

Technical Data Sheet



AB-POX[®] 460 ESD-S

2-C-EP-ESD coating

Description: 2-component epoxy resin with electrostatic conductivity, coloured
VOC < 500 g/l, free of alkyl- / nonylphenol

- Characteristics:**
- in accordance with the official standards
DIN EN 61340-4-1, DIN EN 61340-4-5
(see following information at the application)
 - high compressive strength
 - high abrasion resistance
 - easy to clean
 - inert and harmless once cured

Application: **AB-POX 460 ESD-S** is an electrostatically conductive floor coating for production plants, research and development laboratories / rooms (EPA's) which must comply with the ESD - standards (walking test < 100 Volt). The electrostatic conductive properties of **AB-POX 460 ESD-S** are based on ionic complex compounds / salts, so that a low humidity for an extended period, may result in a reduction in the properties of the system (room climate with a relative humidity of 50 - 65 % is desirable). **AB-POX 460 ESD-S** is not suitable for heating screeds or in combination with underfloor heating. Please consult us!

Consumption: approx. 2 kg/m² - comply consumption.

- Resistant to:**
- common detergents
(neutral – slightly alkaline pH-value < 10)
 - solvents (please consult us)
 - lubricants and fuels

Technical Data:

Mixing ratio A : B	100 : 25 by weight (4 : 1)
Density (23°C)	approx. 1.50 g/cm ³
Volume solids	approx. 100 %
Viscosity (23°C)	approx. 1700 mPa·s ± 300
Compressive strength (DIN EN ISO 604)	approx. 60 N/mm ²
Abrasion (1000 g / 1000 rev.) acc. to Taber	55 mg
Walking test EOS/ESD-STM 97.2 DIN EN 61340-5-1	< 100 Volt
System resistance DIN EN 61340-5-1, EOS/ESD-STM 97.1 and 97.2	< 1 x 10 ⁹ Ω
Discharge value DIN IEC 1340-4-1	< 1 x 10 ⁹ 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)	36 hours / 24 hours / 16 hours
Curing time / mech. resistance (15°C / 23°C / 30°C)	96 hours / 72 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 - pebble grey (other colours available on request)
- due to raw material variations and manufacturing techniques, a slight colour / batch difference may occur -

Storage: 3 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/mm²
- 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**.

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

As **AB-ZEROPOX 860 LS** is a highly 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. **First stir both components thoroughly** and then 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. To apply use a notched trowel (rubber or metal). Spread **AB-POX 460 ESD-S** as an even coat to ensure a uniform thickness. **The freshly applied coating must be immediately finished off with a spiked roller (one direction only).** 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-POX 002, clear

Consumption: approx. 0.3 - 0.5 kg/m², lightly sprinkle with clean, dry quartz sand Ø 0.4 - 0.8 mm (approx. 0.5 kg/m²).

Levelling coat:

AB-POX 002 + quartz sand

Consumption: approx. 0.8 - 1.2 kg/m² resin plus quartz sand, **no** quartz sand to be sprinkled on the surface.

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/m².

Self-levelling coating:

AB-POX 460 ESD-S, pebble grey

Consumption: approx. 2 kg/m².

N/B:

UV radiation cause 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. Special notes

Please observe the cleaning instructions for conductive / antistatic floor coatings. The stated values for electrical conductivity are valid for 40 to 90 % relative humidity. Apply the product at 40 to 85 % relative humidity. Higher layer thickness lead to increased resistance. From a relative humidity below 40 %, the resistance may increase, by carefully moistening (too much can lead to blistering) the electrical resistance may then be reduced. In case of rising moisture or in areas without adequate ventilation and where moisture accumulation (e.g. under rubber mats) is possible, it may lead to bubble formation in the coating. A balanced room climate with humidity of 50 - 65 % is desirable.

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7. Packaging

25 kg - sets

20 kg component A

5 kg component B

8. 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.

9. 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 460 ESD-S; 2.01/10.02.22. 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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