

# Technical Data Sheet



## AB-ZEROPOX<sup>®</sup> 846 ESD-N

2-C-EP-ESD-self-levelling coating



### Description:

2-component epoxy resin with conductive polymeric structures, coloured very low emission

### Characteristics:

- in accordance with the official standards DIN EN 61340-4-1 and DIN EN 61340-4-5
- conductivity independent of the air humidity
- free of ionic liquids / salts
- high compressive strength
- high abrasion resistance
- easy to clean
- inert and harmless once cured

### Application:

**AB-ZEROPOX 846 ESD-N** is the innovative development (acc. to the state of the art) of our since 2002 proven ESD system. This electrostatically conductive, self-levelling floor coating is suitable for production plants, sales areas, warehouses, research and development laboratories / rooms (EPA's) which must comply with the **ESD - standards**. During the curing process **AB-ZEROPOX 846 ESD-N** develops a special and unique electrically conductive polymeric structure, which is both chemically and mechanically resistant. This ESD flooring system can effectively prevent the build-up of electrostatic charges > 100 volt (walking test).

*Test the flooring system earliest after 3 days curing time.*

**AB-ZEROPOX 846 ESD-N** is highly suitable for use in the upgrading (existing) of standard antistatic epoxy and polyurethane systems into ESD approved floors. Please consult us!

### Consumption:

approx. 1.8 kg/m<sup>2</sup>.

### Resistant to:

- water / salt water / sewage
- common detergents
- disinfectants
- saline solutions
- solvents (please consult us)
- diluted acids and alkalis
- lubricants and fuels
- wet temperature max. 40°C

### Technical Data:

Mixing ratio A : B	100 : 50 by weight (2 : 1)
Density (23°C)	approx. 1.1 g/cm <sup>3</sup>
Volume solids	approx. 100 %
Viscosity (23°C)	approx. 1000 mPa·s ± 200
Compressive strength (DIN EN ISO 604)	approx. 60 N/mm <sup>2</sup>
Shore D - hardness (DIN EN ISO 868)	approx. 80
Abrasion (1000 g / 1000 rev.) acc. to Taber	55 mg
<b>Walking test</b> EOS/ESD-STM 97.2 DIN EN 61340-5-1	< 100 Volt (12 ± 3 % relative humidity of air)
<b>System resistance</b> DIN EN 61340-5-1, EOS/ESD-STM 97.1 and 97.2	< 1 x 10 <sup>9</sup> Ω
<b>Discharge value</b> DIN EN 61340-4-1	< 1 x 10 <sup>9</sup> Ω

### Details for application:

Pot life (15°C / 23°C / 30°C)	approx. 25 minutes / 20 minutes / 15 minutes
Substrate temperature	minimum 15°C up to maximum 30°C
Material temperature	15°C - 25°C
Maximum relative humidity of air	at 15°C: 75 % (dew point +3°C) at > 23°C: 85 % (dew point +3°C)
Curing time / foot traffic (15°C / 23°C / 30°C)	24 hours / 18 hours / 16 hours
Curing time / mech. resistance (15°C / 23°C / 30°C)	72 hours / 48 hours / 36 hours
Curing time / chem. resistance (15°C / 23°C / 30°C)	7 days / 5 days / 3 days
All above values are approximate and may be used as a guideline for specifications	

### Packaging:

25 kg - pails

### Colour:

ESD - light grey (other colours 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. Longer storage can lead to sediment formation.

## 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 a levelling coat using **AB-ZEROPOX 803**.

**On concrete surfaces where there is rising damp, residual moisture or damp concrete of maximum 6 %, AB-ZEROPOX 810 must be used.**

### Please ask for advice!

As **AB-ZEROPOX 860 LS** is a conductive intermediate coat it must be applied evenly. Prior to the application of **AB-ZEROPOX 860 LS**, the connection to earth must be installed using spliced copper cable and controlled in accordance with its function and adhesion.

See also "general preparation and application instructions" sheet.

## 2. Application

Prior to mixing, the temperature of the components must be between 15 - 25°C. **Stir the components thoroughly** and mix 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. Distribute the mixture immediately onto the surface. Spread **AB-ZEROPOX 846 ESD-N** as an even coat to ensure a uniform thickness. To apply use a notched trowel (rubber or metal, e.g. triangular toothed S4). **The freshly applied coating should be finished off with a special drop roller (no. 19.012.028 or 19.012.058) within 5 minutes to achieve a more uniform surface and to remove bubbles.** 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.

### 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>).

### Levelling coat:

**AB-ZEROPOX 803** + quartz sand

Consumption: approx. 0.8 - 1.2 kg/m<sup>2</sup> resin plus quartz sand, **no** quartz sand to be sprinkled on the surface.

**Recommendation:** Lightly sand the surface, dust-free / wet-cleaning and let the surface dry.

**N/B: To achieve a premium surface and maximum conductivity, the levelling coat must be applied to the highest standards!**

### Connection to earth:

Must be installed and controlled by a qualified electrician (within a radius of approx. 10 m).

### Conductive coating:

**AB-ZEROPOX 860 LS**, black

Consumption: 0.1 - max. 0.13 kg/m<sup>2</sup>.

**N/B: Once cured, the conductivity of the coating must be tested (100 volt measuring instrument)!**

### ESD-self-levelling coating:

**AB-ZEROPOX 846 ESD-N**, light grey

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

### ESD textured topcoat (optional):

**Sand the AB-ZEROPOX 846 ESD-N.**

Thoroughly sand the ESD surface, dust-free / wet-cleaning and let the surface dry. After the surface preparation apply a topcoat with:

**AB-ZEROPOX 883 ESD**, ESD-light grey

Consumption: 0.15 - max. 0.2 kg/m<sup>2</sup>.

### N/B:

UV radiation causes discolouration.

## 4. Cleaning

To clean the surface (manual or by machine) use only neutral or slightly alkaline (pH < 10) cleaning agents without preservation additives that will create a film. We highly recommend that you contact a specialist cleaning contractor.

## 5. Chemical resistance

Depending on the requirements we recommend to test the chemical resistance.

## 6. Packaging

25 kg - sets

16.67 kg component A

8.33 kg component B

## 7. 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.

## 8. 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.

## 9. Protective cover:

If necessary (e.g. in the case of following installation work), the surface can be protected against mechanical damage with a suitable cover fleece (e.g. PAVISAVE) at earliest after 5 days (please consult us!). Soaked hardboard is not suitable as a protective cover!

**AB-ZEROPOX 846 ESD-N**; 1.01/10.02.22. 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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