

# Technical Data Sheet



## AB-ZEROPUR® 837

2-C-PU-self-levelling coating



**Description:** 2-component polyurethane coating, coloured very low emission

- Characteristics:**
- tough-hard, crack-bridging (up to 0.3 mm static / unfilled 4 kg/m<sup>2</sup>)
  - up to 80 % natural / renewable raw materials
  - very high chemical resistance
  - very high mechanical resistance
  - inert and harmless once cured

**Application:** **AB-ZEROPUR 837** is a very low emission coating for production plants, sales areas and warehouses. **AB-ZEROPUR 837** is a multifunctional industrial floor coating which is suitable for use on a variety of substrates e.g. concrete, cement screed, mastic asphalt (indoor), latexfalt, timber, steel, aluminium, magnesia and anhydrite / gypsum (please consult us?). Due to the self-levelling properties of this product, it is easy to apply. Used in conjunction with **AB-ZEROPOX**- primers and **AB-ZEROPUR**-topcoats, it is possible on cementitious substrates to create a quality and highly aesthetic flooring system which has a high chemical and mechanical resistance (topcoat is recommended). **AB-ZEROPUR 837** is suitable for public buildings e.g. schools, hospitals, kindergartens, shopping malls and other indoor projects with high requirements to room climate. **AB-ZEROPUR 837** meets the strictest criteria regarding the lowest emissions of indoor air pollutants.

**Consumption:** 1.5 - 4.0 kg/m<sup>2</sup>, additional filling with e.g. quartz sand Ø 0.1 - 0.3 mm is possible.

- Resistant to:**
- diluted acids
  - diluted alkalis
  - aliphatic solvents
  - see list of chemicals that it is resistant to
  - forklift up to 40 N/mm<sup>2</sup> (4 wheels)
  - steel work platforms that vibrate

**Technical Data:**

|   |   |
|---|---|
| Mixing ratio A : B                        | 100 : 20 by weight (5 : 1)                              |
| Density (23°C)                            | approx. 1.50 g/cm <sup>3</sup>                          |
| Volume solids                             | approx. 100 %   |
| Viscosity (23°C)                          | approx. 2000 mPa·s ± 500                                |
| Compressive strength (DIN EN ISO 604)     | approx. 45 - 55 N/mm <sup>2</sup> without / with quartz |
| Shore D - hardness (DIN EN ISO 868)       | approx. 60  |
| Elongation at break (DIN 53504)           | 5 - 15 % depending on quartz sand - filler              |
| Tensile strength (DIN EN ISO 527 at 23°C) | approx. 8 N/mm <sup>2</sup> (unfilled)                  |

**Details for application:**

|  |  |
|--|--|
| Pot life (12°C / 23°C / 30°C)  | approx. 30 minutes / 20 minutes / 15 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)<br>at > 23°C: 85 % (dew point +3°C) |
| Curing time / foot traffic (12°C / 23°C / 30°C)                                    | 36 hours / 24 hours / 20 hours                                     |
| Curing time / mech. resistance (12°C / 23°C / 30°C)                                | 72 hours / 48 hours / 48 hours                                     |
| Curing time / chem. resistance (12°C / 23°C / 30°C)                                | 6 days / 4 days / 4 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 < 15°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-ZEROPOX 803**, 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-ZEROPOX 810 must be used. Please consult us!** Once cured, carefully remove excess sand.

**Hard asphalt (only indoor)** must be prepared by shot blasting or abrasive grinding. Minimum 50 % of the filler aggregates must be exposed. 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-ZEROPUR 837** 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-ZEROPUR 837** 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.

**AB-ZEROPUR 837** can also be applied to substrates that are at minimum temperatures +5°C, however in these conditions the consumption, application and curing will be affected in a negative manner.

## 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-ZEROPOX 803**, 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-ZEROPOX 803** + 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-ZEROPUR 837**, pebble grey  
Consumption: approx. 1.5 - 4.0 kg/m<sup>2</sup>.  
System thickness: 2 - 3 mm.

**Hard asphalt (only indoor)** surfaces can directly be coated with **AB-ZEROPUR 837** without the use of a special primer.

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 10 %       | resistant  |
| Ammonia 5 %            | resistant  |
| Boric acid 4 %         | resistant  |
| Chlorine bleach 6 %    | resistant  |
| Chrome acid 10 %       | resistant  |
| Citric acid < 10 %     | resistant  |
| Diesel                 | resistant  |
| Disinfectants          | resistant  |
| Formaldehyde 37 %      | resistant  |
| Formic acid 10 %       | resistant  |
| Hydrochloric acid 10 % | resistant  |
| Hydrogen peroxide 10 % | resistant  |
| Lactic acid 25 %       | resistant  |
| Nitric acid 10 %       | resistant  |
| Petrol / Super         | short-term |
| Phosphoric acid 25 %   | resistant  |
| Phosphoric acid 50 %   | resistant  |
| Sodium lye 50 %        | resistant  |
| Sulphuric acid 50 %    | resistant  |
| Sulphuric acid 70 %    | short-term |

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: PU40

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-ZEROPUR 837**; 2.01/17.03.20. 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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