

NEW New Quality

DisboPOX W 447 2C-EP-Universal resin



Water-thinnable, 2-component liquid epoxy resin sealing for wall coatings and flooring exposed to low or medium traffic loads.

Product Description

Field of Application

Floor surface:

For mineral based flooring and hard asphalt screed indoors with traffic stress in industrial and commercial areas, e.g. supply rooms, social rooms, boiler-rooms, warehouses, archives, depots, on corridors, escape routes and fire escapes. The coated flooring can be driven on by light trolleys, carts with hard rubber rollers.

Wall surface:

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.

Due to the emission-minimised, ecologically compatible formula, particularly suitable for all "sensitive/delicate" areas, as e.g. lounges, hospitals, nurseries, play schools, schools, etc.

Material Properties

- Eurofins Indoor Air Comfort Gold certified
- Tested according to the AgBB testing criteria for VOC emissions from interior building material
- Resistant to disinfectant
- Can be decontaminated according to DIN 25415
- Tested for use in the food & beverage industry (like described in Chapter II and III of the Attachment II of the EU regulation 852/2004 regarding food sanitation)
- Water vapor permeable

Tested according to the AgBB test criteria for VOC emissions from building products relevant for interior use. The evaluation scheme of the German Committee for Health-Related Evaluation of Building Products (AgBB) was derived by environmental and health authorities for the use of building materials in sensitive areas such as recreation rooms.

Material Base / Vehicle

Water-thinnable, 2-component liquid epoxy resin.

Packaging/Package Size

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

Colours

- **Standard:**
5 kg container: Pebble grey (approx. RAL 7032)
10 kg container: Pebble grey (approx. RAL 7032), concrete grey (approx. RAL 7023), light grey (approx. RAL 7035), agate grey (approx. RAL 7038), cream white (approx. RAL 9001), white
40 kg container: Pebble grey (approx. RAL 7032), light grey (approx. RAL 7035), agate grey (approx. RAL 7038)
Special colours available on request.



■ **ColorExpress:**

Can be tinted to more than 21,000 colours at local ColorExpress stations. Exclusive colour design possible with the colours of the FloorColor plus collection. Tint base 1, base 2 or base 3 at the ColorExpress station, depending on the colour.

Gloss Level Satin-gloss/satin-finished (mid sheen)

Storage Store cool, dry, frost-free.
Tightly closed original packaging has a minimum shelf life of 18 months. If stored at low temperatures, the material should be stored at 20 °C before application.

Technical Data

- Density: approx. 1.4 g/cm³
- Dry film thickness: approx. 35 µm/100 g/m²
- Resistance-count for diffusion µ (H₂O): approx. 40,000
- Abrasion to Taber (CS 10/1000 U/1000 g): 60 mg/30 cm²

Chemical resistance

Chemical resistance table according to EN ISO 2812 at 20 °C	
	7 days
Acetic acid 5 %	+ (D)
Hydrochloric acid 10 %	+ (D)
Sulphuric acid ≤ 10 %	+ (D)
Citric 10 %	+
Ammonia 25 % (solution)	+
Calcium hydroxide	+
Iron III chloride solution, saturated	+ (D)
Lysoform solution 2%	+
Magnesium chloride solution 35%	+
Dist. water	+
Sodium chloride solution, saturated	+
White spirit (turpentine substitute)	+
Benzine	+
Heating oil and diesel	+
Coca-Cola	+ (D)
Coffee	+ (D)
Red wine	+ (D)
Transformer coolants	+
Explanation of symbols: + = resistant, (D) = discolouration	

Application

Suitable Substrates

Flooring:

All types of mineral substrates (e.g. concrete, cement, anhydrite and magnesite screeds, renders/plasters) and hard asphalt screeds indoors. The substrates must be sound, dry, dimensionally stable, and free from all materials that may prevent good adhesion, e.g. release agents, dust, oil or abraded rubber contamination (skid-marks).

The average adhesion tensile strength of surfaces must be 1.5 N/mm² with a single minimum value of 1.0 N/mm². Freshly applied concrete or cement-based composition floors / screed must be dried to a matt surface aspect (without forming a glossy film). Other substrates should have achieved their equivalent humidity:

Anhydrite screed: max. 1% by weight

Magnesite screed: 2–4 % by weight

Magnesium oxychloride screed: (Xylolite) 4–8 % by weight

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.

Wall:

On wall surfaces also suitable for use on Capaver Glass Fabrics, Capadecor AkkordVlies-Z (glass fleece), DisboFEIN 332 Spachtel, DisboCRET 505 Fine Spachtel and Caparol-Akkordspachtel KF.

The Suitability of plasters MG PII and PIII need to be checked on site. The substrates must be sound, dry, dimensionally stable, and free from all materials that may prevent good adhesion. The average adhesion tensile strength of surfaces must be 0.8 N/mm² with a single minimum value of 0.5 N/mm². As Sealings do not have a waterproofing property, the substrate as well as the plasters in damp rooms need to come with a sufficient damp resistance.

Other kinds of substrates or procedures require a separate consultancy by DISBON.

Substrate Preparation

Substrate need to be prepared by suitable measures, e.g. shot blasting, milling or grinding, meeting the the above mentioned requirements.

Unsound substrates and other contamination need to be intensely prepared by mechanical methods respectively removed. Existing coatings need to be removed. Pores and cavities need to be opened and the substrate has to show a fine rough structure.

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.

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 mortars or Disboxid EP mortars, flush with the surface.

The BEB-Workingsheet KH-0/U*, the BEB-Workingsheet KH 1* as well as the Table 2.5 of the maintenance guideline, Part II of the German committee for reinforced concrete need to be taken into account.

Preparation of Material

Stir up Comp. A (base material) and add Comp. B (hardener). Stir intensively with a low-speed electrical paddle (agitator / max. 400 rpm), till a streak-free and even color shade is visible. Pour the mixture into another clean container and stir intensively again (Do not apply material out of the delivered container). Do not thin the mixed material for the intermediate and top coat.

Mixing Ratio

Comp. A (base material) : Comp. B (hardener) = 3 : 2 parts by weight

Method of Application

The Material can be applied by a paint brush, short fibre roller (textured polyamide roller, e.g. Rotanyl roller 8 mm, pile height 11 mm, manufacturer: Rotaplast) or airless spraying equipment (Airless, min. 50 bar, nozzle size 0.015 – 0,017 inch, spray angle of 45°, treat with a roller when applied).

To achieve an even and perfect result always apply material wet in wet. When applying the material by a roller always apply evenly and cross-coat. It is recommended to have additional personal on site when coating larger areas and maybe split the area into smaller sections. In Coherent areas always use material from one and the same batch.

Extreme Layer thickness exceedance in each coating operation may lead to disturbances in the surface and material cracking and spalling.

Surface Coating System

Prime Coat

Prime used and highly absorbent substrates with Disbopox 443 EP-Imprägnierung. Apply the priming coat very intensively with a sealant brush.

In case a water permeable system is not required, alternatively a prime coat with DisboPOX 420 E.MI PLUS or DisboXID 462 is possible.

Prime new, unused prepared mineral substrates and hard asphalt flooring/screed with DisboPOX W 447, diluted with approx. 5–10% of tap (potable) water, if a sufficient sound substrate and absorption is guaranteed.

On weak absorbing walls (Capaver Glass Fabrics, Capadecor AkkordVlies-Z (glass fleece), DisboFEIN 332, DisboCRET 505 and Caparol-Akkordspachtel KF) dilute DisboPOX W 447 with a max. 5% by weight of tap (potable) water.

Scratch Coat

To equalize surface roughnesses a scratch coating can be applied:

DisboPOX W 453: 100 % by weight

Water: 2% by weight

DisboADD 942 QUartz sand 0,1-0,4mm: 20% by weight.

Pour the filler on the prime coated surface and spread evenly with a finishing trowel thereby scratch sharp across the grain.

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). If necessary the first coat shall be made with a basic color shade and superior covering power.

Surface Design

For non-skid surfaces (R10) add/mix 4 % by weight of Disbo 947 SlideStop in the final top coat.

Consumption

Priming coat	
<i>Mineral substrates</i> DisboPOX W 443	approx. 200 g/m ²
<i>Hard asphalt screeds for low-absorbent, mineral substrates</i> DisboPOX W 447 Diluted with 5-10% water	approx. 200 g/m ²
<i>Capaver glass fabric and Capadecor AkkordVlies-Z</i> DisboPOX W 447 Diluted with 5-10% water	approx. 120–200 g/m ²
Scratch filling, if required	
DisboPOX W 453 DisboADD 942	approx. 1,040–1,200 g/mm/m ² approx. 210–240 g/mm/m ²
Sealant	
Floor surface (R 9) DisboPOX W 447**	approx. 200–250 g/m ² per application
<i>Anti-slip floor surface (R 10)</i> DisboPOX W 447** DisboADD 947 Glasperlen, fine 75 - 150 µm (Slidestop)	approx. 250 g/m ² approx. 10 g/m ²
Wall surfaces	approx. 120–200 g/m ² per application
Structured surfaces (floor)	
<i>Chip interspersions</i> DisboADD 948 Farbchips, 2 - 4 mm, or DisboADD 8255 Farbchips, 1 - 2 mm (Fast Chips)	approx. 30 g/m ² approx. 30 g/m ²
<i>Sealant</i> DisboPUR W 458**	approx. 130 g/m ²
<i>Anti-slip seal (R 11)</i> DisboPUR W 458** DisboADD 947 Glasperlen, fine 75 - 150 µm (Slidestop)	approx. 130 g/m ² approx. 4 g/m ²

Determine exact consumption values by applying a sample to the object.

*Alternatively DisboPOX 447, diluted with 5-10% water, or DisboXID 420 or DisboXID 462 **

Discolourations can occur following contact with car tyres or similar

Workability

Workability at 20 °C and 60% relative humidity, approx. 90 minutes.

Higher temperatures shorten and lower temperatures extend the potlife.

During drying phase ensure a proper ventilation, as due to the evaporation of the consisting water the humidity may increase. Protect against draft.

Note: The end of pot life (workability) is not recognisable.

Exceeding may cause gloss level variations and colour changes and will lead to diminished stability/strength and poor adhesion.

Application Conditions

Avoid excessively thick applied layers in one process (more consumption).

Material, circulating air and substrate temperature:


min. of 10 °C and max. of 30 °C during application and drying. Relative humidity must not exceed 80%. Substrate temperature always should be min. 3 °C above the dew point temperature.

Waiting Time	The waiting time between coats varies from min. 6 to max. 48 hours at 20 °C, the same for following coats of pigmented materials with proper diffusion. If the waiting time lasts more, the surface must be roughened with a sander/grinder. Higher temperatures shorten and lower temperatures extend the given period.
Drying/Drying Time	At 20 °C and 60% relative humidity, walkable after approx. 6 hours. After 7 days the floor is mechanically and chemically resilient. At lower temperatures the drying time is correspondingly longer. Protect the coating from moisture during the curing process (approx. 24 hours at 20 °C), otherwise surface failures and diminished adhesion may occur.
Tool Cleaning	Immediately after use or during longer breaks with water or warm soapy water.

Advice

German Certificates	Latest technical opinion on request.
Cleaning and Maintenance	Discolouration and chalking effect may occur with weathering and UV light exposure. The pigmentation in, e.g. coffee, red wine or leaves (organic dyes) and various chemicals (e.g. disinfectants, acids, etc.) may cause discolouration. The functionality of the coating will not be affected by these changes.
Special Risks (Hazard Note) / Safety Advice (Status as at Date of Publication)	<p><i>For professional use only.</i></p> <p>Base Material: May cause an allergic skin reaction. Avoid breathing mist or vapors. Do not get in eyes, on skin, or on clothing. Wear protective gloves/ eye protection. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. Contains: 3-aminomethyl-3,5,5-trimethylcyclohexylamine, m-phenylenebis(methylamine). Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.</p> <p>Hardener: Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction. Contains epoxy constituents. May produce an allergic reaction.</p> <p>Hotline for questions regarding allergies: 0800/1895000 (free from German landlines).</p>
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. Do not dispose of via domestic waste. In Germany: Only completely emptied packaging should be given for recycling. Dispose of liquid and hardened material as paint waste containing organic solvents or other dangerous substances.
EU limit value for the VOC content	of this product (category A/j): 140 g/l (2010). This product contains max. 15 g/l of VOC.
Giscode	RE10
Further Details	See Material Safety Data Sheets. Observe our special application indications for applying Disbon materials as well as the cleaning and maintenance advise for floors.

CE Labelling

	
Disbon GmbH Roßdörfer Straße 50, D-64372 Ober-Ramstadt 08 DIS-447-001248 EN 13813:2002	
Synthetic resin screed/synthetic resin coating for use in indoor areas EN 13813:SR-E _{fl} -B1,5-AR1-IR4	
Fire performance	E _{fl}
Release of corrosive substances	SR
Water permeability	NPD
Abrasion resistance	≤ AR1
Tensile strength	≥ B1,5
Impact resistance	≥ IR4

EN 13813

The standard EN 13813 “Screed material and floor screeds – Screed materials – Properties and requirements” specifies the requirements for screed materials that are used for floor constructions in indoor areas. Synthetic resin coatings and seals are also covered by this standard.

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 that comply with one of the above standard must bear the CE mark. The mark is provided on the container and in the appendix of the declaration of performance according to the Construction Products Regulation (BauPVO), which is available online at: www.disbon.de.

Technical Assistance

All in practice occurring substrates/surfaces and their technical processing can not be described in detail in this technical document. In case substrates/surfaces need to be processed, which are not described in detail within this document, it is required to get in touch with our sales representative. We will be glad to assist and consult you object-related in detail.

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