

Disbopox 447 E.MI Wasserepoxid



Water-thinnable, 2-component solid epoxy resin coating for wall areas and floors in trade and industry, exposed to low or medium traffic loads.

Product Description

Field of Application

Floor Spaces:

For interior mineral floor spaces and hard asphalt screed with traffic stress in industrial and commercial areas, e.g. supply rooms, boiler-rooms, warehouses, archives, depots, corridors, escape routes, fire escapes, welfare rooms. Intermediate coat within the Disboxid ArteFloor System.

Wall Areas:

For mineral wall areas exposed to high chemical stress and disinfectants or moisture, e.g. in hospitals, ventilating shafts, laboratories, production areas in food and luxury foodstuffs industry. Intermediate and finishing coat for Capaver Glass Fabrics and Capadecor AkkordVlies-Z.

Material Properties

- Good chemical resistance
- Resistant to disinfectants
- Can be decontaminated according to DIN 25 415
- Diffusion-capable; suitable for magnesite and anhydrite floor pavements (screed)
- Emission-minimised, tested and supervised by TÜV (Technical Control Board)

Tested according to the AgBB testing criteria for VOC emissions from interior building material. The criteria of the AgBB (Ausschuss zur gesundheitlichen Bewertung von Bauprodukten - Commission for the sanitary evaluation of building material) are elaborated by the ecological and sanitary authorities for the use of building material in »delicate/sensitive« areas, as e.g. lounges.

Material Base / Vehicle
Packaging/Package Size

Water-thinnable, 2-component solid epoxy resin.

- **Standard:**
5 kg, 10 kg plastic combi packaging,
40 kg plastic container (Base: 24 kg plastic hobbock, Hardener: 16 kg plastic bucket)
- **ColorExpress:**
10 kg plastic combi packaging



<p>Colours</p>	<ul style="list-style-type: none"> ■ Standard: 5 kg packaging: Pebble Grey (Kieselgrau) 10 kg packaging: Pebble Grey (Kieselgrau), Concrete Grey (Betongrau), Off-White (Altweiss) and White (Weiss) 40 kg packaging: Pebble Grey (Kieselgrau), Concrete Grey (Betongrau) Special tints are available on request. ■ ColorExpress : Can be tinted to more than 21,000 colour shades via the ColorExpress station on site. The FloorColor plus colour collection allows exclusive colour design. Depending on the tint, Base 1, Base 2 or Base 3 can be mixed via the ColorExpress station. <p>Discolouration and chalking effects may occur with weathering and UV light exposure. The pigmentation in, e.g. coffee, red wine or leaves (organic dyestuffs) and various chemicals, e.g. disinfectants, acids, etc., may cause discolouration. Scratch-marks may appear on the surface due to continued rubbing/mechanical stress. The functional capability of the coating will not be affected by these changes. Slightly pigment abrasion may occur on the surface in case of intensive or dark shades; a special surface treatment/care or the application of a transparent sealer may be necessary.</p>																																										
<p>Gloss Level</p>	<p>Satin-gloss/satin-finished (mid sheen)</p>																																										
<p>Storage</p>	<p>Keep cool, dry and frost-free. The original, tightly closed container has a shelf life of minimum 2 years. At low temperatures the material should be stored at approx. 20 °C before application.</p>																																										
<p>Technical Data</p>	<ul style="list-style-type: none"> ■ Density: Approx. 1.4 g/cm³ ■ Dry film thickness: Approx. 35 µm/100 g/m² ■ Resistance-count for diffusion µ (H₂O): Vapour diffusion resistance factor µ (H₂O): Approx. 40,000 ■ Abrasion to Taber (CS 10/1000 U/1000 g): 60 mg/30 cm² (CS 10/1000 rpm/1000 g) 																																										
<p>Chemical resistance</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Chemical Resistance Table according to DIN EN ISO 2812 at 20 °C</th> </tr> <tr> <th style="width: 70%;"></th> <th style="text-align: center;">7 Days</th> </tr> </thead> <tbody> <tr><td>Acetic acid, 5% sol.</td><td style="text-align: center;">+ (D)</td></tr> <tr><td>Hydrochloric acid, 10% sol.</td><td style="text-align: center;">+ (D)</td></tr> <tr><td>Sulphuric acid, ≤10% sol.</td><td style="text-align: center;">+ (D)</td></tr> <tr><td>Citric acid, 10% sol.</td><td style="text-align: center;">+</td></tr> <tr><td>Ammonia solution 25 %</td><td style="text-align: center;">+</td></tr> <tr><td>Calcium hydroxide</td><td style="text-align: center;">+</td></tr> <tr><td>Ferric (III) chloride, saturated</td><td style="text-align: center;">+ (D)</td></tr> <tr><td>Lysol solution 2%</td><td style="text-align: center;">+</td></tr> <tr><td>Magnesium chloride solution 35%</td><td style="text-align: center;">+</td></tr> <tr><td>Distilled water</td><td style="text-align: center;">+</td></tr> <tr><td>Common salt solution, saturated</td><td style="text-align: center;">+</td></tr> <tr><td>White spirit (solvent naphtha/turpentine substitute)</td><td style="text-align: center;">+</td></tr> <tr><td>Benzine (Petroleum ether) / cleaning solvent</td><td style="text-align: center;">+</td></tr> <tr><td>Heating and Diesel fuel</td><td style="text-align: center;">+</td></tr> <tr><td>Coca-Cola</td><td style="text-align: center;">+ (D)</td></tr> <tr><td>Coffee</td><td style="text-align: center;">+ (D)</td></tr> <tr><td>Red wine</td><td style="text-align: center;">+ (D)</td></tr> <tr><td>Transformer coolant</td><td style="text-align: center;">+</td></tr> <tr> <td colspan="2">Legend: + = Resistant, (D) = Discolouration</td> </tr> </tbody> </table>	Chemical Resistance Table according to DIN EN ISO 2812 at 20 °C			7 Days	Acetic acid, 5% sol.	+ (D)	Hydrochloric acid, 10% sol.	+ (D)	Sulphuric acid, ≤10% sol.	+ (D)	Citric acid, 10% sol.	+	Ammonia solution 25 %	+	Calcium hydroxide	+	Ferric (III) chloride, saturated	+ (D)	Lysol solution 2%	+	Magnesium chloride solution 35%	+	Distilled water	+	Common salt solution, saturated	+	White spirit (solvent naphtha/turpentine substitute)	+	Benzine (Petroleum ether) / cleaning solvent	+	Heating and Diesel fuel	+	Coca-Cola	+ (D)	Coffee	+ (D)	Red wine	+ (D)	Transformer coolant	+	Legend: + = Resistant, (D) = Discolouration	
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Application

Suitable Substrates	<p>All types of mineral substrates (e.g. concrete, cement, anhydrite and magnesite screeds, renders/plasters) and hard asphalt screeds in the interiors. On wall surfaces also suitable for use on Capaver Glass Fabrics, Capadecor AkkordVlies-Z (glass fleece) and filler Caparol-Akkordspachtel KF. The substrates must be sound, dimensionally stable and free from brittle particles, dust, oils, fats/greases, rubber abrasion/skid marks and all materials that may prevent good adhesion. Check cementitious, synthetic resin improved flow mortars for compatibility by a trial coating, if necessary.</p> <p>The adhesive tensile strength of substrates must be 1.5 N/mm² on an average, with a minimum single value of 1.0 N/mm².</p> <p>Substrates must have achieved their equilibrium humidity.</p> <p>Concrete and cement-based composition-floor (screed): max. 5 % by weight Anhydrite screed: max. 1 % by weight Magnesite screed: 2 – 4 % by weight Xylolithe (Magnesium Oxychloride) screed: 4 – 8 % by weight</p> <p>Hard asphalt screeds have to correspond at least to hardness class IC 15 and should not warp on the given temperature and mechanical load conditions.</p>
Substrate Preparation	<p>Prepare the substrate by suitable means, e.g. grit blasting (shot peening) or milling, fulfilling the above mentioned requirements. The additives of hard asphalt screeds should be visible after preparation for at least 75%. Always remove existing 1-component paint coatings and loose 2-component coatings.</p> <p>Vitreous surfaces and surfaces of rigid existing 2-component coatings must be cleaned and roughened (flattened) by sanding or blasting or should be primed with Disbon 481 EP-Uniprimer. Repair spallings and defects with Disbocret[®] PCC or Disboxid EP mortars and fillers, filling them flush with the surface.</p> <p>Level surface roughness on mineral substrates with a scratch-filler application of Disbopox 453 Verlaufschiicht (self-levelling flow coat) according to Technical Information, if necessary.</p>
Preparation of Material	<p>Stir up the base material, then add the hardener and stir intensively with a low-speed electric agitator (max. 400 rpm). Continue stirring until a homogeneous, streak-free colour shade is achieved. Pour the mixture in another clean container and stir again very thoroughly. Do not thin the material for intermediate and finishing coats.</p>
Mixing Ratio	<p>Base material : hardener = 3 : 2 parts by weight</p>
Method of Application	<p>The material may be applied with a paint brush, roller (textured polyamide roller, e.g. Rotanyl roller 8 mm, pile height 11 mm, manufacturer: Rotaplast) or suitable spraying equipment. (Airless, min. 50 bar, nozzle size 0.015 – 0,017 inch, spray angle of 45°, treat with a roller when applied.)</p>
Surface Coating System	<p>Priming Coat Prime new, unused mineral substrates and hard asphalt flooring/screed with Disbopox 447 E.MI Wasserepoxid, diluted with approx. 5–10% of tap (potable) water. Prime used and highly absorbent substrates with Disbopox 443 EP-Imprägnierung. Apply the priming coat very intensively with a sealant brush.</p> <p>Coating Apply intermediate and finishing coats of undiluted material. A third work step may be necessary on high-contrast substrates and very intensive colours (e.g. when using ColorExpress Base 3).</p> <p>Surface Design Strew/scatter Disboxid 948 Color-Chips on the freshly applied coating. Allow to dry, then apply Disbopur 458 PU-AquaSiegel for smooth top coat or add/mix 3 % by weight of Disbon 947 SlideStop for non-skid surfaces.</p>

Consumption

Priming coat	
<i>Mineral substrates</i> Disbopox 447 E.MI Wasserepoxid or Disbopox 443 EP-Imprägnierung	approx. 200 g/m ²
<i>Hard asphalt screeds</i> Disbopox 447 E.MI Wasserepoxid	approx. 200 g/m ²
<i>Capaver Glass Fabrics and Capadecor AkkordVlies-Z</i> Disbopox 447 E.MI Wasserepoxid	approx. 120–200 ml/m ²
Coating	
Floor spaces	approx. 200–250 g/m ² per coat
Wall areas	approx. 120–200 g/m ² per coat
Surface design (floors)	
<i>Chips to be strewn</i> Disboxid 948 Color-Chips	approx. 30 g/m ²
<i>Smooth sealing</i> Disbopur 458 PU-AquaSiegel	approx. 130 g/m ²
<i>Slip-resistant sealing</i> Disbopur 458 PU-AquaSiegel Disbon 947 Slidestop	approx. 130 g/m ² approx. 4 g/m ²

The exact rate of consumption is best established by a trial application on site.

Workability

At 20 °C and 60% relative humidity, approx. 90 minutes. Higher temperatures shorten and lower temperatures extend the pot life.

Please Note: The end of pot life (workability) is not easily noticeable. Application after the approx. 90 minutes at 20 °C may cause gloss level variations and colour changes and will lead to diminished stability/strength and poor adhesion. Avoid excessively thick applied layers in one process (more consumption). Provide for proper ventilation during drying and hardening.

Application Conditions

Material, Ambient Air and Substrate Temperature:

Min. 10 °C and max. 30 °C during application and drying.

Relative humidity must not exceed 80%. Substrate temperature should always be min. 3 °C above the dew point temperature.

Waiting Time

The waiting time between work steps (coats) should be at least 16 and max. 48 hours at 20 °C. After longer breaks, the surface of the preceding coating must be roughened/sanded.

Higher temperatures shorten and lower temperatures extend the waiting time.

Drying/Drying Time

At 20 °C and 60% relative humidity, walkable after approx. 1 day. Ready for stress/mechanical loads after approx. 3 days and completely hardened after approx. 7 days.

The drying time is correspondingly longer at low temperatures. During the hardening process (approx. 24 hours at 20 °C) the coating should be protected from moisture, otherwise surface faults and diminished adhesion may occur.

Tool Cleaning

Immediately after use or during longer breaks with water or warm soapy water.

Advice

German Certificates

- 1-1250: Testing the ease of decontamination to DIN 25415, Fachhochschule (UAS) Aachen
- 1-1249: Test on 2-component-coating according to aspects of food safety and hygiene regulations / Hygiene-Institut des Ruhrgebiets (Hygiene Institute of the Ruhr area), Gelsenkirchen
- 1-1203 Test on fire behaviour to DIN EN 13501-1 / Prüfinstitut (Test Institute) Hoch, Fladungen
- 1-1101: Testing of anti-slip properties R9 / Material-Prüfinstitut Hellberg (Material Test Institute), Adendorf
- 1-1247 TÜV Certificate, emission-minimised floor coatings for standard colour shades, TÜV Nord (Technical Control Board North)
- 1-1248 TÜV Certificate, emission-minimised floor coatings for mixed colour shades, TÜV Nord (Technical Control Board North)

Special Risks (Hazard Note) / Safety Advice (Status as at Date of Publication)

Base Material: Keep out of the reach of children. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Do not breathe vapour/aerosol (spray dust). Do not empty into drains, water courses and onto the ground.

Contains isophorone-diamine, m-xylylene diamine. May cause an allergic reaction. Material safety data sheets available for professional users on request.

Hardener: Keep out of the reach of children. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Do not breathe vapour/aerosol (spray dust). Do not empty into drains, water courses and onto the ground.

Contains 4,4'-Isopropylidenediphenol. May cause an allergic reaction.

Only to be used by trained operatives.

Disposal

Materials and all related packaging must be disposed of in a safe way in accordance with the full requirements of the local authorities. Particular attention should be paid to removing wastage from site in compliance with standard construction site procedures.

In Germany: Only completely emptied containers should be given for recycling.

Residues: Allow to harden mixed base and hardener, then dispose of as paints waste.

EU limit value for the VOC content

of this product (category A/j): max. 140 g/l (2010). This product contains max. 15 g/l VOC.

Giscode

RE 0

Further Details

Follow Safety Data Sheet (MSDS) and General Advice for Cleaning and Care/Maintenance of Floor Coatings.

CE Labelling

EN 13813

CE labelling is based on EN 13813 "Screed mortars, screed compounds and screeds – screed mortars and screed compounds – Properties and Requirements" defining the requirements for screed mortars being used for floor constructions in the interiors. The standard also include synthetic resin coatings and sealing.

EN 1504-2

EN 1504-2 "Products and systems for protection and repair of concrete supporting structure - part 2: Surface protection systems for concrete" defines the requirements for surface protection procedures.

Products matching the above mentioned standard are to be labelled with the CE mark. Labelling is given on the container and in the CE information, available via www.caparol.de

In Germany additional norms are to be observed for the use in structural safety relevant areas.

Correlation is documented by the Ü sign on the container. This is also established by the documented evidence of conformity system 2+ with monitoring and tests by the manufacturer and notified bodies.

Technical Assistance

As it is impossible to list herein the wide variety of substrates and their specific problems, please request our technical assistance in case of queries. We will describe appropriate working methods, if a substrate not specified above is to be coated.

Customer Service Centre

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International Distribution: Please see www.caparol.com