MAPEFLOOR COMFORT SYSTEM AL/X

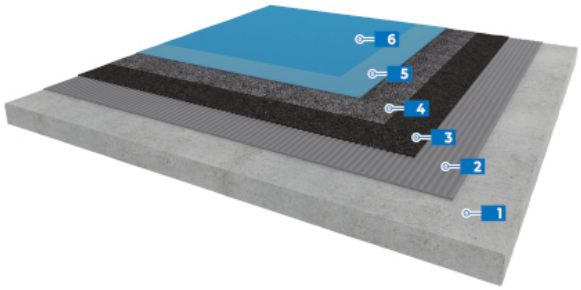
Self-levelling, elastic, flexible, UV-resistant, aliphatic polyurethane resin-based coating system for floors in internal environments; thickness 6 mm

PRODUCTS USED

MAPEFLOOR PORE FILLER - MAPECOMFORT FL - MAPEFLOOR PU 461 - MAPEFLOOR FINISH 59 W TRP

DESCRIPTION

MAPEFLOOR COMFORT SYSTEM AL/X is a self-levelling, smooth, flexible and elastic, coloured, aliphatic polyurethane resin-based system, characterized by its attractive finish and provided by a rubber granulate mat.



1	Concrete
2	**Mapefloor Pore Filler**
3	**Mapecomfort FL**
4	**Mapefloor Pore Filler**
5	**Mapefloor PU 461**
6	**Mapefloor Finish 59 W TRP**

WHERE TO USE

Coating floors in residential environments and in the service sector such as hospitals, museums, bars, shops, schools, kindergartens, apartments, etc.

PERFORMANCE AND ADVANTAGES

- Easy to apply.
- Really comfortable in use.
- Very low emission of VOC.
- Impact absorbing.
- Sound proof.
- Resistant to UV rays.

- Elastic and comfortable underfoot.
- Jointless seamless floors.
- Many colours available.
- Attractive finish.
- Easy to clean and maintain.

CHEMICAL RESISTANCE

At room temperature, **MAPEFLOOR COMFORT SYSTEM AL/X** is resistant to chemical products commonly used to clean and maintain floors in residential environments and in the service sector.
MAPEFLOOR COMFORT SYSTEM AL/X is not suitable for constant exposure to high temperatures and thermal shock.

COLOURS AVAILABLE

MAPEFLOOR COMFORT SYSTEM AL/X is available in different RAL colours. Please consult MAPEI Technical Services Department for the complete range of colours.

Coating the system with transparent finish **MAPEFLOOR FINISH 59 W TRP** gives the surface a matt finish. The transparency of the finishing product allows special aesthetic effects to be created in the base resin layer (e.g. broadcast with coloured chips, a mixture of shades formed by using different colours, etc.).

CONSUMPTION

The consumption levels indicated below are for a cycle applied at a temperature of +15°C to +25°C on a smooth and compact concrete surface finished with a dry shake system and prepared by diamond grinding discs or by light shot-blasting. Rougher surfaces and lower temperatures lead to higher consumption rates and longer hardening times.
The consumption of **MAPEFLOOR PORE FILLER** in particular may vary depending on the type and depth of the preparation of the substrate.

MAPEFLOOR COMFORT SYSTEM AL/X: average thickness 6 mm

Adhesive for rubber mat:

MAPEFLOOR PORE FILLER: 0.4-0.8 kg/m²

Rubber mat:

MAPECOMFORT FL: thickness 4 mm

Skim coat/pore filler:

MAPEFLOOR PORE FILLER: 0.4-0.5 kg/m² per coat

Self-levelling layer:

MAPEFLOOR PU 461: 2.8 kg/m² (2 mm thick)

Finishing coat:

MAPEFLOOR FINISH 59 W TRP: 0.1-0.2 kg/m² per coat

SURFACE PREPARATION

1. Characteristics of the substrate

The cementitious substrate must be solid, compact, stable, strong, sound and clean and designed to withstand the static and dynamic loads once in service. The flatness must be defined according to its final use. The compressive strength of the concrete or cementitious mortar must be at least 25 N/mm² and its tensile strength must be at least 1.5 N/mm². If the substrate is dressed with ceramic, natural stone or an old resin coating, they must be perfectly stable, firmly bonded to the substrate and must be intact, sound and clean. These kinds of substrates require specific and adequate preparation. In the case of old resin coatings, it is also recommended to test their compatibility with the new system to be applied. The moisture content of the substrate must be maximum 4% (test with a suitable hygrometer) and there must be no capillary rising damp. Wait until new cementitious flooring is fully cured before applying the resin system. In case of damp substrate or in the presence of rising damp, contact MAPEI Technical Services Department.

2. Preparation of the substrate

It is very important that the surface is prepared correctly to provide perfect adhesion and the best performance of the resin-based system. The most suitable methods to prepare the surface are those of mechanic nature, such as shot blasting or diamond grinding. Milling is only necessary when a few millimetres of substrate must be removed. After that, all debris must be removed carefully and the dust must be removed by vacuum. Once the surface of the substrate has been prepared, it must be sound, compact, clean, dry or slightly damp, absorbent, slightly rough and have no traces of material that could affect adhesion of the coating, such as:

- cement laitance;
- dust, loose or detached parts;
- protective waxes, curing products, paraffins, efflorescence;
- pollutants of any nature;
- loose residues of existing coating etc.

If required, contact MAPEI Technical Services for advice on the most suitable preparation method. Any defects present in the surface, such as holes, pitting, cracks, etc., must be repaired with **PRIMER SN** mixed 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. Patching any badly damaged areas or joints, fill hollows in the surface and repair or carry out localized modifications to slopes with **MAPEFLOOR EP19**, ready-mixed epoxy mortar.

3. Preliminary checks before application

The temperature of the floor, of the ambient and of the product must be higher than +8°C and max. +35°C (ideally between +15°C to +25°C). The temperature of the substrate must be at least 3°C higher than the dewpoint temperature. The relative humidity of the air must be max. 80%.

PREPARATION AND APPLICATION OF THE PRODUCTS

Carefully follow the preparation instructions according to the Technical Data Sheets for each product that make up the complete system:

- **MAPEFLOOR PORE FILLER**
- **MAPECOMFORT FL**
- **MAPEFLOOR PU 461**
- **MAPEFLOOR FINISH 59 W TRP**

1. Bonding and saturating the rubber granulate mat (MAPEFLOOR PORE FILLER + MAPECOMFORT FL)

Unroll the sheets of **MAPECOMFORT FL** over all the surface to be covered at least one day before bonding them in place. To prepare **MAPEFLOOR PORE FILLER**, pour all the content of component B into the container of the related component A and mix with a low-speed electric mixer to form a smooth and even compound. Evenly spread the product over the clean, de-dusted surface with notched trowel like MAPEI tooth 2 or 3. While

the adhesive is still wet, and within its open time, carefully lay on **MAPECOMFORT FL** rubber mat. Press down evenly over the surface of the mat so that it is in full contact with the adhesive; we recommend using special rollers for this operation. The edges of each strip of mat must be carefully butted together, but leaving a gap at least 1 cm wide between the mat and vertical elements such as walls, pillars, plinths, etc. When the adhesive has completely hardened, make sure the mat has adhered evenly and perfectly to the surface. If the mat has not adhered correctly, remove those areas that are not well-bonded and patch them by laying off-cuts of **MAPECOMFORT FL** bonded in place with a fresh layer of **MAPEFLOOR PORE FILLER**. Skim **MAPECOMFORT FL** and fill all the pores by applying 1-2 coats of **MAPEFLOOR PORE FILLER** with a straight trowel. Skim **MAPECOMFORT FL** mat lengthways and, even if the joints of the sheets between each stripe have already been skimmed, go over them again with the spreader so that each joint is overlapped and skimmed at least twice. Carefully fill all the gaps left between the mat and the vertical elements with **MAPEFLOOR PORE FILLER**. When the skim coat has hardened make sure there are no open pores in the surface of the mat. If there are open pores, apply a further coat of **MAPEFLOOR PORE FILLER** in those areas.

2. Self-levelling layer (MAPEFLOOR PU 461)

Pour all the content of component B into the container of the related component A and mix with a low-speed electric mixer to form a smooth and even compound. Pour the mix onto the floor to be coated and spread it out evenly using a straight trowel or a notched spreader with “V” shaped teeth, at approx. 2 mm thickness. While the product is still wet, immediately go over the surface with a spiked roller to help eliminate any air entrained into the product during mixing. If the surface is to be sprinkled with coloured flakes (maximum size 3-4 mm), this should be done after going over the surface with the spiked roller. To create particularly special or decorative finishes, apply **MAPEFLOOR PU 461** in a variety of different colours using the “wet-on-wet” technique. In such cases, do not go over the surface with a spiked roller, otherwise the finish required will be altered. You’ll have to accept that bubbles and pinholes could remain visible on the surface of the coating once hardened.

3. Finishing coat (MAPEFLOOR FINISH 59 W TRP)

Pour all the content of component B into the container of the related component A and mix with a low-speed electric mixer to form a smooth and even compound. Apply the product by rolling crosswise with a short-piled roller such as mohair or by airless spray. Make sure rooms are well ventilated to help the product to dry. Apply 2 coats of transparent **MAPEFLOOR FINISH 59 W TRP**, the first one within 48 hours (at +23°C) from **MAPEFLOOR PU 461** hardening, and then the second coat within 72 hours (at +23°C) from the hardening of the first one. If these times are exceeded, lightly roughen the surface and remove all traces of dust by vacuum.

4. Hardening and step-on times

At +23°C, **MAPEFLOOR COMFORT SYSTEM AL/X** sets to foot traffic after 12 hours and completely hardens after about 7 days. Lower temperatures lead to longer hardening and step-on times.

CLEANING AND MAINTENANCE

Regular cleaning and maintenance increase the life of the treated floor, maintain its aesthetic properties and reduce its tendency to collect dirt. **MAPEFLOOR COMFORT SYSTEM AL/X** is generally easy to clean with neutral detergents, or with alkali detergents diluted at a concentration of from 5 to 10% in water. **MAPEFLOOR MAINTENANCE KIT** is available for maintenance operations and includes **MAPELUX LUCIDA** metallic wax, **MAPEFLOOR WAX REMOVER** and **MAPEFLOOR CLEANER ED** detergent for daily cleaning operations. Our Technical Services Department is available for any information required.

TECHNICAL DATA

TECHNICAL DATA (after 7 days at +23°C)	
Appearance:	matt
Adhesion strength (EN 13892-8)	≥ 1.5 N/mm^2

**Resistance to abrasion after 7 days at +23°C (TABER test CS 17 wheel - 1000 cycles - 1000 g) (EN ISO 5470-1):	25 mg
*Elongation at break (DIN 53504):	75%
*Shore A hardness (DIN 53505):	75
Impact sound insulation (EN ISO 10140):	16 dB
*Resistance to tearing (DIN 53515):	12 N/mm
*Tensile strength (DIN 53504):	4 N/mm^2

** values for **Mapefloor PU 461***
*** values for the finishing film **Mapefloor Finish 59 W TRP***

NOTES

Recommendations regarding safe handling of the products are contained in the Safety Data Sheet for each single product in the cycle. However, the use of protective gloves and goggles is recommended when mixing and applying the products.

If the cycle is applied on different 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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