CLASS EPX-340

Antistatic Self-Leveling Epoxy Coating

BENZKİM

Product Overview

It is a solvent-free, self-leveling, epoxy-based flooring coating material characterized by high mechanical strength and chemical resistance.

Application Domains

- In aviation hangars,
- In automotive manufacturing facilities,
- In the healthcare sector, laboratories and painting studios,
- In laboratories focused on electrical and electronics engineering,
- It is applicable in environments where flammable materials are stored or utilized, even at low temperatures.

Technical Specifications

Mixture Density	1.45-1.55 g/cm^3 20°C TS EN ISO 2811-1
Homogeneous Mixture	By weight: 100 / By volume: 100
Shore D (7 days)	85- ASTM D 2240, DIN 53505
Application Reducer	Not diluted
Blending Proportion	By weight: A/B: 87/13
Electrical Conductivity Measurement	10^6W / 10^7 W
Drying Duration	Dust Drying Time: 3-4 hours at 23°C (TS 4317) Touch Drying Time: 10-12 hours at 23°C (TS 4317) Full Drying Time: 7 days at 23°C (TS 4317)

Advantages

- It demonstrates exceptional resistance to chemicals.
- It exhibits resistance to friction and wear.
- It enables the static electricity generated on the surface to reach the conductors in the lower layer and subsequently flow to the ground.
- It produces a flawless surface.
- It is simple to maintain cleanliness and uphold hygiene.
- It necessitates minimal maintenance over an extended duration.
- It is straightforward to implement.
- It is free of solvents.

Surface Preparation

Weak areas on the surfaces designated for treatment should be eliminated through milling, sandblasting, or grinding. In cases where the surface exhibits a high gloss, it should be textured via milling or sandblasting to enhance the specific surface area. If oil is present on the surface, it must be incinerated, and any dirt and dust should be extracted through vacuuming.

Application Details

The prepared surfaces are treated with CLASS EPX-110. Within 24 hours of primer application, copper busbars are affixed to the ground, ensuring at least one is placed in each x and y direction for every 100 m^2. After confirming physical contact between the busbars, CLASS EPX-150 is applied using a trowel and subsequently rolled with a roller in accordance with the specified consumption guidelines. Following a one-day interval, CLASS EPX-340 is applied with a trowel. Finally, gas bubbles are eliminated using a spiked roller, and the surface is allowed to dry.

Technical Data Sheet
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Chemical Resistance Table

Chemical Compound	Strength
Sulfuric Acid (H2SO4) 10%	3
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Hydrochloric Acid (HCl) 10%	3
Hydrochloric Acid (HCl) 20%	3
Nitric Acid (HNO3) 10% Solution	3
Nitric Acid (HNO3) 20%	3
Acetic Acid (CH3COOH) 10% Solution	2
Acetic Acid (CH3COOH) 20%	1
Formaldehyde (HCOOH) 10%	2_1
Formaldehyde (HCOOH) 20%	1
Lactic Acid (CH3CHOH-COOH) 10%	2_1
Lactic Acid (CH3CHOH-COOH) 20%	1
Xylene	3
Solvent Naphtha	2
Ethyl Alcohol	2

3 - Highly Durable / 2 - Moderately Durable / 1 - Not Durable / _ Propensity

Mechanical Strength Table

Type of Strength	Strength
Compressive Strength (N/mm^2)	70 ~ 75 DIN 53504 TS 1967
Tensile Strength (N/mm^2)	15 ~ 20 DIN 53504 TS 1967
Tensile Elongation Percentage (%)	0.8 – 1.0 DIN 53504 TS 1967
Flexural Strength (N/mm^2)	10 ~ 12 DIN 52371 TS 985
E-Module (N/mm^2)	18 ~ 20 DIN 52371 TS 985
Abrasion Resistance (Taber)	115 mg 1000 cycles EN 1504-2
Adhesion strength via tensile and shear forces.	>2.0(1.5)b EN 1504-2
Impact Resistance Experiment	Class III EN 1504-2
Capillary water absorption and hydraulic permeability	<0.1 $kg/m^2 \cdot h^{0.5}$ EN 1504-2

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Application Guidelines and Standards

Condaktiv Primer Layer:
Do not cover the primer with sand. Freshly applied CLASS EPX-150 must be safeguarded against moisture, condensation, and water for a minimum of 24 hours. Avoid allowing the primer to accumulate on the surface. Once the primer layer has reached touch-cure across the entire surface, proceed with the application of the CLASS EPX-340 conductive layer. Failing to do so may result in wrinkling, excessive flexibility, or degradation of the surface's conductive properties.

Conductive End Layer:
Final coating thickness: approximately 1.5 mm. Increased thicknesses (material consumption exceeding 2.25 kg/m²) will lead to diminished conductivity. A reference zone test must be performed prior to the application of a conductive floor coating system. This reference zone should be established and approved by the contractor/client. The required conductivity value and the method of conductivity measurement should be detailed in the specifications and application procedure.

Detection of Grounding Plates:
Each grounding point can facilitate conductivity for an area of 100 m². Ensure that the maximum distance between each grounding point does not exceed 10 m. Clean the grounding points meticulously. Additional plates should be employed for extended distances. If site conditions preclude the use of supplementary grounding plates, longer distances (>10 m) should be bridged using copper tape. Grounding points must be linked to the building's main line. This procedure must be executed and sanctioned by an electrical engineer in compliance with applicable regulations.

Number of Grounding Connections:
A minimum of two grounding points is necessary for each room. The ideal number of grounding connections is contingent upon local conditions and must be documented in writing. Inaccurate evaluation and treatment of cracks can diminish service life, and the manifestation of cracks in the coating may impair or reduce conductivity. It is essential to utilize the same product with the identical production number (CLASS EPX-340) in each area to ensure precise color matching. In certain instances, marks may develop on the resin in regions subjected to high point loads, underfloor heating systems, or elevated ambient temperatures. If heating is required, refrain from using gas, oil, paraffin, or other fossil fuel heaters, as these generate significant amounts of CO2 and H2O vapor, adversely affecting surface appearance. Only electric warm air blower systems should be employed for heating purposes.

Consumption

1.5 kg for a thickness of 1 mm.

PACKAGING

A/B/ : 17,4 + 2,6 = 20 kg set

Shelf life

It must be safeguarded against unfavorable weather conditions. It should be kept in a dry, cool, and sealed environment (between +10 °C and +25 °C). Once opened and mixed, the product should be consumed promptly. In its unopened packaging, it has a shelf life of 12 months when stored in a dry location at a minimum temperature of +5 °C.

Attention

- Product packaging must be tightly sealed, and the labeling information must be comprehensive.
- The expiration date must be monitored, adhering to the first-in, first-out principle.
- Storage conditions must be dry, cool, and well-ventilated.
- The product must be stored in compliance with technical safety guidelines and legal regulations.

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