

# Technical Data Sheet



## AB-POX® 452

2-C-EP-self-levelling coating

### Description:

2-component epoxy coating, coloured  
VOC < 500 g/l, free of nonylphenol

### Characteristics:

- tough-hard
- self-levelling
- self-ventilating
- can be filled with quartz sand (30 up to 50 %)
- very high chemical resistance
- very high mechanical resistance
- high abrasion resistance
- inert and harmless once cured

### Application:

**AB-POX 452** is an economical industrial floor coating for production plants, sales areas and warehouses. Using **AB-POX 452** different specifications can be formulated by the addition of fillers. Due to the self-levelling properties of this product, it is easy to apply. Used in conjunction with **AB-POX**- primers and **AB-PUR** - topcoats, it is possible on cementitious substrates to create a quality and highly aesthetic flooring system, which has a high chemical and mechanical resistance (choice of topcoats available on request). **AB-POX 452** is highly suitable for both self-levelling and wear coating systems.

### Consumption:

1.8 - 3.0 kg/m<sup>2</sup>, additional filling with e.g. quartz sand Ø 0.1 - 0.3 mm is possible.

### Resistant to:

- water / sewage
- washing agents / detergents
- saline solutions
- wet temperature max. 40°C
- solvents (please consult us)
- diluted acids and alkalis
- lubricants and fuels
- wet temperature short-term max. 60°C

### Technical Data:

Mixing ratio A : B	100 : 20 by weight (5 : 1)
Density (23°C)	approx. 1.55 g/cm <sup>3</sup>
Volume solids	approx. 100 %
Viscosity (23°C)	approx. 1300 mPa·s ± 400
Compressive strength (DIN EN ISO 604)	> 60 N/mm <sup>2</sup>
Shore D - hardness (DIN EN ISO 868)	approx. 80
Tensile strength (DIN EN ISO 178)	45 N/mm <sup>2</sup>
Linear shrinkage	< 0.12 %
Abrasion (1000 g / 1000 rev.) acc. to Taber	55 mg

### Details for application:

Pot life (12°C / 23°C / 30°C)	approx. 75 minutes / 40 minutes / 25 minutes
Substrate temperature	minimum 12°C up to maximum 30°C
Material temperature	15°C - 25°C
Maximum relative humidity of air	at 12°C: 75 % (dew point +3°C) at > 23°C: 85 % (dew point +3°C)
Curing time / foot traffic (12°C / 23°C / 30°C)	36 hours / 18 hours / 12 hours
Curing time / mech. resistance (12°C / 23°C / 30°C)	48 hours / 24 hours / 16 hours
Curing time / chem. resistance (12°C / 23°C / 30°C)	7 days / 5 days / 2 days
All above values are approximate and may be used as a guideline for specifications	

### Packaging:

30 kg - pails

### Colour:

pebble grey approx. RAL 7032 (other colours are available on request)  
- due to raw material variations and manufacturing techniques, a slight colour / batch difference may occur -

### Storage:

12 months, unopened in original drums under dry conditions and a temperature of 15 - 25°C.  
At temperatures < 10°C crystallisation is possible. Please consult us.

## 1. Surface preparation

Prior to the application the substrate must be prepared by mechanical means using qualified equipment e.g. Blastrac® shot blasting.

### Minimum requirements:

- free of cement laitance, dust, oil, fat and other contaminants
- open textured, absorbent surface
- pull off strength min. 1.5 N/mm<sup>2</sup>
- concrete residual moisture max. 4 %

Depending on the condition of the substrate the surface must be made non-porous by the application of a primer and / or key coat using **AB-POX 002**, followed by a light sprinkle of clean, dry quartz sand.

**On concrete surfaces where there is rising damp, residual moisture or damp concrete of maximum 6 %, AB-POX 010 must be used.**

Once cured, carefully remove excess sand. See also "general preparation and application instructions" sheet.

## 2. Application

Prior to mixing, the temperature of the components must be between 15 - 25°C. Mix the components in the correct ratio using a suitable low speed electric mixer (300 - 400 rpm) for at least 3 minutes or until a completely homogeneous mixture has been achieved. Put the mixed material into a clean container and mix again for at least 1 minute more. After mixing, fillers can be added whilst stirring constantly. Distribute the mixture immediately onto the surface. **AB-POX 452** can be applied as a pure product or mixed with clean, dry, tempered quartz sand Ø 0.1 - 0.3 mm. The mixing ratio (w/w) will be determined by the type of use / application. To apply use a notched trowel (rubber or metal). Spread **AB-POX 452** as an even coat ensuring uniform thickness. **The freshly applied coating should be finished off with a spiked roller within 5 minutes to achieve an excellent surface and to remove bubbles. This is even more important when filled with quartz sand. In order to improve the optical quality (e.g. reddish shades of grey), the fresh coating should be treated with a suitable nylon roller (e.g. 14 mm pile height).** Prior to, during and after the application the temperature of the substrate must be at least +3°C above the current dew point temperature.

## 3. System description

The following figures are for ambient and surface temperatures of 15 - 23°C. Both high and low temperatures will influence the filler ratio and the consumption per m<sup>2</sup>.

### Primer:

**AB-POX 002**, clear

Consumption: approx. 0.3 - 0.5 kg/m<sup>2</sup>, lightly sprinkle with clean, dry quartz sand Ø 0.4 - 0.8 mm (approx. 0.5 kg/m<sup>2</sup>).

### Key coat:

**AB-POX 002** + quartz sand

Consumption: approx. 0.6 kg/m<sup>2</sup> resin plus quartz sand, lightly sprinkle with clean, dry quartz sand Ø 0.4 - 0.8 mm (approx. 0.5 kg/m<sup>2</sup>).

### Self-levelling coating:

**AB-POX 452**, pebble grey

Consumption: approx. 1.8 - 3.0 kg/m<sup>2</sup>.

System thickness: 2 - 3 mm.

By using both the clear and pigmented polyurethane topcoats it is possible to modify the aesthetic finish e.g. silk matt, glossy, smooth and anti-slip. Topcoats also improve both the chemical and mechanical resistance (please consult us).

**Professional maintenance will increase the service life of the flooring system.**

### N/B:

UV radiation cause discolouration.

## 4. Chemical resistance

Acetic acid 5 %	resistant
Acetic acid 10 %	short-term
Ammonia 5 %	resistant
Boric acid 4 %	resistant
Chlorine bleach 6 %	resistant
Citric acid < 10 %	resistant
Distilled water	resistant
Formaldehyde 37 %	resistant
Formic acid 2 %	resistant
Formic acid 5 %	short-term
Hydrochloric acid 10 %	resistant
Hydrochloric acid 30 %	short-term
Lactic acid 10 %	resistant
Methylene chloride	not resistant
Nitric acid 10 %	resistant
Petrol / Super	resistant
Phosphoric acid 25 %	resistant
Saline solution	resistant
Sodium lye 50 %	resistant
Sulphuric acid 40 %	short-term
Tannic acid solution	resistant
Xylene	resistant

Tested for 3 months at 20°C; whether discolouration did occur was not considered.

## 5. Packaging

30 kg - sets  
25 kg component A  
5 kg component B

## 6. Health and safety

### GISCODE: RE30

Avoid inhalation of the vapours and contact with skin. Wear suitable protective clothing, gloves and eye / face protection. Adequate ventilation of the working area is recommended. After contact with skin, wash immediately with plenty of water and soap. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. When using do not eat, drink, smoke and keep away from sources of ignition. For additional references to safety-hazard warnings, regulations regarding the transport and waste management please refer to the relevant Safety Data Sheet.

## 7. EU Directive ("Decopaint-RL"):

Acc. to the EU Directive 2004/42/EG the maximum allowed content of VOC (Product category All / j / type SB) is 500 g/l (Limit 2010) for the ready to use product. This product is in accordance with the EU Directive 2010.

**AB-POX 452;** 2.00/07.01.19. Before use, please check that this is the actual edition of the Technical Data Sheet. The information contained in this Technical Data Sheet is of a general nature and is provided in good faith and we accept no liability for errors or omissions. Because use and application of this product are out of our control and depend, concerning substrate, load and method of application, on the particularities of the individual case, our advice, verbal, written or based on tests, does not exempt the applicator from testing the suitability of the products for the intended use.

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