MAPEFLOOR FC 200 EU

Two-component epoxy resin for floor coating

DESCRIPTION

Mapefloor FC 200 EU is a pigmented, high solid content, two-component, epoxy-based resin used to create a seamless smooth, or non-slip floor coating.

TECHNICAL CHARACTERISTICS

The resin systems made with **Mapefloor FC 200 EU** are characterized by:

- Good wear resistance
- Good resistance to chemicals
- Smooth or slip-resistant surface profile
- Impermeability to liquids
- Dust-proof property

The product complies with the requirements according to EN 13813 "Screed material and floor screeds - Screed material - Properties and requirements", which defines the requirements to be applied to materials for screeds used in the construction of internal floors.
The product is classified by FeRFA “Type 3 : High build floor coating”.

ADVANTAGES

- Easy to clean
- Easy to maintain
- Effective protection of the treated surfaces

WHERE TO USE

- Chemical and pharmaceutical industries
- Foodstuffs industries
- Car parks
- Warehouses
- Shopping centres
- Factories, hangars, workshops and garages

RECOMMENDATIONS

- Do not apply **Mapefloor FC 200 EU** on damp substrates or on substrates with capillary rising damp (contact MAPEI Technical Services).
- Do not dilute **Mapefloor FC 200 EU** with solvent or water.
- Do not apply **Mapefloor FC 200 EU** on dusty or crumbling substrates.
- Do not apply **Mapefloor FC 200 EU** on substrates with oil or grease stains or dirt in general.
- Do not apply **Mapefloor FC 200 EU** on substrates, which have not been previously primed and prepared accordingly.
- Do not mix partial quantities of the components to avoid mixing errors; the product may not harden correctly.
- Do not expose the mixed product to sources of heat.
- It recommended applying **Mapefloor FC 200 EU** from the same production batch to guarantee an even colour.
- **Mapefloor FC 200 EU** coatings could change colour or fade if exposed to UV rays, but this has absolutely no effect on their performance characteristics.
- The coating could also change colour if it comes into contact with aggressive chemicals. A change of colour alone, however, does not imply any damage caused by chemical aggression.
- Remove aggressive chemicals as soon as possible after they come into contact with **Mapefloor FC 200 EU** coating.
- If rooms where the product is being used need to be warmed up, do not use heaters that burn hydrocarbons, otherwise the carbon dioxide and water vapour given off into the air will affect the shine on the finish and ruin its appearance. Use electric heaters only.
- Use suitable specific cleaning equipment and detergent to clean the surfaces, depending on the type of dirt or stain to be removed.
- Protect the coating from water for at least 24 hours after application.
- The product cannot be applied directly on cementitious substrates with a moisture content higher than 4% and/or with capillary rising damp.
- The temperature of the substrate must be at least 3°C higher than the dew-point temperature.

APPLICATION PROCEDURE

Preparation of the substrate

The surface of concrete must be dry, clean, and sound and have no crumbling or detached areas. The compressive strength of the concrete used for the substrate must be at least 25 N/mm² and its tensile strength must be at least 1.5 N/mm². The strength of the substrate must also be suitable for its final use and for the types of loads acting on the flooring.
The level of moisture in the substrate must be a maximum of 4% and there must be no capillary rising damp.
The surface of the floor must be prepared with suitable power tools (e.g. shot-blasting or grinding with a diamond disk) to remove all traces of dirt, cement laitance, and crumbling or detached portions and to leave a dry and dust-free open textured surface.
Before applying the product, remove all dust from the surface with a vacuum cleaner.
Any defects present in the surface, such as holes, pitting, cracking, etc., must be repaired with **PRIMER SN** fillerized with quartz sand or made thixotropic with **Additix PE**, or with **Mapefloor JA** or **Mapefloor JA Fast** depending on the width and depth of the defects or cracks.
Reintegrate any badly damaged areas or joints, fill hollows in the surface, and repair or carry out localised modifications to slopes with **Mapefloor EP19** ready-mixed epoxy mortar.

Application of the primer

Apply **Primer SN** or **Mapefloor I 900** neat, by roller or mixed with 20% by weight of **Quartz 0.5**, with a straight trowel or rake on the substrate after it has been prepared as specified.
It is suggested to broadcast the layer of primer, while still wet, with quartz sand **Quartz 0.5.**

Preparation of the product

The two components which make up **Mapecoat FC 200 EU** must be mixed together just before application.

Mix component A thoroughly and add the content of component B. Mix again with an electric mixer at low-speed (300-400 revs/min) to prevent entraining air into the product for at least 2 minutes until the mix is completely blended.
Do not mix the product for too long to avoid entraining too much air into the mix.
Pour the mix into a clean container and briefly mix again.
Apply the product within the pot life indicated in the Technical Data table (it refers to a temperature of +23°C). Higher surrounding temperatures will reduce the pot life of the mix, while lower temperatures will increase its pot life.

Application of the product

Mapefloor FC 200 EU can be used as a smooth or non-slip coating system.

1. 1. Roll coat epoxy resin system

When the layer of primer is completely hardened, apply the finishing coat of **Mapefloor FC 200 EU** by straight trowel or squeegee down to a feather edge on the surface, then back roll crosswise with a short pile roller As an alternative method, the product can be directly applied on the substrate by medium pile roller.

2. Multi-layered non-slip system

When the layer of primer is completely hardened, pour **Mapefloor FC 200 EU** onto the floor and spread it out evenly with a straight trowel or roller. While the product is still wet, fully broadcast with **Quartz 0.5**. If a higher degree of non-slip finish is required, a larger particle size has to be used. In such cases, the consumption rate of the following coat will be higher.
When the first coat of **Mapefloor FC 200 EU** has hardened, remove any excess sand by sweeping, then thoroughly remove the last grains by vacuuming.
Apply the finishing coat of **Mapefloor FC 200 EU** by straight trowel down to a feather edge, then back roll crosswise with a short pile roller. As an alternative method, the product can be directly applied by a medium pile roller. Make sure the roller strokes crisscross to get a better finish.

CLEANING TOOLS

Clean tools used to prepare and apply **Mapefloor FC 200 EU** with ethanol or a thinner immediately after use. Once hardened, the product may only be removed using mechanical means.

CONSUMPTION

1. Roll coat epoxy resin system

Primer SN or Mapefloor I 900 (A+B):	0.25 - 0.70 kg/m² (depending on the substrate condition and the application method)
Mapefloor FC 200 EU (A+B):	0.3 - 0.4 kg/m² per coat.

2. Multi-layered non-slip system

Primer SN or Mapefloor I 900 (A+B):	0.25 - 0.70 kg/m² (depending on the substrate condition and the application method)
First layer of Mapefloor FC 200 EU (A+B):	0.4 - 0.5 kg/m²
Broadcast in excess with Quartz 0.5:	2 - 2.5 kg/m²
Mapefloor FC 200 EU (A+B):	0.4 - 0.5 kg/m²

The consumption rates above are only indicative and are influenced by the condition of the surface to be treated, absorbency, roughness, the actual conditions on site, etc.

PACKAGING

25.5 kg units (component A = 22 kg; component B = 3.5 kg).

COLOURS

Mapefloor FC 200 EU is available in the grey RAL colours 7032, 7035, 7042. Please contact the Mapei Technical Service for a full list of the colours available.

STORAGE

24 months in its original sealed packaging, in a dry place, stored at a temperature between +5°C and +35°C. Protect from frost.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instructions for the safe use of our products can be found on the latest version of the Safety Data Sheet, available from our website www.mapei.com.
When the product reacts, it generates heat. After mixing components A and B, we recommend applying the product as soon as possible and never leaving the container unattended until it is completely empty.
PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

PRODUCT IDENTITY		
	Component A	**Component B**
Appearance:	thick liquid	liquid
Colour:	RAL colours	transparent, straw-yellow
Density:	1.70 – 1.75 g/cm^3	0.990 – 1.060 g/cm^3
Viscosity at +25°C:	24 - 34 Pa·s (#6, rpm 10)	0.200 - 0.300 Pa·s (#2; rpm 50)

APPLICATION DATA (at +23°C and 50% R.H.)	
Mixing ratio:	Component A : Component B = 22 : 3.5 by weight
Density of the mix (A+B):	1.55 g/cm^3
Viscosity of mix (A+B):	10 - 15 Pa·s (#5; rpm 20)
Workability time:	20-25 min
Overcoating time:	20 h
Setting time **Set to foot traffic:** **Set to vehicular traffic:**	 24 h 48 h
Application temperature:	from +5°C to +35°C

FINAL PERFORMANCES (after 7 days at +23°C and 50% R.H.)	
Compressive strength (EN 196-1):	40 N/mm^2
Flexural strength (EN 196-1):	35 N/mm^2
Shore D hardness (DIN 53505):	approx. 70

Essential characteristics	Test method	Requirements according to EN 13813 for synthetic resin-based screeds	Typical values
Bond strength:	EN 13892-8	≥ B1.5	B2.0
Reaction to fire:	EN 13501-1	from $A1_{FL}$ to F_{FL}	B_{FL}-s1
Water permeability:	EN 1062-3	declared value	w < 0.1 kg/m²·$h^{0.5}$
Wear resistance-BCA:	EN 13892-4	≤ AR6	AR0.5
Impact resistance:	EN ISO 6272	≥ IR4	IR10
Resistance to chemicals:	EN 13529	declared value	CR1 (class 2); from CR3 to CR4 (class 2); CR10 (class 2); CR12 (class 2); CR14 (class 2)

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, 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 ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

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

Mapei S.p.A.
Via Cafiero, 22, 20158, Milano
+39-02-376731 www.mapei.com mapei@mapei.it

12005-9-2023 en (IT)