Mapefloor Comfort System AL/X

SELF-LEVELLING, ELASTIC, FLEXIBLE, UV-RESISTANT, ALIPHATIC POLYURETHANE RESIN-BASED COATING SYSTEM FOR FLOORS IN CIVIL ENVIRONMENTS; TOTAL THICKNESS 6 mm

Products used:
Mapefloor Pore Filler - Mapecomfort - Mapefloor PU 461 - Mapefloor Finish 58 W

DESCRIPTION

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

WHERE TO USE

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

PERFORMANCE AND ADVANTAGES

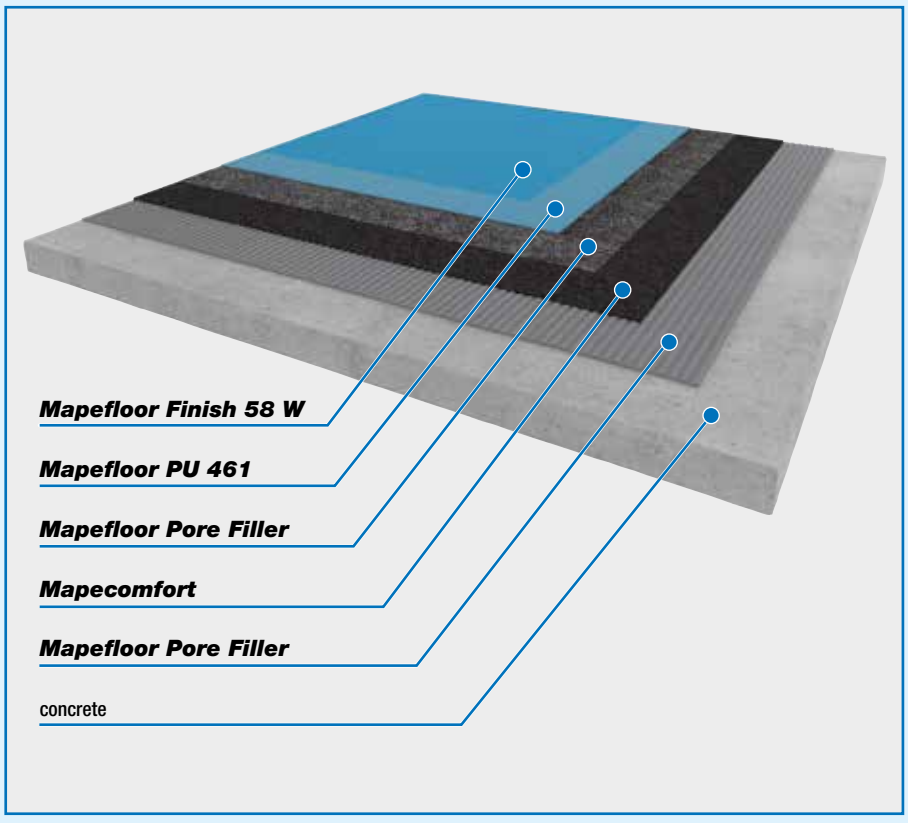
- Easy to apply.
- High level of comfort during use.
- Very low emission level of VOC.
- Greatly reduces the force of impact on the ground.
- Reduces noise levels.
- Resistant to UV rays.
- Elastic, soft and comfortable.
- Seamless floors with no distribution joints.
- Choose from a variety of colours.
- Attractive finish.
- Easy to clean and maintain.
- Comfortable underfoot.

CHEMICAL RESISTANCE

At room temperature, floors coated with **MAPEFLOOR COMFORT SYSTEM AL/X** are resistant to chemical products commonly used to clean and maintain floors in civil environments and in the service sector. Floors coated with **MAPEFLOOR COMFORT SYSTEM AL/X** are 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 Service Department for the complete range of colours.
Coating the system with **MAPEFLOOR FINISH 58 W** transparent finish gives the surface a



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Mapefloor Comfort System AL/X

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.).

YIELD

The consumption levels indicated below are for a cycle applied at a temperature of +15°C to +25°C on a smooth, compact concrete surface finished with a dry shake system and prepared with a diamond grinding wheel or by light shot-blasting. Rougher surfaces and lower temperatures lead to higher consumption rates and longer hardening times.
The consumption rate for **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: thickness 4 mm

Skim coat/Pore Filler:

MAPEFLOOR PORE FILLER: 0.4÷0.5 kg/m²

Self-levelling coating:

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

Finishing coat:

MAPEFLOOR FINISH 58 W*: 0.1-0.2 kg/m² per coat

* transparent version

TECHNICAL DATA (after 7 days at +23°C)

Finish:	matt
Resistance to abrasion after 7 days at +23°C (TABER test CS 17 disk - 1000 revs - 1000 g) (EN ISO 5470-1):	30 mg
Elongation at break* (DIN 53504) (%):	75
Shore A hardness* (DIN 53505):	85
Impact sound insulation (EN ISO 10140):	16 dB
Resistance to tearing* (DIN 53515) (N/mm):	25
Tensile strength* (DIN 53504) (N/mm²):	9

** values for **Mapefloor PU 461***

SURFACE PREPARATION

1. Characteristics of the substrate
Before applying **MAPEFLOOR COMFORT SYSTEM AL/X** the substrate on which the coating is to be applied must be carefully analysed.
The substrate made of a concrete slab must be sound, compact, strong, clean and must be dimensionally stable according to the static and dynamic loads to which it will be subjected when in service. The flatness must be defined according to the final use.
To obtain the best results, the following must be checked:

- There must be any materials or debris on the substrate which could potentially impede adhesion of the coating, such as:
  – cement laitance;
  – dust or detached or loose material;
  – protective wax, curing products, paraffin or efflorescence;
  – oil stains or layers of dirty resin;
  – traces of paint or chemical products.

Any other kind of material or substance that could affect adhesion of the coating must be removed before starting the work. If such materials or substances are present, the substrate must be prepared by carrying out a specific preparation cycle. Please contact MAPEI Technical Service Department for advice and information.

- The pull-off strength of the substrate must be more than 1.5 N/mm².
- The level of moisture in the substrate must be a maximum of 4% and there must be a suitable vapour barrier; in any case there should be no capillary rising damp (check by testing it with a sheet of polythene according to ASTM standards). If these conditions are not met, please contact the MAPEI Technical Service Department.

If all the above conditions are met, **MAPEFLOOR COMFORT SYSTEM AL/X** may be applied on concrete industrial floors, conventional or polymer-modified cementitious screeds and controlled-shrinkage screeds such as those made using **MAPECEM** or **TOPCEM**.

2. Preparation of the substrate
It is very important that the surface is prepared according to specification to guarantee correct application and to obtain the best performance from **MAPEFLOOR COMFORT SYSTEM AL/X**.
The most suitable method to prepare the surface is a diamond grinding wheel or by shot-blasting, followed by removal of all the dust with a vacuum cleaner taking care not to go too deep into the substrate. Do not use chemical preparation methods, such as acid rinsing, or aggressive percussion tools, to prevent damaging the substrate. Any defects present on the surface, such as holes, pitting, cracking, etc., must be repaired beforehand using either **EPORIP** or **PRIMER SN**, depending on the width and depth of the defects and cracks.
If the substrate needs to be consolidated, use **PRIMER MF** or **PRIMER EP** (choose the most suitable product according to the porosity of the substrate, which will also have an effect on the consumption rate). If there are deep hollows or highly deteriorated areas on the substrate, repair these areas beforehand using **MAPEFLOOR EP19**, three-component epoxy mortar or the products from the **MAPEGROUT** range, which may also be used to repair damaged joints.
If any of the above conditions are not

strictly adhered to, the quality of the coating may be poor.

3. Preliminary checks before application

Make sure that all the checks indicated in point 1 “Characteristics of the substrate” have been carried out, and that all the operations indicated in point 2 “Preparation of the substrate” have been carried out correctly.
The surrounding temperature must be higher than +8°C (the ideal application temperature is +15°C to +25°C), and the temperature of the substrate must be at least 3°C higher than the dew-point temperature.

4. Preparation and application of the products

Carefully follow the preparation instructions contained in the Technical Data Sheet for each single product used to form the complete system:
– **MAPEFLOOR PORE FILLER**,
– **MAPECOMFORT**,
– **MAPEFLOOR PU 461**,
– **MAPEFLOOR FINISH 58 W**.

- **Bonding and saturating the mat made from rubber granules (MAPEFLOOR PORE FILLER + MAPECOMFORT)**
  Unroll the sheets of **MAPECOMFORT** over all the surface to be covered at least one day before bonding them in place. To prepare **MAPEFLOOR PORE FILLER**, pour component B (2.2 kg) into component A (10 kg), and mix with a drill at low speed with a spiral mixing attachment, to form a smooth and even paste. Spread an even coat of product over the clean, de-dusted surface with notched trowel like MAPEI rooth 2 or 3. While the adhesive is still wet, and within the product’s open time, carefully lay on **MAPECOMFORT** 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 piece of mat must be carefully butted together, 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 repair the missing areas by laying off-cuts of **MAPECOMFORT** bonded in place with a fresh layer of **MAPEFLOOR PORE FILLER**. Skim the **MAPECOMFORT** and fill all the pores by applying 1-2 coats of **MAPEFLOOR PORE FILLER** with a straight trowel. Skim the **MAPECOMFORT** mat lengthways and, even if the joints of the sheets between each piece have already been skimmed, go over them again with the spreader so that each joint is skimmed at least twice.
  Carefully fill all the gaps left between the mat and the vertical elements (walls, pillars, plinths, drains, etc.) 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 another coat of **MAPEFLOOR PORE FILLER** in those areas.

- **Self-levelling coat (MAPEFLOOR PU 461)**
  Pour component B into component A and mix with a drill at low speed with a spiral mixing attachment to form a smooth and uniform compound. Pour the mix onto the floor to be coated and spread it out evenly and uniformly using a straight trowel or a notched spreader with “V” shaped teeth. 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.
  The total thickness of the **MAPEFLOOR PU 461** must be approx. 2 mm.

- **Finishing coat (MAPEFLOOR FINISH 58 W)**
  Pour component B (0.5 kg) into component A (5 kg), and mix with a drill at low speed with a spiral mixing attachment, to form homogeneous compound. Apply the product by back-rolling crosswise with a medium-piled roller or by airless spray. Make sure rooms are well ventilated to help the product to dry. Apply 2 coats of transparent **MAPEFLOOR FINISH 58 W**, the first one within 48 hours (at +23°C) of **MAPEFLOOR PU 461** hardening, and then the second coat, within 72 hours (at +23°C) of the first coat hardening. If these times are exceeded, lightly roughen the surface and remove all traces of dust from the surface.

5. Hardening and step-on times

At +20°C **MAPEFLOOR COMFORT SYSTEM AL/X** sets to foot traffic after 12 hours and completely hardens after around 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, improves its aesthetic properties and reduces its tendency to collect dirt. Floors created using **MAPEFLOOR COMFORT SYSTEM AL/X** are 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.

NOTES

Recommendations regarding safe handling of the products are contained in the Material 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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