Disbon 385 PU-PremiumSchicht

Pigmented, elastic and solvent-free 2-component polyurethane floor coating for indoor surfaces. Noise-dampening, highly UV-light resistant and color stability.

Product Description

Field of Application

For interior mineral and hard asphalt floor surfaces subjected from average to high mechanical loads, hence suitable for lounges, hospitals, schools, day-care centers, etc. Trafficable with pneumatic-tyred wheels.

Material Properties

- Emission-minimised.
- UV-light resistant and non-yellowing.
- Good chemical resistance.
- Elastic/resilient.
- Noise-dampening.
- Statically crack bridging.

Material Base / Vehicle

2-component polyurethane-resin, solvent-free according to "Deutsche Bauchemie".

Packaging/Package Size

30 kg packaging (Component A: 21.6 kg tin hobbock / Component B: 8.4 kg tin can)

Colours

ca. RAL 7032 Pebble Grey, ca. RAL 7035 Light Grey
Special color shades available on request.

Organic colorants in e.g. coffee, red wine or leaves (organic dyestuffs) and various chemicals, e.g. disinfectants, acids, etc., may cause discolouration. Abrasive stress may cause visible scratches in the surface. Proper functioning of the coating will not be affected by these changes.

Gloss Level

Gloss

Storage

Keep in a cool, dry, and frost-free place.
Shelf life of the original, tightly closed packaging: Minimum 9 months. If temperatures are low, the material should be stored at approx. 20 °C before application.

Technical Data

- Crack bridging as per DIN EN 1062, Part 7: approx. 1 mm (consumption: 2.5 kg/m²)
- Density: approx. 1.4 g/cm^3
- Dry film thickness: approx. 70 µm/100 g/m^2
- Abrasion to Taber (CS 10/1000 U/1000 g): 46 mg/30 cm^2
- Shore hardness (A/D): approx. D 35

Chemical resistance

Chemical Resistance Table according to DIN EN ISO 2812-3:2007 at 20 °C	
	7 Days
Test liquid group 5b: Monovalent and polyhydric alcohols (except methanol), glycol ether	+ / -
Test liquid group 9: Aqueous solutions of inorganic acids (carboxylic acids) up to 10 % and their salts (in aqueous solution)	+ (D)
Test liquid group 10: Mineral acids up to 20 % and their salts in aqueous solution (pH <6), except hydrofluoric acid and oxidizing acids and their salts	+ (D)
Test liquid group 11: Inorganic leaches/bases and alcaline hydrolysing, inorganic salts in aqueous solution (pH < 8), except ammonia solutions and oxidizing solutions of salts (e.g. hypochlorite)	+
Ethanol 50 % solution	+ / -
Ammonia 25 % solution	+ (D)
Caustic soda solution 50 %	+ (D)
Citric acid 10 %	+
VE Water	+
Coffee	+ (D)
Cola	+ (D)
Red wine	+ (D)
Legend: + = Resistant, +/- = Limited resistant, D = Discolouration	

Application

Suitable Substrates

Mineral and asphalt screed interior floor surfaces.
The substrate must be dry, sound, dimensionally stable, solid and free from all substances that may prevent good adhesion, e.g. loose/brittle materials, dust, oils, fats/greases or rubber abrasion (skidmarks). Compressive strength of substrates must be > 25 N/mm².

The average value for adhesive tensile strength must be 1.5 N/mm², with a single minimum value of 1.0 N/mm². Substrates must have achieved their equilibrium moisture content (EMC):
Concrete and cement screed: max. 4 % by weight (CM method)
Testing methods for above mentioned values as per DAfStb, repair guideline part 3.

If rising damp (moisture on the reverse side of the coating) cannot be excluded, then it is essential to apply a pore-free priming coat of Disboxid 420 E.MI Primer or Disboxid 462 EP-Siegel Neu. Therefore, the average value for adhesive tensile strength must be 2.0 N/mm², with a single minimum value of 1.5 N/mm².

Other types of substrates or proceedings require a special advice from DISBON.

The substrate must always be even and should have a tolerable down-grade of max. 1 %, otherwise the material cannot be applied in the required coating thickness.

Substrate Preparation

Prepare the existing substrate very thoroughly by shot-blasting with solid shot/grit (shot peening), avoiding dust due to simultaneous suction-cleaning. The degree of removing layers of lower adherence is depending on pressure, type and amount of shotblasting medium. Grinding is only permissible for small (border) areas, except for the preparation using diamond grinding technique to remove layers of lower adherence.

Germany: Follow BEB-Arbeitsblatt (process sheet) KH-0/U* and KH2* as well as the table 2,5 of guideline "Schutz und Instandsetzung von Betonbauteilen / Protection and Repair of Concrete Elements", part 2 of "Deutscher Ausschuss für Stahlbeton / German Committee for Reinforced Concrete".

Carefully clean existing, rigid 2-component coatings, then roughen/grind or flatten by abrasive blasting to remove all remnants, care products or the like on the surface to be coated.
Repair spallings and defects in the substrate with Disbocret® PCC mortars or Disboxid EP mortars, filling them flush with the surface.

Do not use any materials with silicone content in surrounding areas before and during application to avoid detrimental influences (surface disfunction/loss of adhesion).

* Bundesverband Estrich und Belag e.V., 53842 Troisdorf-Oberlar, Germany

Preparation of Material

Stir the base material (Component A), then add the hardener (Component B) to the base and mix intensively with a low-speed paddle mixer (max. 400 rpm) until a homogeneous colour shade, free of streaks, is achieved. Pour the mixture into another clean mixing vessel and continue stirring.

Disbon 385 PU-PremiumSchicht can be thixotropized to a max. of 2 % by weight with Disbon 913 PU-Stellmittel, if necessary. Adding approx. 0.5 % by weigt is sufficient for a down-grade of 2 %. Flow and surface appearance may be detrimentally influenced by adding a set-up agent.

Please Note: Disbon 385 PU-PremiumSchicht can only be thixotropized with Disbon 913 PU-Stellmittel. Do not use any other set-up agent to avoid diminished hardening.

Mixing Ratio

Component A (Base) : Component B (Hardener) = 72 : 28 parts by weight

Method of Application

With suitable wiper, squeegee or scraper (e.g. notched hard rubber squeegee).

Please Note: When using a notched tool the chosen triangular notching does not lead automatically to compliance with given consumption values.

Surface Coating System

Priming Coat

1. Prime cement-based substrates with Disboxid 420 E.MI Primer, filling all pores. Pour mixed material to the surface and spread evenly, working very thoroughly in back-pull technique with a rubber wiper, filling all pores. Then roll over the surface, working cross-wise with a medium pile roller to avoid any agglomeration of material (gloss areas). For strongly absorbent substrates (when the resin is fully absorbed, without forming a closed primer film on the surface) a second priming coat is necessary to fill all pores.

2. Prime hard asphalt substrates with Disbon 385 PU-PremiumSchicht using a flat hard-rubber squeege or a scraper, filling all pores. Level rough and porous hard asphalt surfaces with an additional scratch filler coat of Disbon 385 PU-PremiumSchicht: 1.0 part by weight and Disboxid 942 Mischquarz: 0.5 parts by weight.

Scratch Filler Coat

A scratch filler coat is necessary to level surface roughness > 1 mm (measured as per sand surface method*).

Prepare a scratch filler as follows:
Disboxid 420 E.MI Primer: 1.0 part by weight
Disboxid 942 Mischquarz: 0.75 parts by weight
Disboxid 943 Einstreuquarz: 0.75 parts by weight

Pour the mixed material to the previously primed (priming coat) surface and draw sharply with a smoothing trowel (standing working with metal wiper/squeegee, max. 60 mm wide) in order to level surface unevenness.

* Sand surface method as per German Richtlinie/Guideline DAfStb, repair guideline Part 3: Determination of surface roughness

Levelling Coat

The levelling coat is essential to achieve an even surface appearance. Pour the mixed material to the primed surface and spread evenly with a notched hard rubber wiper/squeegee (triangular notching 4 mm**). Leave to stand for approx. 10 minutes, then remove all blistering with a spiked roller, working cross-wise.
Consumption*:
Disboxid 420 E.MI Primer: approx. 800 g/m^2
Disboxid 942 Mischquarz: approx. 800 g/m^2

Please Note: Do not scatter quartz sand to the levelling coat!

Finishing (Top) Coat

Flow coating with a smooth surface
Pour Disbon 385 PU-PremiumSchicht timely to the levelling coat and spread evenly with a notched hard rubber wiper/squeegee. The levelling coat must be roughened/grinded when the time for recoating is overrun. Take care to avoid any exposure of the substrate. After having respected a waiting time of approx. 10 minutes remove all blistering with a spiked roller, working cross-wise over the freshly applied flow coating.

Surface Design

Scatter Disboxid 948 Color-Chips to the freshly applied coating, allow to dry and seal with Disbopur 458 PU-AquaSiegel (smooth surface) or add 3 % by weight of Disbon 947 SlideStop Fine to obtain a slip-resistant effect.
Alternatively Disbon HS 8255 FastChips can be used without additional sealing.

Do not use Disbopur 458 PU-AquaSiegel for areas with intesive loads due to chair rollers. Use chair mats in highly stressed areas, if necessary.

Consumption

Priming Coat for mineral substrates Disboxid 420 E.MI Primer	 approx. 0.3-0.4 kg/m²
Priming Coat for asphalt Disbon 385 PU-PremiumSchicht	approx. 0,5-1,0 kg/m²
Scratch Filler Coat *surface roughness 1.0 mm and more*	
Disboxid 420 E.MI Primer Disboxid 942 Mischquarz Disboxid 943 Einstreuquarz	approx. 0.66 kg/mm/m² approx. 0.5 kg/mm/m² approx. 0.5 kg/mm/m²
Scratch Filler Coat for asphalt Disbon 385 PU-PremiumSchicht Disboxid 942 Mischquarz	 approx. 1,3 kg/mm/m² approx. 0,6 kg/mm/m²
Levelling Coat	
Disboxid 420 E.MI Primer Disboxid 942 Mischquarz	approx. 0.8 kg/m² approx. 0.8 kg/m²
Flow Coating with a smooth surface	
*Approx. 2 - 3 mm of coating thickness (6 - 8 mm triangular notching)**	
Disbon 385 PU-PremiumSchicht	approx. 2.4 - 3.5 kg/m²
Surface Design	
Scattering chips Disboxid 948 Color-Chips or Disbon HS 8255 FastChips	 approx. 30 g/m² approx. 30 g/m²
Sealing, matt Disbopur 458 PU-AquaSiegel	 approx. 130 g/m²
Sealing, matt, slip-resistant Disbopur 458 PU-AquaSiegel Disbon 947 SlideStop Fine	 approx. 130 g/m² approx. 4 g/m²

*Recommendation only. Notching is depending on the wear resistance of tools, temperature, degree of filling and substrate requirements.
Consumption of top sealer coat on scattered coatings may vary due to temperature, working method, tool and different materials used for scattering. Determine the exact amount of material required by coating a test area on site.

Workability

Processing time: At 20 °C and 60 % relative humidity approximately 40 minutes.
Higher temperatures shorten and lower temperatures extend the pot life.

Application Conditions

Material, Ambient Air and Substrate Temperature:
Temperature must remain at a min. of 10 °C, max. 25 °C.
Relative humidity must not exceed 80 %. The substrate temperature should always be minimum 3 °C above the temperature of dew point.

Waiting Time

Waiting time between operations (priming coat or scratch filler coat) and Disbon 385 PU-PremiumSchicht: min. 12 hours, max. 24 hours at 20 °C. For longer waiting times the surface of the preceding coat must be roughened/slightly grinded.

Waiting time between Disbon 385 PU-PremiumSchicht and the following coat: min. 20 hours, max. 48 hours. Higher temperatures shorten and lower temperatures extend these waiting times.

Drying/Drying Time

At 20 °C and 60 % relative humidity, walkable and recoatable after approx. 20 hours. Completely hardened and ready for chemical and mechanical stress after 7 days. Lower temperatures extend the curing time. During hardening/curing, the applied coating has to be protected against moisture to avoid surface faults and loss of adhesion.
Depending on the air exchange rate, a product typical odor (modified castor oil) may be perceived over a longer period of time.

Please Note: Disbon 385 PU-PremiumSchicht has a brilliant surface, the smallest disturbances as well as impurities are immediately visible and hard to avoid - especially with intensive colors. Therefore, the application of a maintenance product by trained personnel is recommended, specially if no lealing will be applied.

Tool Cleaning

Immediately after use and during longer breaks with thinner Disbocolor 499 Verdünner.

Advice

German Certificates

Certificates on request.

Cleaning and Maintenance

Without an additional sealing a specific cleaning is required, due to the high-gloss, hydrophobic surface of Disbon 385 PremiumSchicht. Maintenance cleaning is effected with a special cleaning product (e.g. Veriprop, Inc. Kiehl) for badly wettable surfaces. Cleaning property is improved with repeated wiping. It is advisable to use microfibre cleaning tissue, followed by drying to avoid a streak-free surface.
For maintenance cleaning always a basic cleaning (max. with a red pad) is necessary. Maintenance cleaner (e.g. Tana Longlife diamond) must be suitable for use on resilient coatings, thus a trial coating on site is advisable.

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

Restricted to professional users.

Base (Component A):
No dangerous substance or mixture.

Hardener (Component B):
Contains: aliphatic polyisocyanates. May cause an allergic skin reaction. Harmful if inhaled. May cause respiratory irritation. Avoid breathing dust/ fume/ gas/ mist/ va-pours/ spray. Wear protective gloves/ protective clothing/ eye protection/ face protection. Use only outdoors or in a well-ventilated area. IF ON SKIN: Wash with plenty of soap and water. P352 P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.

Disposal

Only completely emptied containers should be given for recycling. Material residues: Allow the basic substance to harden with hardener and dispose of as paint waste. Uncured product residues are special/hazardous waste.

EU limit value for the VOC content

of this product (category A/j): max. 140 g/l (2010). This product contains max. 35 g/l VOC.

Giscode

PU 40 (Germany)

Further Details

See Material Safety Data Sheets (MSDS).
Follow the application references and DISBON advice for care/cleaning and maintenance of floor spaces while applying our products.

CE Labelling

CE

Disbon GmbH
Roßdörfer Straße 50, D-64372 Ober-Ramstadt

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DIS-385-013124
EN 13813: 2002
Synthetic screed/synthetic coating for interior use
EN 13813:SR-B_{fl}-B1,5-AR1-IR4

Reaction to fire	B_{fl-s1}
Release of corrosive substances	SR
Water permeability	NPD
Wear resistance	≤ AR1
Adhesive tensile strength	≥ B1.5
Impact strength	≥ IR4

EN 13813
CE labelling is based on DIN 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 interiors. The standard also include synthetic resin coatings and sealing.

Products matching the above mentioned standard are to be labelled on the container with the CE mark. Corresponding information (performance record according to BauPVO) is given on our website www.disbon.de

Customer Service Centre

Tel.: +49 6154 71-71710
Fax: +49 6154 71-71711
e-mail: kundenservicecenter@caparol.de

International Distribution: Please see www.caparol.com

DISBON GmbH · Rossdoerfer Strasse 50 · D-64372 Ober-Ramstadt · Phone +49 6154 71-71719 · Fax +49 6154 71-71008 · Internet www.disbon.com