

TECHNICAL DATA SHEET

KEMAPOX SL 5000

Basic self-levelling final epoxy coating



PRODUCT DESCRIPTION

2-component, pigmented epoxy resin for self-levelling final coating

The product is available in the following colors: RAL 1001, 3009, 3013, 5010, 6001, 7030, 7032 *, 7035, 7037, 7040 *, 7047, 8004, 9005, 9010. Other colors according to RAL color scale on request.
 *-in stock.

Field of use

It is used for making self-levelling floorings on concrete and other cement-based substrates for normal to medium loads, such as warehouses, working halls, garages, etc.. It can also be used as a decorative coating for floors.

Product properties

1. Self-levelling industrial floorings in areas with normal and medium high loads .
2. Basic self-levelling flooring with good chemical resistance
3. Self-levelling epoxy coating for the preparation of high decorative glossy flooring
4. Possible implementation with decorative flakes KEMAPOX CHIPS

- Good chemical and mechanical resistance
- Water resistant
- For indoor use
- Contains no solvents
- Easy to install
- Glossy monolithic final surface

PRODUCT DATA

Basic information

Appearance	Component A: pigmented liquid; component B: yellowish liquid
Packing	24 kg (20 kg of component A + 4 kg of component B)
Storage and expiration date	12 months from date of production at appropriate storage (dry, in the temperature range between +5 ° C and + 30 ° C in original and undamaged packaging), Protect the product from freezing, direct sun and heat sources.

Technical data

Chemical composition	Filled epoxy resin and modified cyclo-aliphatic hardener
Density of component A (25°C)	1,5 g/cm ³
Density of component B (25°C)	1,0 g/cm ³
Density of compound (25°C)	1,4 g/cm ³
Density of compound and 30 % EPOXY SAND ES 0,1-0,3 (25°C)	
Viscosity of component A (25°C)	cca. 4700 mPa.s
Viscosity of component B (25°C)	35-55 mPa.s

Viscosity of compound (25°C)	mPa.s
Bond strength on primer	> 1,5 N/mm ²
Compressive strength of mortar (KF 5000: ES 0.1 - 0.3 = 1:0,3)	
Flexural strength of mortar (KF 5000: ES 0.1 - 0.3 = 1:0,3)	
Shore D after 24 hours	55
Shore D after 48 hours	65
Shore D after 3 days	75
Shore D after 7 days	75
Content of volatile organic compounds, total	< 10 ml/m ³
Resistance to abrasion, BCA	0 ηm
Density (+25°C)	1,4 g/cm ³
Dry matter content	100 %
Bonding time	1 day
Solid	7 days
Fire resistance class	E _{fl}

INSTRUCTIONS FOR USE

Installation

1. Self-levelling epoxy flooring of thickness approx. 1 mm:

Primer: 1 layer KEMAPOX GRUND 2000
 Final coat 1 layer KEMAPOX SL 5000

2. Self-levelling epoxy flooring of thickness approx. 1,5 - 3 mm:

Primer: 1 layer KEMAPOX GRUND 2000
 Final coat: 1 layer KEMAPOX SL 5000 + EPOXY SAND ES 0,1 - 0,3

3. Self-levelling epoxy flooring of thickness approx. 4 mm:

Primer: 1 layer KEMAPOX GRUND 2000
 Intermediate layer: 1 layer KEMAPOX SL 5000 + EPOXY SAND ES 0,1 - 0,3 + EPOXY SAND ES 80
 Final coat: 1 layer KEMAPOX C 6000

The described systems are feasible at normal absorbent and flat cement substrates. If a prior epoxy leveling is necessary, use KEMAPOX Grund 2000 (see technical data sheet for KEMAPOX Grund 2000).

Consumption

1. Primer prior to installation of epoxy floorings, substrate reinforcement, anti-dust coating, bonding layer with KEMAPOX Grund 2000: 0.3 - 0.5 kg/m² for one layer, depending on the absorbency of the substrate
2. Epoxy levelling compound (levelling up to 2 mm) with KEMAPOX Grund 2000: 1.4 to 1.6 kg/m² for 1 mm thickness (mixing ratio resin: sand = 1:1)
3. Self-levelling epoxy flooring, thickness of approx. 1 mm: approx. 1.2 kg/m²
4. Self-levelling epoxy flooring, thickness of approx. 1.5 to 3 mm: approx. 1.8 to 2 kg compound/m² (1.4 to 1.5 kg of resin A + B and 0.4 to 0.5 kg of sand EPOXY SAND ES 0.1 - 0.3)
5. Self-levelling epoxy flooring, thickness of approx. 4 mm: approx. 4 kg compound/m² (2.7 kg of resin A + B and 1.3 kg of sand EPOXY SAND ES 0.1 - 0.3) + 2 kg/m² EPOXY SAND ES 80 for a complete strewing + 0.6 kg/m² KEMAPOX C 6000

These data are theoretical and do not include additional material consumption, which may result from a porous surface, slope levelling or losses at installation etc..

Base

The substrate must be clean, dry, stable, sound and without cement crust, dust, oil, grease, loose particles and similar impurities. Compressive strength of the substrate must be at least 25 MPa, the average bond strength of at least 1.5 MPa (the smallest measured value shall not be less than 1.0 MPa). Substrate moisture content shall not be more than 3,5%, measured by the CM method (concrete MB at least 35).

Base preparation

Porosity, irregularities and cracks in the substrate are repaired with with the priming of the substrate or leveling, use appropriate products KEMAPOX GRUND and KEMAPOX FILL. Peaks in the substrate are properly repaired.. Before applying the product it is necessary to remove all dust and loose particles, preferably with a broom or vacuum cleaner.

Mix ratio

5:1 ratio of component A: B (by weight) Quartz filler EPOXY SAND ES 0.1 - 0.3 mm (cca.30%) is added.

Mix time

The epoxy resin is usually denser than the hardener, so that they can not easily be stirred. Before mixing component A with component B, mix the two components individually. The recommended time for mixing the individual components is 2-3 minutes, then all of part B is mixed into all of part A. With a mixer intensively stir the compound into a homogenous mass. It is important that the compound is intensely stirred to evenly distribute the hardener in the mass. It is necessary to mix on the sides and from the bottom upwards, so that the hardener evenly distributed in vertical direction, until the compound becomes completely homogeneous and of uniform color. Mixing time should be at least 3 minutes. Recommended temperature for mixing must be higher than 15 ° C. Before use, pour the mixed components into a new, clean container and mix all together again .The second mixing should not take too long to avoid the entry of too much air in the compound.The container must be clean and free of grease, oil or other impurities.
 If you are preparing a small quantity of epoxy coating, use a third clean container. First mix the two components individually, then pour in a third bowl the exact quantity of component A and component B. The mixing procedure should be the same as described above. Use weighing scales with an accuracy of + / - 0.01 kg.
 If you add a third component of dry quartz sand, first mix the two components according to the instructions. Then gradually add the sand in steps of 15%. The total quantity of added sand depends on the purpose of installation and must be determined in each case.

Mix tool

Component B must be added to component A and mixed thoroughly, preferably with a spiral stirrer attached to a drill with max. 300-400 rpm.

Installation

Before application, check the moisture, relative humidity and dew point. If all conditions are met the installation can begin.

In the case of humidity to 10% KEMAPOX GRUND 2040 can be used instead of KEMAPOX GRUND 2000.

1. Primer prior to installation of epoxy flooring, substrate reinforcement, anti- dust coating, bonding layer:
 Pour mixed material (follow instructions) over the surface, distribute evenly by spatula from hard gum, roller or trowel. After about 5 minutes distribute evenly in cross pulls, using paint roller. In the case of highly absorbent substrates apply the second coat after approx. 10-12 hours (depending on temperature).
2. Epoxy levelling compound (levelling up to 2 mm):
 Prepare your material according to instructions and pour it over the surface. Use a spatula of hard gum or masonry trowel to distribute the resin to the desired thickness. According to project, the fresh resin can also be strewn with dry sand.
3. Self- levelling epoxy flooring of 1-3 mm thickness:
 Prepare your material according to instructions and pour it over the surface. Use a notched trowel to spread the resin to the desired thickness. Additionally air the surface with a spiked roller in two directions to remove as much air as possible and ensure an even thickness.
4. Self- levelling epoxy flooring of 4 mm thickness:
 Prepare your material according to instructions and pour it over the surface. Use a notched trowel to spread the resin to the desired thickness. Additionally air the surface with a spiked roller in two directions to remove as much air as possible and ensure an even thickness. The fresh flooring must be strewn with dry sand, make sure that the sand is strewn in surplus. The final coat KEMAPOX C 6000 is applied after 24 hours. Before applying fully remove sand and clean the surface thoroughly (vacuum cleaner). Pour KEMAPOX C 6000 over surface, distribute with a rubber float and smooth with a paint roller in two directions (cross).

OPTION:
 The fresh self- levelling resin can be strewn with decorative flakes KEMAPOX CHIPS, which are available in different colors. The flakes must be protected with an epoxy or polyurethane varnish in gloss or satin finish.

Tool

KEMAPOX SL 5000 is applied to the prepared substrate with a paint roller, a metal trowel, notched trowel or BIFLEKS spatula.

Cleaning of tool

Clean all tools with diluent KEMAPOX CLEANER immediately after use. Hardened material can only be removed mechanically.

Open time

60 minutes (at +23°C, 100 g)

Coagulation

Processing time:

Temperature	Ready for foot traffic	Light load	Full load
+10°C	approx. 24 hours	approx. 5 days	approx. 10 days
+20°C	approx. 12 hours	approx. 3 days	approx. 7 days
+30°C	approx. 6 hours	approx. 2 days	approx. 5 days

Waiting time between coats:

Substrate temperature	Minimum	Maximum
+10°C	24 - 36 hours	3 - 4 days
+20°C	12 - 24 hours	2 - 3 days
+30°C	8 - 12 hours	1 - 2 days

Times are approximate and depend on the ambient conditions, particularly temperature and relative humidity.

LIMITATIONS

Base temperature	+10°C min./ +30°C max.
Air temperature	+10°C min./ +30°C max.
Material temperature	+15°C min.

Warnings

- Protect fresh install epoxy resin from freezing, raining and other weather conditions. The material should not be used at temperatures below +10° C.
- Recommended Relative Air Humidity: 80% r.h. max.
- Maximum moisture content in substrate is 3,5% on concrete with mark MB C30/37 (determined with CM method or laboratory drying)
- Store the product in dry place, protect form direct sun and freezing.
- Freshly applied KEMAPOX resin should be protected from damp, condensation and water for at least 24 hours.
- For external applications, apply when temperature is falling. If applied during rising temperatures small holes may occur on the surface.
- If heating in the room of application is required, do not use gas, oil, paraffin or other fossil fuel heaters, these release large quantities of CO2 and H2O, which may adversely affect the appearance of the surface. For heating use only electric powered heating systems.
- Dew Point: The substrate and uncured floor must be at least 3°C below the dew point to avoid condensation or blooming of the floor finish.
- Direct sunlight may cause discolouration and color deviations, but this has no effect on the function and properties of the coating.
- Uninterrupted access to closed site, 3 phase current electrical connection, strength of at least 32 A, lighting of surfaces, where flooring will be implemented, protection against rain and direct sunlight.

Recommendation: Remains of the unhardened/unset material have to be removed in accordance with the legislation.

Data source: All technical data in this technical sheet were obtained by laboratory research. Actual data may differ due to different working conditions on which we have no influence.

Local restrictions: Due to specific local regulations the installed product can differ from country to country. For exact instructions for use, demand a country specific technical data sheet.


PROOFS

Norms/Standards	Product in accordance with EN 13813.
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SAFETY DATA

At work use gloves and protective skin cream. Hardener should not come into contact with skin and especially not in eyes. Stains on the skin shall be washed with soap and water, but if accidentally splashed into the eyes, wash immediately with plenty of water and seek medical advice. Further information on storage, handling and use of compound are contained in this safety data sheet which contains safety, toxicological and ecological data, also pay attention to warnings on the original packaging.

OTHER INFORMATION

	KEMA Puconci d.o.o., Puconci 109, 9201 Puconci, SLOVENIJA
Glej datum proizvodnje natisnjen na embalaži	
EN 13813 SR-B1,5-AR0,5-IR1	
Estrih iz umetnih mas/premaz za notranje prostore (vgradnja po navodilih tehničnega lista)	
Razred odziva na ogenj	E _{fl}
Syntetic Resin Screed-estrihi iz umetnih smol:	SR
Odpornost na obrabo (Abrasion Resistance):	AR 0,5
Sprijemna trdnost (Bond):	B 1,5
Udarna trdnost (Impact Resistance):	IR 1

LEGAL BASE

Information and recommendations relating application and end use of Kema products, are given in good faith based on our temporary knowledge and experience of the products when properly stored, properly handled and used under normal conditions. In practice, the differences in materials, substrates and actual site conditions are such that from this information or any written recommendations, or from any other advice no tradability or suitability for a particular purpose, nor any liability arising from any legal relationship can be guaranteed. Proprietary rights of third must be respected. All of our orders fall under current sales and supply conditions. Users should always refer to the latest technical data sheet for a product, copies are available on request.