



MAPEI I 320 SL CONCEPT



Self-levelling epoxy coating with a coloured granular finish for decorative floors

WHERE TO USE

Mapefloor I 320 SL CONCEPT is used for coating floors in industrial and civil environments, including those subjected to medium to heavy loads such as laboratories and distribution warehouses.

Mapefloor I 320 SL CONCEPT may also be used to coat floors in sterile rooms and in production areas, such as in the pharmaceutical industry.

It has an attractive finish and its resistance to abrasion is higher than traditional self-levelling systems, which also makes it suitable for use in areas used by the general public such as bars, hotel lobbies, offices, canteens, classrooms, showrooms, etc.

Some application examples

- Making floors in sterile areas such as production areas in the pharmaceutical industry and in cleanrooms.
- Making floors in clinics, canteens and laboratories.
- Making decorative floors in showrooms and distribution warehouses.

TECHNICAL CHARACTERISTICS

Mapefloor I 320 SL CONCEPT is a two-component, epoxy resin-based formulate with 100% solids content according to a formula developed in the MAPEI R&D laboratories.

When it hardens it forms a very smooth surface to create seamless floors that are easy to clean and sanitize.

Mapefloor I 320 SL CONCEPT is available in a special range of colours to give floors a highly attractive finish.

RECOMMENDATIONS

- Do not apply **Mapefloor I 320 SL CONCEPT** if the temperature is lower than +8°C or higher than +35°C.
- Do not apply **Mapefloor I 320 SL CONCEPT** on damp substrates or on substrates with capillary rising damp (please consult our Technical Services Department).
- Do not dilute **Mapefloor I 320 SL CONCEPT** with solvent or water.
- Do not apply **Mapefloor I 320 SL CONCEPT** on dusty or crumbling substrates.
- Do not apply **Mapefloor I 320 SL CONCEPT** on substrates with oil or grease stains or stains in general.
- Do not apply **Mapefloor I 320 SL CONCEPT** on substrates that have not been treated with **Primer SN** or that have not been prepared as specified.
- 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.
- Coatings made from **Mapefloor I 320 SL CONCEPT** may change colour or fade if exposed to sunlight but this has no effect on its performance characteristics.
- The coating may also change colour if it comes into contact with aggressive chemicals. A change in colour, however, does not mean that it has been damaged by the chemical.
- 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.

- Remove aggressive chemicals as soon as possible after they come into contact with **Mapecolor I 320 SL CONCEPT**.
- Use suitable specific cleaning equipment and detergent to clean the product, depending on the type of dirt or stain to be removed.
- Protect the product from water for at least 24 hours after application.
- Do not apply the product directly on substrates with moisture content higher than 4% and/or with capillary rising damp (check by testing it with a sheet of polythene).
- The temperature of the substrate must be at least 3°C higher than the dew-point temperature.

HOW TO USE

Preparation of the substrate

The surface of concrete floors must be dry or slightly damp, clean and sound and have no crumbling or detached portions. The concrete slab must have a minimum compressive strength of 25 N/mm² and a minimum tensile strength of 1.5 N/mm². The strength of the substrate must also be suitable for its final use and the types of load to which it will be subjected.

The level of moisture in the substrate must be a maximum of 4% and there must be no capillary rising damp (check by testing it with a sheet of polythene).

The surface of the floor must be prepared with a suitable mechanical process (e.g. shot-blasting or grinding with a diamond disk) to remove all traces of dirt and cement laitance and crumbling or detached portions, and to make the surface slightly rough and absorbent.

Before applying the coating, remove all dust from the surface with a vacuum cleaner.

Any cracks must be repaired by filling them with **Eporex**, while any deteriorated areas of the concrete must be repaired with

Mapecolor EP19 or a cementitious mortar from the **Mapecolor** line.

Before applying **Mapecolor I 320 SL CONCEPT**, remove all traces of dust from the surface with a vacuum cleaner.

Preparation and application of Primer SN

Pour component B (4 kg) into component A (16 kg) and mix with a drill with a spiral mixing attachment to form a smooth, homogenous paste.

While mixing, add 4 kg of **Quartz 0.5** to the paste as soon as it has been prepared and continue mixing for several minutes to form a smooth, even compound.

Pour the mix into a clean container and briefly mix again.

Pour **Primer SN** prepared according to the indications above onto the floor to be coated and spread it out evenly and uniformly using a trowel or rake.

Immediately after applying **Primer SN**, fully broadcast the surface with **Quartz 0.5** while it is still wet to ensure the next coat of resin adheres perfectly.

When the primer has hardened remove any

excess sand, sand the surface and remove the last grains of sand with an industrial-grade vacuum cleaner.

Prepare a new batch of **Primer SN**, add **Mapecolor Paste** (one 0.7 kg bag for each 20 kg kit of **Primer SN**) in a colour similar to the colour chosen for the finishing coat and apply a second coat on the primed surface.

Preparation and application of Mapecolor I 320 SL CONCEPT

The two components which make up **Mapecolor I 320 SL CONCEPT** must be blended together. Pour component B (catalyser) into component A (resin) and mix for at least 2 minutes with an electric mixer at low speed to prevent entraining air into the mix (300-400 revs/min) until it is completely blended. Do not mix the product for too long to prevent entraining too much air into the mix.

Pour the mix into a clean container and briefly mix again.

Apply a coat at least 2 mm thick on the floor treated previously with **Primer SN** with a straight or notched trowel. Using a straight trowel helps reduce the marks made by the trowelling action. Apply the mix within the pot life indicated in the table (refers to a temperature of +20°C). Higher surrounding temperatures will reduce the pot life of the mix, while lower temperatures will increase its pot life. Go over the surface with a spiked roller several times while the product is still wet to even out the thickness of the coat and to remove any air entrapped in the product.

CONSUMPTION

1° coat:

Primer SN (A+B):	0.7 kg/m ²
Quartz 0.5:	0.14 kg/m ²
Broadcast with Quartz 0.5 on wet primer:	3 kg/m ²

2° coat:

Primer SN (A+B + Mapecolor Paste):	0.3-0.5 kg/m ²
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Self-levelling layer approx. 2 mm thick:

Mapecolor I 320 SL CONCEPT (A+B):	2.7-3 kg/m ²
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The consumption rates above are theoretical and are influenced by the condition of the surface to be treated, absorbency, roughness, the actual conditions on site, etc.

The amount of sand added to **Primer SN** may vary according to the surrounding temperature. The amount required may be less at low temperatures and more at high temperatures.

Cleaning tools

Clean tools used to prepare and apply **Mapecolor I 320 SL CONCEPT** with methylated spirits immediately after use. Once hardened, the product may only be removed using mechanical means.

PACKAGING

16.8 kg kit: component A = 13.8 kg; component B = 3 kg.

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

	component A	component B
Colour:	light grey, dark grey light blue, dark blue, red	straw-yellow
Consistency:	thick liquid	liquid
Dry solids (%):	100	100
Density (g/cm³):	1.37	1.0
Viscosity at +23°C (mPa·s):	40,000 ± 2,000 (# 7 - 20 rpm)	300

APPLICATION DATA (at +23°C - 50% R.H.)

Mixing ratio:	component A : component B = 100 : 22	
Colour of mix:	light grey, dark grey, light blue, dark blue, red	
Consistency of mix:	fluid	
Density of mix (kg/m³):	1,320	
Viscosity of mix (mPa·s):	6,000 ± 500 (# 5 - 20 rpm)	
Workability time at +20°C:	20 mins.	
Application temperature:	from +8°C to +35°C	
Waiting time between coats at +23°C and 50% R.H.: – on Primer SN:	min. 12 hours	max. 48 hours
Hardening time at +23°C and 50% R.H.: – dust dry: – set to foot traffic: – full hardening time:	approx. 4 hours approx. 24 hours approx. 7 days	

The times above are for indication purposes only and are influenced by actual site conditions (e.g. temperature of the surroundings and substrate, relative humidity of the surrounding air, etc.)

FINAL PERFORMANCE (after 7 days at +23°C)

Compressive strength (DIN EN 196-1) N/mm²:	52
Flexural strength (DIN EN 196-1) N/mm²:	31
Shore D hardness:	75
Abrasion resistance (Taber abrasimeter) (EN ISO 5470-1) (CS17 disk - weight 1,000 g - 1,000 revs) (mg):	80

Performance characteristic	Test method	Requirements according to EN 13813 for synthetic resin-based screeds	Performance of product
BCA wear resistance (µm):	EN 13892-4	≤ 100	< 5
Adhesion strength (N/mm²):	EN 13892-8; 2004	≥ 1.5	3.20
Impact strength (Nm):	EN ISO 6272	≥ 4	20
Reaction to fire:	EN 13501-1	from A _{1fl} to F _{fl}	C _{fl} -s1

Mapefloor I 320 SL CONCEPT

STORAGE

Mapefloor I 320 SL CONCEPT may be stored for 12 months in a dry area in its original packaging at a temperature of between +8°C and +35°C.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapefloor I 320 SL CONCEPT component A is irritant for the eyes and skin. Both component A and B may cause sensitization when in contact with the skin of those predisposed.

Mapefloor I 320 SL CONCEPT is corrosive and may cause burns and damage to the eyes. The product contains low molecular weight epoxy resins that may cause sensitization if cross-contamination occurs with other epoxy compounds. When applying the product, it is recommended to wear protective gloves and goggles and to 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.

Furthermore, Mapefloor I 320 SL CONCEPT component A and B are dangerous for aquatic life. Do not dispose of them 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.



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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