

Mapecolor System 33

SOLVENT-FREE, SELF-LEVELLING EPOXY SYSTEM 2-4 mm THICK FOR INDUSTRIAL FLOORS

Products required:

Primer SN - Mapecolor I 300 SL - 0.5 Quartz - 0.25 Quartz

DESCRIPTION

MAPEFLOOR SYSTEM 33 is a self-levelling epoxy system used to create surface finishes on industrial floors which are highly resistant to chemicals, impermeable to oil and aggressive substances and resistant to frequent washing.

Floors produced with **MAPEFLOOR SYSTEM 33** also have an attractive finish.

WHERE TO USE

Industrial floors subject to medium traffic which require a smooth surface, such as tracks for three-way forklifts, warehouses, storage areas, areas where forklifts are employed, pedestrian zones, schools, offices, exhibition centres and showrooms.

MAPEFLOOR SYSTEM 33 is used in:

- the chemical processing and pharmaceutical industries, in processing and storage areas;
- food manufacturing industry, in both production areas (as long as no process water is present due to the smooth finish of the floor) and in areas used for storage and movement of goods, and on surfaces subject to medium traffic;
- large distribution centres where the surface must be extremely flat, such as for tracks where A.G.V.s are employed;
- automated warehouse systems, in all areas;
- shopping centres, in areas subject to intense pedestrian traffic and areas for storage where goods are frequently moved;
- aseptic areas, in processing and storage areas;
- sterile areas, laboratories and hospitals, except isolation wards and operating theatres.

PROPERTIES AND ADVANTAGES

- Smooth finish.
- Safe for the environment, does not contain solvents.
- Long-lasting, characterised by high resistance to wear and abrasion caused by continuous pedestrian use and frequent washing regimes.
- Resistant to most chemical agents such as dilute acids, base solutions, oil and fuel.
- The product's extremely attractive appearance, make it particularly suitable for exhibition areas.
- Easy to clean, sanitise and decontaminate, which makes it particularly suitable for applications in the food manufacturing industry, especially in areas subject to medium traffic.
- Flat surfaces may be obtained, with an extremely attractive highly functional finish.
- Quick application.
- Guarantees an excellent cost-performance ratio.

CHEMICAL RESISTANCE

Floors finished with **MAPEFLOOR SYSTEM 33** are resistant to:

- dilute mineral acids, such as: hydrochloric acid, nitric acid, phosphoric acid and sulphuric acid. Limited resistance to organic acids (refer to the chemical resistance table in the technical data sheet for **MAPEFLOOR I 300 SL**);

- alkalis, including sodium hydroxide at 50% concentration and detergents normally used for cleaning floors, up to a concentration of 20-30%, as long as they do not contain abrasive material;
- sugary substances, even in frequent contact;
- mineral oils, diesel fuel, kerosene and petrol.

COLOURS AVAILABLE

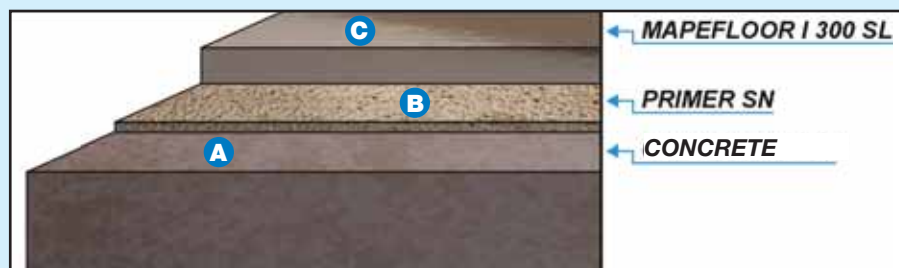
MAPEFLOOR SYSTEM 33 is available in 19 different colours from the RAL range: refer to colours in the **MAPECOLOR PASTE** range for **MAPEFLOOR I 300 SL**.

YIELD

The consumption figures indicated below are based on application at temperatures between 15°C and 23°C on a smooth, compact concrete surface, and finished with a diamond grinding disc or by light shot-blasting. Rougher surfaces or lower temperatures increase the consumption rate and lengthen the curing times.

In particular, the consumption of **PRIMER SN** may vary depending on substrate preparation.

MAPEFLOOR SYSTEM 33	average thickness 3 mm
1° coat:	
PRIMER SN (A+B)	0.7 kg/m ²
Sprinkled on fresh 0.5 QUARTZ	1 kg/m ²



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Finishing coat:

MAPEFLOOR I 300 SL
(A+B + **MAPECOLOR PASTE**) 2 kg/m²
0.25 QUARTZ 2 kg/m²

N.B. If the **MAPEFLOOR I 300 SL** to be used is already coloured, the **MAPECOLOR PASTE** component must not be included.

SURFACE PREPARATION

1. Characteristics of the substrate

Before applying the **MAPEFLOOR SYSTEM 33**, an accurate, in-depth analysis of the substrate on which the finish is to be applied must be carried out. To make sure that a good result is obtained, verify the following:

- That the surface irregularity does not exceed 0.5 mm.
- That there are no materials on the substrate which could impede the adhesion of successive finishes, such as:
 - cement laitance;
 - dust or areas which are either loose or not well bonded;
 - protective wax, curing agents, paraffin or efflorescence;
 - oil stains or layers of dirty resin;
 - traces of paint or chemical products.

Other contaminants which may compromise bonding of the finish must be removed before carrying out installation. If the substrate is contaminated, it is ESSENTIAL to implement a suitable preparation technique.

If necessary, contact our company's Technical Services Department for advice.

- That the tear strength of the substrate is higher than 1.5 N/mm².
 - That the level of humidity in the substrate is no higher than 4%, and that there is an adequate vapour barrier installed. If these conditions are not met, use **MAPEFLOOR SYSTEM 53**. The use of **MAPEFLOOR SYSTEM 33** could lead to detachment and/or the formation of blisters.
- If the aforementioned prerequisites are met, **MAPEFLOOR SYSTEM 33** may be applied on concrete industrial floors, traditional cementitious screeds or polymer modified screeds, on shrinkage-compensated screeds such as **MAPECEM** or **TOPCEM** screeds, on old cement terrazzo surfaces and ceramic floors if prepared correctly.

2. Preparation of the substrate

Correct preparation of the surface is essential to guarantee application success, and to guarantee the best performance of the **MAPEFLOOR SYSTEM 33**.

The most suitable preparation method is by shot-blasting or, as an alternative, by grinding with a diamond disc followed by vacuuming the resulting dust. We advise against using chemical-based treatments, such as acid rinsing, or aggressive pneumatic hammering, which may damage the substrate. Any defects present, such as holes, cavities, cracking, etc. must be repaired beforehand using either **EPORIP**, **PRIMER SN** or **MAPEFLOOR I 300 SL**, depending on the size and depth of the defect or damaged area.

If the substrate needs to be consolidated, use **PRIMER MF** or **PRIMER EP** (the choice of product depends on the porosity of the substrate, which will also have an effect on the consumption rate). Large hollows or highly deteriorated areas must be rebuilt beforehand using either **MAPEFLOOR EP 19** three-component epoxy mortar or one of the products from the **MAPEGROUT** range.

Joints which are in a poor condition must be rebuilt using the above materials.

If the above guidelines are not followed, there will be a detrimental effect on quality of the work carried out.

TECHNICAL DATA (after 7 days at +23°C)	
Bonding strength (DIN ISO 4624) N/mm ²	> 1,5
Abrasion resistance (TABER Disk CS 17 - 1000 revs - 1000 g in weight) mg	98
Coefficient of thermal expansion (DIN 50014) °k	86 x 10 ⁻⁶
Compressive strength (DIN en 196) N/mm ²	85
Flexural strength (DIN 1048) N/mm ²	35
Modulus of elasticity (DIN 1048) N/mm ²	9500
Temperature range (open air) °C	-20 ± 60
Appearance	glossy

3. Preliminary checks before application

Make sure that all the checks in item 1 "Characteristics of the substrate" have been carried out, and that all the operations indicated in item 2 "Preparation of the substrate" have been carried out correctly.

The air temperature must be higher than 8°C (the most suitable temperature is from 15°C to 25°C) and the temperature of the substrate must be at least 3°C higher than the dew-point temperature.

4. Mixing and application

Follow the instructions in the technical data sheet for each single component of the system: **PRIMER SN** and **MAPEFLOOR I 300 SL**.

2-4 mm thick self-levelling dressing

- **Primer (PRIMER SN)**
Pour component B (4 kg) into component A (16 kg), add the colouring paste (**MAPECOLOR PASTE**) and mix with a low-speed drill fitted with a spiral mixing attachment until a homogenous mix is obtained. Whilst mixing, add 4 kg of **0.5 QUARTZ** to the blend, and continue to mix for a few minutes until homogenous. Pour the mix onto the floor to be finished, and spread it out evenly and uniformly using a smooth spreader or a smooth rake. Whilst the product is still fresh, apply a layer of **0.5 QUARTZ** (approx. 1 kg/m²).
If the surface is still porous, is not compact or if there are micro-cracks present after applying the first coat of primer due to a particularly absorbent substrate, a further smoothing layer of **PRIMER SN** must be applied as described above, until the porosity has been completely eliminated.
If the porosity is not completely sealed, pinholes and other defects may appear in the **MAPEFLOOR I 300 SL** finishing coat.

- **Vacuuming off the dust**
When the **PRIMER SN** has cured, remove the excess sand with a heavy-duty vacuum cleaner.

- **Finishing coat (MAPEFLOOR I 300 SL)**
Pour component B (2 kg) into component A (6 kg), add the **MAPECOLOR PASTE** (0.7 kg of **MAPECOLOR PASTE** for each bag of **MAPEFLOOR I 300 SL**) and mix with a low-speed drill fitted with a spiral mixing attachment until a homogenous mix is obtained. Whilst mixing, add 8 kg of **0.25 QUARTZ** to the blend, and continue to mix until a homogenous blend is obtained. Pour the **MAPEFLOOR I 300 SL** mix on the floor to be finished and spread it out evenly and

homogeneously using a smooth spreader or a V-notched serrated rake. Whilst the product is still fresh, immediately pass over the surface with a bubble breaker, to help completely eliminate any air entrapped in the product during mixing.

N.B.: If a matt, slightly non-slip finish is required, the surface may be painted over within 24 hours using **MAPEFLOOR FINISH 51** two-component, aliphatic polyurethane compound at a rate of 0.1 kg/m². It is also possible to increase the non-slip effect by adding 5-10% of **MAPEFLOOR FILLER** to the **MAPEFLOOR FINISH 51**.

5. Hardening and step-on times

At 25°C, **MAPEFLOOR SYSTEM 33** may be stepped on after 16 hours. Trolleys and forklifts, however, may not drive on the surface for at least 24 hours.

Lower temperatures lengthen the hardening and step-on times of the dressing.

CLEANING AND MAINTENANCE

Regular cleaning and maintenance increases the life of the treated floor, improves its appearance and reduces the floor's tendency to attract dirt. Floors made using **MAPEFLOOR SYSTEM 33** are generally easy to clean with neutral detergents or with alkalis diluted in water at a concentration from 5 to 10%. Also, detergents and cleaning equipment which are suitable for cleaning resin floors are widely available. Manufacturers of these products supply all the necessary information required regarding the correct procedures to adopt. If **MAPEFLOOR SYSTEM 33** is applied in public areas, we recommend polishing with metallic waxes. The company's Technical Services Department is also available for any kind of clarification required.

NOTE

Information regarding safety equipment and handling of the products are contained in the technical data sheets for each single component of the system. However, we recommend that protective goggles and gloves are always used when mixing and applying the products.

If the products are to be applied on surfaces or under climatic and/or service conditions which are different from those indicated in the technical data sheet for the system, please contact MAPEI's Technical Services Department.