

Antistatic self-levelling waterborne epoxy floor

Product Description

EPOLIT AS-W is a 3-part, self-levelling, solvent free, waterborne antistatic epoxy floor coating. Electroconductivity of the floor is 10 K Ω -1 M Ω that is achieved by applying a special built-in system of this floor, satisfying home and world standards for this kind of a floor.

Uses

EPOLIT AS-W is specially intended epoxy electrically conductive floor coating for static electricity continuous elimination and partial protection against voltage shocks. EPOLIT AS-W can withstand light to medium mechanical loads. It can be applied to relatively fresh concrete bases, when the process of concrete maturing has not yet been completed and the percentage of humidity is still high. Application on vertical surfaces is possible.

Suitable areas of application:

- Explosion risk areas
- Computer rooms
- Electrical component production areas
- Electronic component plants
- Paint and solvent storage areas
- Flammable liquid areas
- Power plants
- Medical facilities: laboratories, operating rooms, X-ray and scan rooms

Advantages

- Electrically conductive/antistatic
- Excellent chemical resistance
- Good mechanical resistance
- Free from organic solvents
- Transport resistance
- Excellent adhesion
- Easy washing and cleaning
- Decorative appearance with matte finish
- Fast building-in
- Long life
- Environmentally friendly
- Can be applied in coats from 2 – 5 mm
- No joints
- Water vapour permeable
- The old damaged epoxy antistatic floor coating which doesn't conduct static electricity in some places can be partially repaired without application new coats on entire surface.

Certificate

Report of quality No. UIV – 033/09 of Institute IMS, Belgrade.
Report of quality No. 50912 of Electrical Engineering Institute Nikola Tesla, Belgrade.
(Conforms to the requirements of SRPS IEC 61340-4-1/97,DIN 53276).

TECHNICAL SPECIFICATIONS**Colour**

Pebble grey approx. RAL 7032, Window grey approx. RAL 7040, Brilliant blue approx. RAL 5007 other RAL colour shades available upon request. Due to the carbon fibres providing the conductivity, it is not possible to achieve an exact colour matching. With very bright colours (such as yellow and orange), this risk is increased. Make your own trials.

Storage and Shelf Life

6 months minimum in unopened package stored in a dry place at temperature over +15°C. Protect from freezing.

Packaging

Exactly definite irretrievable package for 17,09 kg of the finished mixture
Part A : Part B : Part C = 1,55 kg : 12,00 kg : 3,54 kg.
Form and size of a set can be done according to your requirements.

PHYSICAL SPECIFICATIONS

Volume Mass of Bound Material, g/cm³	1,576
Electrostatic Behaviour SRPS IEC 61340-4-1/97	Resistance to earth $R_E = 10^4 - 10^6 \Omega$ (alternatively $R_E = 10^6-10^9 \Omega$)
Compressive Strength, N/mm² SRPS G.S2.613	50 (28 days / +23°C)
Flexural Strength, N/mm² SRPS G.S2.614	21 (28 days / +23°C)
Abrasion Resistance,mg DIN 53 109 Taber Abrader Test	64 (weight Taber Index)
Adhesive Strength, N/mm² SRPS EN ISO 4624	> 5,0 (failure in concrete)
Shore D Hardness	ShD / 1 : 81
Chemical Resistance	See Chemical Resistance Table of EPOKSAN Products.
Impact Resistance SRPS H.C8.060	There is no cracking while a weight falls from the height of 100 cm (weight mass 1000 g, gauge diameter 20 mm).

Work Conditions

- ☀ Room temperature: min. 10°C, max. 25°C.
- ☀ Relative air humidity: max 80%.
- ☀ The substrate and uncured floor must be at least 3°C above dew point to reduce the risk of condensation or blooming on the floor finish.
- ☀ In the course of work protect floor from direct influence of sun rays and prevent the room ventilation.

Pot life

+15°C	+20°C	+30°C
50 min	20 min	15min

Waiting time between applications/Overcoating

+10°C	+20°C	+25°C
24 hours	12 hours	10 hours

Times are approximate and will be affected by changing ambient conditions, particularly temperature and relative humidity.

Drying time

	+15°C	+20°C	+30°C
Ready for foot traffic	2 days	1 day	12 hours
Lightly Serviceable	3 days	2 days	1 day
Fully Serviceable	10 days	7 days	5 days

Necessary tools

Paint roller, spiked roller, notched trowel, squeegee, filling knives, a brush, low speed electric stirrer (300-400 rpm), scales (20-30 kg), industrial vacuum cleaner, floor duster, vessel for mixing (V=30/40 l), clogs with nails.

INSTRUCTIONS FOR USE

This product may only be used by experienced professionals.

Material Consumption

About 5,0–5,5 kg/m² for floor thickness of 3mm.
(The values are not in effect for porous, uneven, too blotting bases and material scattering).

System Structure

Primer: 1-2 x PRIMER W

Levelling (optional): Appropriate epoxy products from the range of EPOKSAN products.

Conductive Copper Strips

Conductive layer: 1 x PRIMER W/G

Antistatic top coat: 1 x EPOLIT AS-W

Substrate Quality

The substrate must be clean, dry or damp and free of all contaminants such as dirt, oil, grease, coatings and surface treatments, etc. New concrete substrate should age at least 14 days before being coated. The concrete substrate must be compact, a minimum degree of roughness, even (max. Unlevelling ± 1 mm/m), without cement laitance, cracks and badly adhered parts. The hydroisolation should be done in underground rooms. The concrete substrate must be of sufficient compressive strength (minimum 25 N/mm²) with a minimum pull off strength of 1.5 N/mm².

Substrate Preparation

Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve an open textured surface. Weak concrete must be removed and surface defects such as blowholes and voids must be fully exposed. Repairs to the substrate, filling of blowholes/voids and surface levelling must be carried out using appropriate products from the range of EPOKSAN materials.

The concrete or screed substrate has to be primed or levelled in order to achieve an even surface. High spots must be removed by e.g. grinding. Before application of layers all dust and loose materials must be completely removed by brushes or a vacuum cleaner. Metal surfaces should be cleaned from fats, corrosion and old poor adhered coatings.

Application methods

Priming: PRIMER W part A and PRIMER W part B join in a suitable vessel in the delivered mixing ratio and mix by electric stirrer. Add 70% water in relation to A+B and again stir well. Immediately after mixing primer do surface impregnation of concrete by paint rollers and/or brushes.

After a couple of hours, in case the primed surface gets dry appearance of a light colour, priming must be repeated partially or completely. Avoid puddles on the surface with the primer.

For compact concrete substrates (required quality) priming is sufficient in one coating with the consumption of primer from 0,30-0,40 kg/m². Prepared primer should be built-in in the course of half an hour. The conductive layer should be applied before the primer is completely cured depending on the temperature according to Waiting time Table.

Conductive Copper Strips: After curing of the primer, copper strips should be installed on the floor in a grid formation of 3m x 3m so that the distance between the first tape and the wall is 0.5 m. The copper strips is glued on concrete surface with conductive glue and connected to the earthing spots. The earthing spots have to be connected to the ring-mains. This work must be executed and approved by an electrical engineer and in accordance with any relevant regulations. Alternative: the special selfadhesive copper strips (conductors). The numbers of earth connections are at least 2 earthing points per room. The optimum number of earth connections depends on the local conditions and should be specified with documents.

Conductive layer: Prior to mixing stir part B mechanically. When all of part A has been added to part B, continuously mix both components thoroughly with a low speed electric stirrer (300 - 400 rpm) for a minimum 3 minutes until a uniform mix has been achieved. Apply PRIMER W/G Conductive only on primed or levelled up concrete and screed surfaces. Do not blind the PRIMER W/G.

Freshly applied PRIMER W/G Conductive should be protected from damp, condensation and water for at least 24 hours. Only start application of PRIMER W/G Conductive coat after the primer has dried tackfree all over.

Otherwise there is a risk of wrinkling and impairing of the conductive properties.

The consumption of PRIMER W/G Conductive is 0,25-0,30 kg/m².

After the curing of the conductive layer PRIMER W/G, testing to measure the conductivity is strongly recommended.

Final Layer Making: Prior to mixing stir part A mechanically. When all of part B has been added to part A, continuously mix for a minimum 3 minutes until a uniform mix has been achieved.

When parts A and B have been mixed, the part C must be mixed with parts A and B for a minimum 3 minutes until a uniform mix has been achieved.

To ensure thorough mixing, pour materials into another container and mix again to achieve a consistent mix. Over mixing must be avoided to minimize air entrainment.

EPOLIT AS-W must be mechanically mixed using an electric power stirrer (300 - 400 rpm) or other suitable equipment.

EPOLIT AS-W must be poured, spread evenly by means of a notched trowel.

Roll immediately in two directions with spiked roller to ensure even thickness. The mixed mass is built-in in the course of half an hour.

CAUTION

Freshly applied layer of EPOLIT AS-W must be protected from humidity, condensation, water and heavier chemical and mechanical loads, 7 days at least.

Tool Cleaning

Tools should be washed in solvent or water immediately after use.

SAFETY REGULATIONS AND SAFETY AT WORK

The use of safety and personal protective equipment is obligatory. Observing the fire fighting measures is required. The physical, safety-technical and ecological data and regulations in work with chemical materials, as well as storage and waste removal must be observed.

STATEMENT ON LIMITED LIABILITY

All information mentioned in this technical sheet have been transferred faithfully and conscientiously and they are based on our knowledge. The final appearance of the floor coating and its physicalchemical characteristics depend on careful preparation, building-in and conditions of the substrate to which we have no influence. The obligation in the warranty period is limited to the quality of the delivered goods. In cases of important building enterprises or if there are problems you are to ask advice from our technical service.