergic to such substances. Always use protective gloves and goggles when handling and using the products. If they come into contact with the eyes, rinse well with plenty of running water and seek medical attention. Component A of **Mapecfloor I 500 W** is dangerous for aquatic life: do not dispose the product in the environment.

PRODUCT FOR PROFESSIONAL USE ONLY.

## WARNING

*While the indications and guidelines contained in this data sheet correspond to the company's knowledge and wide experience, they must be considered, under all circumstances, merely as an indication and subject to confirmation only after long-term, practical applications. Therefore, anybody who undertakes to use this product, must ensure beforehand that it is suitable for the intended application and, in all cases, the user is to be held responsible for any consequences deriving from its use.*

**All relevant references of the product are available upon request**



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