



KEMAPOX GRUND 2040

Epoxy coating for substrates with moisture up to 8 %

- ▶ High penetration into the substrate
- ▶ Universal application
- ▶ Low viscosity
- ▶ Easy to use
- ▶ For outdoor and indoor use



PRODUCT DESCRIPTION 2-component impregnating epoxy coating and bond old-new.

FIELD OF USE For priming of commonly cement based surfaces, for filling of capillaries and pores, for reinforcement and thin-layer levelling. It is of low viscosity, suitable for filling with quartz sand and for thin epoxy screeds and mortars. For outdoor and indoor use.

1. Primer on concrete, cement screeds, epoxy leveling and mortars.
2. Primer in the installation of all Kema epoxy and polyurethane floors.
3. For reinforcement and as an anti-dust coating for cement based substrates.
4. Suitable for use on normal to strongly absorbent cement substrates.
5. Suitable for filling with quartz sand of different grain sizes, to implement thin epoxy leveling and epoxy mortar.

- PRODUCT PROPERTIES**
- High penetration into the substrate
 - Universal application
 - Low viscosity
 - Easy to use
 - For outdoor and indoor use

PRODUCT DATA

BASIC INFORMATION

Appearance Component A: colourless fluid; Component B: brownish fluid

Packing 32 kg (20 kg of component A and 12 kg of component B)
Bulk cargo: 200 kg of component A and 200 kg of component B

Storage and expiration date At an appropriate storage (dry, in the temperature range between +5 ° C to +30 ° C in original and undamaged packaging), 12 months from date of manufacture. Protect the product from freezing, direct sun and heat sources.

TECHNICAL DATA

Chemical composition Modified epoxy resin and modified cycloaliphatic hardener

Density of component A (25°C) 1,1 g/cm³

Density of component B (25°C) 0,955 g/cm³

Density of mixture (25°C) 1,00 g/cm³

Viscosity of component A (25°C) 950-1250 mPa.s

Viscosity of component B (25°C) 10-30 mPa.s

Viscosity of mixture (25°C) 400 mPa.s

Dry matter content Approx.: 99 %

Bond strength > 1,5 N/mm²

Compressive strength of mortar (KG 2040:ES 0,1-0,3=1:10) > 45 N/mm²

Flexural strength of mortar (KG 2040:ES 0,1-0,3=1:10) > 20 N/mm²

Shore D after 24 hours 55

Shore D after 48 hours 65

Shore D after 3 days 72

Shore D after 7 days 72

THERMAL RESISTANCE

| | |
|-----------------------------|----------|
| Exposure | Dry heat |
| long- term | +50°C |
| short- term, up to 7 days: | +80°C |
| short- term, up to 12 hours | +100°C |

Exposure should not be simultaneous chemical and mechanical.

INSTRUCTIONS FOR USE

IMPLEMENTATION 1. Primer prior to installation of epoxy floor, substrate reinforcement, anti- dust coat:

| | |
|------------------------------|-----------------------------|
| Normally absorbent substrate | 1 layer KEMAPOX GRUND 2040 |
| Strongly absorbent substrate | 2 layers KEMAPOX GRUND 2040 |

2. Epoxy leveling compound (leveling up to 2 mm):

| | |
|------------------------------|--|
| Normally absorbent substrate | 1 layer KEMAPOX GRUND 2040 and 1 layer KEMAPOX GRUND 2040 + EPOXY SAND ES 0,1 - 0,3 |
| Strongly absorbent substrate | 2 layers KEMAPOX GRUND 2040 and 1 layer KEMAPOX GRUND 2040 + EPOXY SAND ES 0,1 - 0,3 |

3. Epoxy mortar (15 to 20 mm)

| | |
|-------------------------------|--|
| Normally absorbent substrate: | 1 layer KEMAPOX GRUND 2040 as bonding layer and 1 layer KEMAPOX GRUND 2040 + EPOXY SAND ES 80 |
| Strongly absorbent substrate | 1 layer KEMAPOX GRUND 2040 and 1 layer KEMAPOX GRUND 2040 as bonding layer and 1 layer KEMAGRUND 2040 + EPOXY SAND ES 80 |

CONSUMPTION 1. Primer prior to installation of epoxy floor, substrate reinforcement, anti- dust protection coating, bonding layer: 0,3 - 0,5 kg/m² for one layer, depending on the absorbency of the substrate.

2. Epoxy leveling compound (leveling up to 2 mm): 1,4 to 1,6 kg/m² for 1 mm thickness (mixing ratio resin: sand = 1:1)

3. Epoxy mortar (15 to 20 mm): 2,2 kg/m² for 1 mm thickness (mixing ratio resin: sand = 1:10)

BASE The substrate must be clean, dry, stable, sound and free from 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). Moisture content in substrate must be not more than 8 %, measured by the CM method (concrete at least 35 MB).

BASE PREPARATION Prepare by appropriate mechanical methods such as grinding, milling, ball or sand blasting or burning to remove the top layer of the surface and to achieve an open texture of the surface. Unbound and loose particles must be removed, it is also necessary to fully repair all defects such as holes, dents or cracks, and irregularities and voids. Defects, cracks and holes must be repaired with appropriate KEMA products (eg. KEMAPOX FILL, KEMAPOX GRUND, ...).

Before application of the resin completely remove dust and loose particles from the substrate, using a broom or vacuum cleaner

MIX RATIO A:B=100:60 (ratio of components A and B); Dry quartz sand is added according the purpose of use

MIX TIME Epoxy resin is usually thicker than the hardener, so that they can not be easily stirred. Before mixing component A with component B, stir 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 mixture into a homogenous compound. It is important that the compound is intensely stirred that the hardener is evenly distributed in the compound. It is necessary to mix on the sides and from the bottom upwards, so that the hardener evenly distributes in the vertical direction, until the compound is completely homogeneous and of uniform color. Mixing time should be at least 3 minutes. Recommended temperature when mixing must be greater than 15 ° C. Before use, the mixed components must be poured over in a new, clean container and again well stirred. The second mixing should not take too long to avoid the entry of too much air in the compound. This 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 container the exact quantity of component A and then of 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. 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 stirred thoroughly, preferably with a spiral mixing spindle 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.

1. Primer prior to installation of epoxy floor, substrate reinforcement, anti- dust protection coating, bonding layer: Pour mixed material (follow instructions) over the surface, use spatula from hard gum, roller or trowel and distribute evenly. After about 5 minutes evenly distribute it using a paint roller in cross pulls. In the case of highly absorbent substrate apply the second coat after approx. 10-12 hours (depending on temperature).

2. Epoxy leveling compound (leveling up to 2 mm): Prepare your material according to instructions and pour over the surface. Use a spatula from hard gum or masonry trowel to distribute resin to the desired thickness. Depending on project the fresh resin can also be strewn with dry sand.

3. Epoxy mortar (15 to 20 mm): Epoxy mortar shall be prepared according to instructions and installed on the fresh bonding layer. Using a spatula from hard gum or masonry trowel to distribute the resin to the desired thickness, you can also use a leveling board. If you want to level the surface of the epoxy mortar use compound KEMAPOX GRUND 2040 and KEMAPOX DENS SM, which is applied onto the still wet epoxy mortar.

TOOL KEMAPOX Grund 2040 is applied to the prepared surface with a paint roller, a metal trowel or notched trowel.

CLEANING OF TOOL Clean tools immediately after use with diluent KEMAPOX CLEANER. Hardened material can be removed from the tool only mechanically.

OPEN TIME 30 minutes (at +25°C, 100 g)

COAGULATION Processing time

| Temperature | Ready for foot traffic | Lighter loading | Full loading |
|-------------|------------------------|-----------------|-----------------|
| +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 - 26 hours | 4 - days |
| +20°C | 12 - 24 hours | 2 - 4 days |
| +30°C | 6 - 12 hours | 1 - 2 days |

Times are approximate and depend on the ambient conditions, particularly on 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 freshly installed material from freezing, rain and other weather conditions. The material should not be used at temperatures below +10 ° C.
 - It is recommended that the material is used at a maximum humidity of 80%.
 - The maximum permissible moisture is 8% for concretes of label C30/37 (determined by CM-apparatus or laboratory drying).
 - It is recommended that the material is stored in a dry place, protected from direct sunlight and frost.
 - Protect freshly installed epoxy resin from moisture, condensation and water for at least 24 hours from installation.
 - In outdoor use, install the resin when the temperature decreases. In the case of rising temperature, holes on the surface may occur.
 - If heating is required do not use gas, oil, paraffin or other fossil fuels for heating. It is recommended to use an electrical method of heating, because organic fuels release CO₂ and H₂O, which may adversely affect the surface appearance.
 - Dew Point: The substrate and unhardened resin must be at least 3°C below the dew point to reduce the risk of condensation or blooming on the floor finish.
 - The epoxy resin is composed of two components, so take into consideration the given mixing ratio.
 - Uninterrupted access to closed site, 3 phase current, strength of at least 32 A, lighting of surfaces, where the floor 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 was 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.

SAFETY DATA

At work we have to use gloves and protective skin cream. Hardener should not come into contact with skin and especially not in eyes. Stains on the skin are washed with soap and water, but if accidentally splashed into the eyes, they should immediately be washed 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, we must also pay attention to warnings on the original packaging.



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, if they are 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 orders fall under current sales and supply conditions. Customers should always refer to the latest technical data sheet for the concerned product, copies of the technical data sheet are available on request.