

# SigaPox 450

High-quality 2-component epoxy resin flow-coating

*Empowered by Expertise!*

**Description:**

**SigaPox 450** is a solvent-free, pigmented flow-coating based on a 2-component epoxy resin with very good flow- and smoothing properties. Due to its good flow properties coatings starting at 1 mm can be applied depending on the demands to the floor.

**SigaPox 450** contains high-quality resin components and is high in binding agents. Economic solutions can be achieved by addition of fire-dried quartz sand, especially for increased layer coatings. The product features easy handling and high class appearance.

Cured coatings are suitable for commercially and industrially used areas. **SigaPox 450** is more formable than usual epoxy resin coatings and furthermore has an excellent wear resistance.

**SigaPox 450** shows good resistance to yellowing. Therefore it is very suitable for pale colour tones.

**SigaPox 450** offers good resistance to chemicals, e.g. to bases, oil, grease, solvents, water, salt solutions, and different acids. For any special demands to the resistance please obtain advice.

**Characteristics:**

- Solvent-free
- Smooth, pigmented surface
- Lean consistency
- Well-balanced stability
- Resistant to hydrolysis and saponification
- Fillable with fire-dried quartz sand
- Energy-elastic and wear-resistant

**Application:**

- Commercially used areas for medium mechanical load, e.g. production areas, stocking areas in many economic sectors (2 mm coating).
- Commercially used areas for high mechanical load, e.g. production areas, stocking areas in many economic sectors (3 - 4 mm coating).
- Pigmented carrying coat for decorative colour sand scattered coatings and subsequent sealing layers.

**Technical data:**

|                                |                                    |  |                               |                              |
|--------------------------------|------------------------------------|--|-------------------------------|------------------------------|
| Mixing ratio                   | Parts by weight<br>Parts by volume | A : B = 4 : 1<br>A : B = 100 : 37  |                               |                              |
| Processing time                | Temperature<br>Time                | 10 °C / 50 °F<br>50 minutes  | 20 °C / 68 °F<br>30 minutes   | 30 °C / 86 °F<br>20 minutes  |
| Processing temperature         |                                    | Minimum 10 °C / 50 °F (room- and floor-temperature)  |                               |                              |
| Curing time<br>(Accessibility) | Temperature<br>Time                | 10 °C / 50 °F<br>24 - 36 hrs.  | 20 °C / 68 °F<br>14 - 18 hrs. | 30 °C / 86 °F<br>10 - 14hrs. |
| Curing                         |                                    | 2 - 3 days for mechanical load at 20 °C / 68 °F<br>7 days for chemical resistance at 20 °C / 68 °F                         |                               |                              |
| Further coatings               |                                    | After 14 - 18 hours, but not longer than 48 hours at 20 °C / 68 °F   |                               |                              |
| Consumption                    |                                    | Approx. 1.4 - 1.6 kg/m <sup>2</sup> for each 1 mm of layer   |                               |                              |
| Thickness of layers            |                                    | 1 - 4 mm   |                               |                              |
| Addition of quartz sand        |                                    | Recommended for layers starting at 2 mm of thickness, up to 70 % quartz sand 0.1/0.3 mm depending on usage and temperature |                               |                              |
| Packaging                      |                                    | Hobbock-Combi 30 kg  |                               |                              |
| Colours                        |                                    | Colours on request!  |                               |                              |
| Shelf life                     |                                    | 12 months (originally sealed)  |                               |                              |

## 1. Build-up of Coats

### Smooth coating

- Prime with the recommended SIGAS-Base Coats like **SigaPox 410, SigaPox 411, SigaPox 412, SigaPox 413, or SigaPox 415**. Consumption approx. 0.3 - 0.4 kg/m<sup>2</sup> depending on the resin and substrate.
- Apply a scratch coat for a planar substrate, e.g. with **SigaPox 410, SigaPox 411, SigaPox 412, SigaPox 413, or SigaPox 415** and **SIGAS quartz sand-mix 2/1**, mixing ratio: 1.0 : 0.8 parts by weight. Consumption of mixture approx. 0.8 - 1.3 kg/m<sup>2</sup>.
- Apply coating **SigaPox 450** with a trowel. Consumption 2.6 - 3.0 kg/m<sup>2</sup> for approx. 2 mm layers.
- Optionally the surface may be scattered with silicium carbide, delustering agent, or decorative chips (flakes).
- Seal the surface with suitable silky luster and matt sealers, like e.g. **SigaPox 470, SigaFlex 530, SigaFlex 533** or **SigaFlex 535**.

## 2. Substrate

The substrate to be coated has to be levelled, dry, free of dust, has to have adequate tensile and compressive strength, and be free from weakly-bonded components or surfaces. Materials impairing adhesion, such as grease, oil and paint residues must be removed using suitable methods. Please refer to the product information for the recommended base coats like e.g. **SigaPox 410, SigaPox 411, SigaPox 412, and SigaPox 415**. The surface to be coated should be prepared mechanically, preferably by shot-blasting. The prepared surface has to be primed accurately, saturated and free of pores. Estimating the substrate according to the necessary sealed state may be difficult, so a scratch coat is recommended for smoothing the surface. If the substrate

hasn't been sealed completely bubbles and pores may appear because of rising air. Conduct a trial if in doubt. To improve adhesion scatter the surface completely with 0.5 - 1.0 kg/m<sup>2</sup> quartz sand, grain size 0.3/0.8 mm.

## 3. Mixing

Combi-trading units will be supplied in the correctly measured mixing ratio. Component A has sufficient volume for the entire trading unit. Decant the hardener compound B into the resin completely. Blend with a slow speed mixer (200 - 400 r/pm) for at least 2 - 3 minutes, for a material that is homogeneous and free of streaks. To avoid mixing errors it is recommended to principally empty the resin/ hardener-mixture into a clean container and mix briefly once again ("to repot").

**Addition of quartz sand:** Add after mixing the components. Suitable is quartz sand, grain size 0.1 - 0.3 mm. Do not use any quartz flour or blend of sand. The amount to be added depends on the thickness of layer, temperature, and kind of sand. For 1 kg coating material **SigaPox 450** may usually be filled with quartz sand up to 0.5 - 0.7 kg. Adding sand is not recommended for thin coatings because flow-properties degrade.

## 4. Processing / Handling

Process the material immediately after mixing with a coating knife or trowel by applying an even layer on the prepared surface. The product is adjusted with an optimum of air venting. To upgrade the moistening of the substrate, optimizing the flow-properties and removing any air blows, it is recommended to roll with a spiked roller. Using the spiked roller should be carried out time-delayed after 10 - 20 minutes. Divide working areas before starting work and work "fresh-in-fresh" to avoid any shoulders. Do not scatter too early because of air venting, optimum point

of time at 20 °C / 68 °F is after 20 - 30 minutes.

Floor- and air-temperature must not fall below 10 °C / 50 °F and humidity must not exceed 75 %. The difference in floor- and room-temperature must be less than 3 °C / 37.4 °F so the curing will not be disturbed. If a dew- point situation occurs adhesion may malfunction, curing may be disturbed, and spotting may occur. Exposure to water should be avoided within the first 7 days. Curing time applies to 20 °C / 68 °F. Lower temperature may increase, higher temperature may decrease the curing and processing time.

If working conditions are not complied with, deviations in the described technical properties (surface and resistance) may occur in the end product

## 5. Cleaning

To remove fresh contamination and to clean tools use **Cleaner V20** or **V30** immediately. Hardened material can only be removed mechanically.

## 6. Storage

Store in dry and at frost-free conditions. Ideal storage temperature is between 10 - 20 °C / 50 - 68 °F. Bring to a suitable working temperature before application. Tightly re-seal opened containers and use the content as soon as possible.

## 7. Special Remarks

The product is subject to the hazardous material, operational safety, and transport regulations for hazardous goods. Refer to the DIN-Safety Data Sheet and the information labelled on the containers!

GISCODE: RE 1

### Indication of VOC-Content:

(EG-Regulation 2004/42)

Maximum Permissible Value 500 g/l (2010,II,j/lb) Ready-for-use product contains < 500 g/l VOC.

## Technical Data\*

|                          |                  |       |                   |                                   |
|--------------------------|------------------|-------|-------------------|-----------------------------------|
| Viscosity                | Components A + B | 2600  | mPas              | DIN EN ISO 3219 (23 °C / 73.4 °F) |
| Solid content            |                  | > 99  | %                 | SIGAS-Method                      |
| Density                  | Components A + B | 1.48  | kg/l              | DIN EN ISO 2811-2 (20 °C / 68 °F) |
| Weight loss              |                  | 0.3   | weight-%          | (after 28 days)                   |
| Water absorption         |                  | < 0.2 | weight-%          | DIN 53495                         |
| Bending tensile strength |                  | 30    | N/mm <sup>2</sup> | DIN EN 196/1                      |
| Compressive strength     |                  | 70    | N/mm <sup>2</sup> | DIN EN 196/1                      |
| Shore-hardness D         |                  | 80    | -                 | DIN 53505 (after 7 days)          |
| Abrasion (Taber Abraser) |                  | 50    | mg                | ASTM D4060                        |

(\*Values achieved in sampling are average values. Variation in product specification is possible.)

**SigaPox 450**; 0.00/01.08.2018. All information contained herein is based on the current state of our knowledge and practical experience at the time of release. Therefore, please make sure that this is the actual edition of the Technical Data Sheet. All data are only intended as a guideline for informational purposes and do not constitute a legally-binding warranty of the suitability for a certain purpose of use, due to its dependence on site conditions and possible processing, use and applications. All information contained in this technical datasheet is subject to change without notice.

**SIGAS GmbH**  
Hutropstr. 60  
45138 Essen  
Germany  
Tel: +49 201 17003 270  
Fax: +49 201 17003 277  
E-Mail: [info@sigas.de](mailto:info@sigas.de)  
Web: [www.sigas.de](http://www.sigas.de)