Mapefloor PU 430 SL

Two-component flexible self-leveling floor coating based on polyurethane

AREA OF USE
Mapefloor PU 430 SL is a flexible self-leveling coating suited for indoor use on surfaces exposed to medium to high mechanical wear.

Suitable areas of application are on floors in production plants, in mechanical industry, warehouses, ramps or similar areas.

Mapefloor PU 430 SL is normally applied on concrete and other cement-based substrates, but may also in some cases be used as a coating on bitumen based substrates.

TECHNICAL CHARACTERISTICS
Mapefloor PU 430 SL is a formulated two-component flexible polyurethane-based coating, solvent free, for use on surfaces in areas with medium to high mechanical wear.

Mapefloor PU 430 SL has excellent impact resistance and good chemical resistance.

Mapefloor PU 430 SL is delivered in colors shown in the provided color guide.

Mapefloor PU 430 SL is not UV-stable and will most likely become yellow in contact with sunlight, without this having any negative influence on the properties.

Mapefloor PU 430 SL has very low emissions, and is classified according to M1.

Mapefloor PU 430 SL complies with the principles defined in EN 1504-9 standards (“Products and systems for protecting and repairing concrete structures. Definitions, requirements, quality control and conformity assessment. General principles for the use and application of systems”), and the requirements of EN 1504-2 (“Protection systems for concrete surfaces”) for class: products for protecting surfaces - coating (C) – PI, MC, PR and IR.

Mapefloor PU 430 SL complies with EN 13813.

APPLICATION PROCEDURE
Preparation of the substrate:
The concrete must be sound, clean, dust-free and have a smooth permanent surface. Normal cleaning methods such as milling, grinding or shot blasting can be used. The substrate’s surface temperature should be at least +10 °C and at least 3 °C above the applicable dew point during product application.

For application on bitumen based substrates please contact Mapei Technical service for specific recommendations, and application procedures.

Preparation of the product:
Components A and B should have a temperature of +15 °C or more when mixed together. Mix component A first, using a slow drill whisk,
Mapefloor PU 430 SL: Two-component flexible self-leveling floor coating based on polyurethane. The product complies with specification in EN 13813 and EN 1504-2. Coating (C) principles: PI, IR, PR and MC

TECHNICAL DATA (typical values)

<table>
<thead>
<tr>
<th>PRODUCT DETAILS</th>
<th>Component A</th>
<th>Component B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>colored</td>
<td>dark brown</td>
</tr>
<tr>
<td>Appearance</td>
<td>thick liquid</td>
<td>liquid</td>
</tr>
<tr>
<td>Density (g/cm³)</td>
<td>1.52</td>
<td>1.23</td>
</tr>
<tr>
<td>Brookfield viscosity at +23°C (mPa*s)</td>
<td>approx. 6 700</td>
<td>approx. 170</td>
</tr>
</tbody>
</table>

APPLICATION DATA

| Mixing ratio     | 100:20 component A: component B |
| Color of mixture | colored                           |
| Consistency of the mixture | dense fluid                     |
| Density of the mixture (kg/m³) | 1 450                           |
| Brookfield viscosity of the mixture (mPa*s) | approx. 2 800 |
| Application temperature range | +10 - 30°C                     |
| Potlife (EN 9514): | 26 minutes                        |

FINAL PROPERTIES (7 days at + 23°C and 50 % R.H)

| Step on time       | 12 hours |
| Final setting time | 7 days    |
| Elongation at break| approx. 100 % |
| Shore D (ISO 868:2003): | 60 (1s) |
| Taber abrasion (CS 17 / 1000 g /1000 cycles): | 70 mg |

Performance characteristics for product or system

<table>
<thead>
<tr>
<th>Test methods</th>
<th>Requirements according to EN 13813 for synthetic resin screeds</th>
<th>Product or system performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wear resistance: EN 13892-4</td>
<td>&lt; AR1</td>
<td>AR0.5*</td>
</tr>
<tr>
<td>Bond strength: EN 13892-8:2004</td>
<td>&gt;2.0 N/mm²</td>
<td>&gt; 4.1 N/mm²</td>
</tr>
<tr>
<td>Impact resistance: EN 6272-1</td>
<td>&gt; IR4</td>
<td>&gt; IR4</td>
</tr>
<tr>
<td>Reaction to fire: EN 13501-1</td>
<td>Declared value</td>
<td>Cₙ – s1</td>
</tr>
</tbody>
</table>

* Correlation to Taber (EN ISO 5470-1)
then add component B and mix well for at least 3 minutes until it reaches a homogeneous consistency.

The product must not be thinned!

**Application of the product:**
The relative humidity should be less than 70 % RH during both installation and curing. The uncured product must not come into contact with water or moisture.

**Please Note:** Be especially observant that the substrate is dry and that only dry aggregates are used as spreading material.

**Single layer smooth floors on concrete - thickness > 1 mm**

**a. Primers**
The surface should always be cleaned and prepared with a primer (such as Primer SN, Mapeprimer M) before applying Mapefloor PU 430 SL. The primer is best applied using smooth trowel or rake. After application all pores or air holes on the concrete surface should be filled and the surface appear to be sealed without any apparent dry spots.

Depending on the type of primer used; One should broadcast with dry sand grain size of 0.1-0.5 or 0.4-0.8 mm onto the primer using the “grain-to-grain” technique while the primer is still wet, in order to ensure good adhesion of the subsequent layer.

**b. Coatings**
The Mapefloor PU 430 SL self-leveling coating is applied using a leveling rake or a v-toothed spattle at the desired thickness of at least 1 mm. If necessary, a spike roller can be used to remove any air bubbles.

**Multilayer non-slip industrial floors with a thickness of approximately 2.5 mm or more**

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**b. Multilayer coating**
A self-leveling coating of Mapefloor PU 430 SL is applied using a leveling rake or a v-toothed spattle in the desired thickness of at least 1 mm, and covered to complete saturation using dry sand with a grain size

<table>
<thead>
<tr>
<th>Performance characteristics for product or system</th>
<th>Test methods</th>
<th>Requirements according to EN 1504-2</th>
<th>Product or system performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrasion resistance:</td>
<td>EN ISO 5470-1</td>
<td>&lt; 3000 mg H22/1000 cycles/load 1000 g</td>
<td>&lt; 250 mg</td>
</tr>
<tr>
<td>Permeability to CO₂:</td>
<td>EN 1062-6</td>
<td>Permeability to CO₂: SD &gt; 50 m</td>
<td>Sd &gt; 50 m</td>
</tr>
<tr>
<td>Water vapor permeability:</td>
<td>EN ISO 7783</td>
<td>Class I: Sd &lt; 5 m</td>
<td></td>
</tr>
<tr>
<td>Capillary absorption and permeability to water:</td>
<td>EN 1062-3</td>
<td>w &lt; 0.1 kg/m²·h¹/₂</td>
<td>w &lt; 0.03 kg/m²·h¹/₂</td>
</tr>
<tr>
<td>Chemical resistance:</td>
<td>EN ISO 2812-1</td>
<td>No visual defects after 30 days exposure</td>
<td>See separate list</td>
</tr>
<tr>
<td>Impact resistance:</td>
<td>EN ISO 1542</td>
<td>Class I: ≥ 4 Nm</td>
<td></td>
</tr>
<tr>
<td>Pull-off test Reference substrate: MC (0.40) as specified in EN 1766, curing time 7 days:</td>
<td>EN 13501-1</td>
<td>Declared value</td>
<td>C₀ — s₁</td>
</tr>
</tbody>
</table>

* In system Mapefloor PU SL S

![Performance characteristics for product or system](image-url)
SAFETY INSTRUCTIONS FOR PREPARATION AND USE

Mapefloor PU 430 SL Component A is not considered dangerous, while component B is harmful by inhalation and may cause sensitisation by inhalation and skin contact for individuals sensitive to isocyanates. Danger of serious damage to health by prolonged exposure through inhalation. Limited evidence of a carcinogenic effect.

While using the products, we recommend using respiratory protection, gloves and goggles. Only apply the product in well-ventilated areas. Seek medical attention in the event of accidents or any discomfort. For further and complete information about safe use of the product please refer to the latest version of the Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE!

NOTE

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

CLEANING

Tools and equipment must be washed immediately after use using a thinner or some other cleaning agent suited for polyurethane. Please Note: Technical alcohol may not be used! Once set, the product may only be removed mechanically.

CONSUMPTION

For smooth single layer application: approx. 2-3 kg/m² for a coating with thickness 1.5 to 2 mm. For multilayer application: approx. 2.5 kg/m² for a 2.5 mm coating.

PACKAGING

21 kg packs: Component A = 17.5 kg, component B = 3.5 kg

STORAGE

Properties for use are not changed for a period of 24 months for component A and 6 months for component B when stored between +5 and +30 °C in unopened original packaging.

All relevant references for the product are available upon request and from www.mapei.com
MAPEFLOOR PU 430 SL

Synthetic resin screed material (coating) for internal use

Reaction to fire: C\textsubscript{r} -s1
Release of corrosive substances: SR
Water permeability: NPD
Wear Resistance: AR0.5
Bond strength: B2.0
Impact resistance: IR4
Sound insulation: NPD
Sound absorption: NPD
Thermal resistance: NPD
Chemical resistance: NPD

MAPEFLOOR PU 430 SL

Intended to be used as surface protection products – coating

1.3 Ingress protection
2.2 Moisture control
5.1 Physical resistance
8.2 Increasing resistivity

Abrasion resistance: \(< 3000\text{mg}
Permeability to CO\textsubscript{2}: Sd > 50\text{ m}
Water vapour permeability: Class III
Capillary absorption and permeability to water: \(w < 0.03\text{ kg/m}^2\cdot\text{h}^{0.6}\)
Impact resistance: Class I
Adhesion strength by pull off test: \(>2.0\text{ N/mm}^2\)
Reaction to fire: C\textsubscript{r} -s1
Dangerous substances: NPD