

## System Data Sheet

# Disbon

## Water Protection Systems

**WHG-New**

For sealing off mineral floor spaces from nonflammable, water-polluting substances.

**WHG-AS New**

For sealing off mineral floor spaces from inflammable - even explosive - water-polluting substances.

### System Description

Coating systems for water pollution control in industrial plants, tested and approved by the German Institute for Structural Engineering (Deutsches Institut für Bautechnik DIBt).

General technical approvals Z-59.12-348 (WHG-Neu) and Z-59.12-349 (WHG-AS Neu) for the use in storage, filling and loading facilities.

Driveable, aging- and weathering resistant, high mechanical resistance, thus useable in production-, treatment- and processing facilities.

Unique system design.

The Disbon Gewässerschutz-Systems are certified, chemically resistant, crack-bridging and mechanically highly resilient coating systems. They consist of 2 different system designs.

| System                       | Product  |
|------------------------------|--|
| <i>WHG-New</i>               |  |
| Priming coat                 | DisboXID 5011 WHG 2K-EP-Grundierung              |
| Finishing coat               | DisboXID 5044 WHG 2K-EP-Verlaufsbeschichtung     |
| <i>WHG-AS New</i>            |  |
| Priming coat                 | DisboXID 5011 WHG 2K-EP-Grundierung              |
| Earthing                     | DisboADD 973 Kupferband                          |
| Conductive intermediate coat | DisboPOX W 5022 WHG 2K-EP-Leitschicht            |
| Finishing coat               | DisboXID 5033 WHG, AS 2K-EP-Verlaufsbeschichtung |

List of Stress Levels acc. to TRWS DWA-A-786 DAW "Design of sealing surfaces" Okt. 2020:

● High ≤ 28 days ○ Medium ≤ 14 days ○ Low ≤ 7 days ○○ very low ≤ 72 hours

| Group | Liquids for the plant operating modes storage (L), filling (A) and reloading (U). Stress levels "high" (3), "medium" (2) and "low" (1)   | Disbon Water Protection System |            |
|-------|--|--------------------------------|------------|
|       |  | WHG-New                        | WHG-AS New |
| 1     | Gasoline, regular and premium (acc. to DIN EN 228) with max. 5 % by volume bioalkohol (L3/AU2)   |                                | ●          |
| 1a    | Gasoline, regular and premium (acc. to DIN EN 228) with max. 20 % by volume bioalkohol (L3/AU2)  |                                | ●          |
| 2     | Aviation fuels (LA3/AU2)   |                                | ●          |
| 3     | Heating oil EL (acc. to DIN 51 603-1), unused engine oils and unused automotive gear oils, mixtures of saturated and aromatic hydrocarbons with an aromatic content of < 20 % by and a flash point > 55 ° C (LA3/U2) | ●                              | ●          |
| 3b    | Diesel fuel (acc. to DIN EN 590) with max. 20 % by volume biodiesel (acc. to DIN EN 14214) (LA3/U2)  | ●                              | ●          |
| 3c    | Diesel fuel (acc. to DIN EN 16709) with a high proportion of FAME up to a total content of max. 30% by volume (LA3/U2)   | ●                              | ●          |
| 4     | All hydrocarbons, and benzene-containing mixtures with max. 5 % by volume of benzene (LA3/U2)  | ●                              | ●          |
| 4a    | Benzene and benzene-containing mixtures (LA3/U2)   | ●                              | ●          |
| 4b    | Crude oils (LA3/U2)  |                                | ●          |
| 4c    | Used combustion engine oils and used automotive gear oils with a flash point > 55 ° C (LA3/U2)   | ○                              | ○          |
| 5     | Mono- and polyhydric alcohols (up to 48 % by volume methanol), glycol ethers (LU2/A1)  | ○                              | ○          |
| 5a    | All alcohols and glycol ethers (LU2/A1)  | ○                              | ○          |
| 5b    | Mono- and polyhydric alcohols (except methanol), glycol ethers (LU2/A1)  | ○                              | ○          |
| 5c    | Ethanol including ethanol according to DIN EN 15376 (regardless of the manufacturing process) and their aqueous solutions (LU2/A1)   |                                | ○          |
| 6b    | Aromatic halocarbons (LAU2)  | ○                              | ○          |
| 7     | All organic esters and ketones (LAU2)  | ○                              | ○          |
| 7a    | Aromatic esters and ketones (LAU2)   | ○                              | ○          |
| 8     | Aqueous solutions of aliphatic aldehydes up to 40% (LA3/U2)  | ●                              | ●          |
| 8a    | Aliphatic aldehydes and their aqueous solutions (LA3/U2)   | ●                              | ●          |
| 9     | Aqueous solutions of inorganic acids (carboxylic acids) up to 10 % and its salts (in aqueous solution) (LA3/U2)  | ●                              | ●          |
| 9a    | Organic acids (carboxylic acids) and its salts (in aqueous solution) except formic acid (LAU1)   | □                              | □          |
| 10    | Mineral acids up to 20% and their salts in aqueous solution (pH <6), except hydrofluoric acid and oxidizing acids and their salts (LA3/U2)   | ●                              | ●          |
| 11    | Inorganic alkalis, and alkaline hydrolyzing inorganic salts in aqueous solution (pH <8), except for ammonia, and oxidizing solutions of salts (eg hypochlorite) (LA3/U2)   | ●                              | ●          |
| 12    | Aqueous solutions of non oxidizing salts with a pH value between 6 and 8 (LA3/U2)  | ●                              | ●          |
| 13    | Amines and their salts (in aqueous solution) (LA3/U2)  | ●                              | ●          |
| 14    | Aqueous solutions of organic surfactants (LA3/U2)  | ●                              | ●          |
| 15a   | Acyclic ethers (LU2/A1)  | □                              | □          |
|       | Nitric acid 15% (L3/AU2)   | ●                              | ●          |
|       | Phosphoric acid 60% (LAU2)   | ○                              | ○          |

\* System WHG New, applicable as far as the liquids are not flammable, not easily flammable or not highly flammable (corresponding to German Ordinance on Hazardous Substances), and where the coating system must be capable of dissipating electrostatic charges, based on risk assessment according to § 3 of the German Ordinance on Industrial Safety and Health.

## Areas of Application

Sealing of floor areas for the protection of waters in commercial and industrial plants.  
Sealing of catch basins or catchment areas for storage of water-polluting liquids.

System WHG-New for areas, where non-flammable - but also VbF A III - water-polluting substances are handled.

System WHG-AS New for potentially explosive areas or areas where flammable, water-polluting substances are handled (VbF A I, A II and B).

The Disbon Water Protection systems are approved for water-polluting liquids of the groups of chemicals listed in this document, corresponding to the test principles for the protection of waters, part 1, by the German Institute for Structural Engineering, Berlin.

Material Base / Vehicle

**DisboXID 5011 WHG 2K-EP-Grundierung**

Colourless 2-component liquid epoxy resin, total solid according to German Construction Chemistry.

**DisboXID 5033 WHG, AS 2K-EP-Verlaufsbeschichtung**

Pigmented, conductive 2-component liquid epoxy resin, total solid according to German Construction Chemistry.

**DisboXID 5044 WHG 2K-EP-Verlaufsbeschichtung**

Pigmented 2-component liquid epoxy resin, total solid according to German Construction Chemistry.

**DisboPOX W 5022 WHG 2K-EP-Leitschicht**

Pigmented, conductive, aqueous 2-component liquid epoxy resin.

Gloss Level

Glossy (Finishing coat)

Differences in the degree of gloss occur after contact with water. Proper functioning of the coating will not be affected by these changes.

Technical Data

|  | <b>DisboXID 5011</b>   | <b>DisboXID 5033</b>  | <b>DisboXID 5044</b>                  | <b>DisboPOX W 5022</b>                 |
|--|--|---|---------------------------------------|--|
| <b>Density</b>   | approx. 1.1 g/cm <sup>3</sup>  | approx. 1.6 g/cm <sup>3</sup>   | approx. 1.6 g/cm <sup>3</sup>         | approx. 1.08 g/cm <sup>3</sup>         |
| <b>Mixing Ratio</b><br>Base:<br>Hardener:                                      | 2 parts by weight<br>1 part by weight  | 4 parts by weight<br>1 part by weight                                       | 4 parts by weight<br>1 part by weight | 1 parts by weight<br>4 parts by weight |
| <b>Consumption</b>   | approx. 300–400 g/m <sup>2</sup><br><br><i>Scattering:</i><br>approx. 1,000 g/m <sup>2</sup> of quartz sand 0.3-0.8 mm<br><br><i>Scratch filling:</i><br>approx. 1,000 g/m <sup>2</sup> , mixed in 1:0.8 ratio with quartz sand 0.1-0.3 mm | approx. 2,500 g/m <sup>2</sup> outside WHG<br>1,800- 2,000 g/m <sup>2</sup> | approx. 2,500 g/m <sup>2</sup>        | approx. 120 g/m <sup>2</sup>           |
| <b>Workability *</b>   | approx. 30 minutes   | approx. 20 minutes  | approx. 20 minutes                    | approx. 60 minutes                     |
| <b>Drying Time *</b><br>Walkable<br>Ready for Mechanical ans<br>Chemical Loads | after 6-8 hours<br>after 7 days  | after 14-18 hours<br>after 7 days   | after 14-18 hours<br>after 7 days     | after 18-24 hours<br>–                 |
| <b>Processing Temperature</b><br>Minimum<br>Maximum                            | 10 °C<br>30 °C   | 10 °C<br>30 °C  | 10 °C<br>30 °C                        | 15 °C<br>30 °C                         |
| <b>Abrasion acc. to Taber</b><br>(CS 10/100 U/1000 g)                          | –  | approx. 50 mg   | approx. 50 mg                         | –                                      |
| <b>Bleeder Resistance</b>  | –  | < 10 <sup>6</sup> Ohm   | –                                     | < 10 <sup>5</sup> Ohm                  |

\* Reference values at 20 °C and 50 % relative humidity.

Table of Chemical Resistance

| Group | Substance Name<br>(in alphabetical order) | Disbon Water Protection System |            |
|-------|---|--------------------------------|------------|
|       |   | WHG-New                        | WHG-AS New |
| 8     | Acetaldehyde                              | ●                              | ●          |
| 7     | Acetone                                   | ○                              | ○          |
| 7a    | Acetophenone                              | ○                              | ○          |
| 7     | Acrylic ester                             | ○                              | ○          |
| 14    | Alkanolamides, 5 % aqueous sol.           | ●                              | ●          |
| 14    | Alkanesulfonates, 5 % aqueous sol.        | ●                              | ●          |
| 14    | Alkyl phosphates, 5 % aqueous sol.        | ●                              | ●          |
| 5     | Allyl alcohol                             | ○                              | ○          |
| 10    | Aluminium (III)-chloride sol. (saturated) | ●                              | ●          |
| 9     | Formic acid < 5 %                         | ●                              | ●          |
| 7     | Formic acid ethyl ester                   | ○                              | ○          |
| 11    | Ammonium 32 % sol.                        | ●                              | ●          |
| 12    | Ammonium chloride, saturated sol.         | ●                              | ●          |
| 12    | Ammonium sulfate, saturated sol.          | ●                              | ●          |
| 13    | Aniline                                   | ●                              | ●          |
| 9     | Malic acid, saturated sol.                | ●                              | ●          |
| 9     | Ascorbic acid, saturated sol.             | ●                              | ●          |
| 12    | Barium chloride, saturated sol.           | ●                              | ●          |
| 11    | Barium hydroxide, saturated sol.          | ●                              | ●          |

| Group | Substance Name<br>(in alphabetical order) | Disbon Water Protection System |            |
|-------|---|--------------------------------|------------|
|       |   | WHG-New                        | WHG-AS New |
| 14    | Benzalkonium A, 5 % aqueous sol.          | ●                              | ●          |
| 1     | Unleaded gasoline                         |                                | ●          |
| 1     | Regular gasoline                          |                                | ●          |
| 1     | Premium gasoline                          |                                | ●          |
| 9     | Benzoic acid saturated sol.               | ●                              | ●          |
| 4a    | Benzene                                   | ●                              | ●          |
| 5     | Benzyl alcohol                            | ○                              | ○          |
| 13    | Benzylamine                               | ●                              | ●          |
| 9     | Succinic acid, saturated sol.             | ●                              | ●          |
| 12    | Borax, saturated sol.                     | ●                              | ●          |
| 10    | Hydrobromic acid < 20 %                   | ●                              | ●          |
| 5     | Butanols                                  | ○                              | ○          |
| 9     | Butyric acid                              | ●                              | ●          |
| 7     | Butylacetate                              | ○                              | ○          |
| 13    | Butylamine                                | ●                              | ●          |
| 5     | Butyl diglycol                            | ○                              | ○          |
| 5     | Butylglycol                               | ○                              | ○          |
| 7     | Butyl laurate                             | ●                              | ●          |
| 8     | Butyraldehyde                             | ●                              | ●          |
| 10    | Calcium chloride sol.                     | ●                              | ●          |
| 11    | Calcium hydroxide (lime milk)             | ●                              | ●          |
| 4     | Cyclohexene                               | ●                              | ●          |
| 4     | Cyclooctane                               | ●                              | ●          |
| 4     | Cyclooctene                               | ●                              | ●          |
| 4     | Cyclopentane                              | ●                              | ●          |
| 5     | Cyclopentanol                             | ○                              | ○          |
| 4     | Decalin                                   | ●                              | ●          |
| 13    | 1.2 Diaminocyclohexane                    | ●                              | ●          |
| 4     | Diesel fuel                               | ●                              | ●          |

| Group | Substance Name<br>(in alphabetical order)         | Disbon Water Protection System |            |
|-------|---|--------------------------------|------------|
|       |   | WHG-New                        | WHG-AS New |
| 13    | Diethanolamin                                     | ●                              | ●          |
| 5     | Diethylenglykol                                   | ○                              | ○          |
| 13    | Diethylentriamine                                 | ●                              | ●          |
| 7     | Diisopropyl ketone                                | ○                              | ○          |
| 7     | Diisobutyl ketone                                 | ○                              | ○          |
| 13    | 3.3 Dimethyl-                                     | ●                              | ●          |
| 2     | 4.4 Diaminodicyclohexylmethane jet fuel "Jet A-1" |                                | ●          |
| 2     | Jet fuel JP 4                                     |                                | ●          |
| 12    | Iron (II) sulfate, saturated sol.                 | ●                              | ●          |
| 10    | Iron (III) - chloride., saturated sol.            | ●                              | ●          |
| 9     | Acetic acid < 20 %                                | ●                              | ●          |
| 5     | Ethanol   | ●                              | ●          |
| 7     | Ethyl acetate                                     | ○                              | ○          |
| 7     | Ethylamylketone                                   | ○                              | ○          |
| 5     | Ethyldiglycol                                     | ○                              | ○          |
| 13    | Ethylendiamin                                     | ●                              | ●          |
| 7     | Ethylglycolacetate                                |                                | ●          |
| 14    | Fatty alcohol polyglycol ether, 5 % aqueous sol.  | ●                              | ●          |
| 14    | Fatty amine ethoxylates, 5 % aqueous sol.         | ●                              | ●          |
| 2     | Aviation fuels                                    |                                | ●          |
| 8     | Formaldehyde ≤ 20 %                               | ●                              | ●          |
| 8     | Fufural   | ●                              | ●          |
| 9     | Tannic acid                                       | ●                              | ●          |
| 8     | Glutardialdehyde                                  | ●                              | ●          |
| 5     | Glycol  |                                | ●          |
| 8     | Glyoxal   | ●                              | ●          |
| 5     | Glycerine   | ○                              | ○          |
| 9     | Uric acid   | ●                              | ●          |

| Group | Substance Name<br>(in alphabetical order) | Disbon Water Protection System |            |
|-------|---|--------------------------------|------------|
|       |   | WHG-New                        | WHG-AS New |
| 3     | Heating oil                               | ●                              | ●          |
| 4     | Heptane                                   |                                | ●          |
| 4     | Hexane                                    | ●                              | ●          |
| 5     | Hexanols                                  | ●                              | ●          |
| 7     | Isobutyl acetate                          | ○                              | ○          |
| 13    | Isophoronediamine                         | ●                              | ●          |
| 5     | Isopropyl glycol                          | ○                              | ○          |
| 10    | Hydroiodic acid< 20%                      | ●                              | ●          |
| 12    | Potash alum, saturated sol.               | ●                              | ●          |
| 12    | Potassium chloride, saturated sol.        | ●                              | ●          |
| 11    | Potassium hydroxide < 50%                 | ●                              | ●          |
| 12    | Potassium nitrate, saturated sol.         | ●                              | ●          |
| 12    | Potassium sulphate, saturated sol.        | ●                              | ●          |
| 12    | Cobalt sulphate, saturated sol.           | ●                              | ●          |
| 12    | Copper sulphate, saturated sol.           | ●                              | ●          |
| 14    | Lauryl ether, 5 % aqueous sol.            | ●                              | ●          |
| 12    | Lithium carbonate, saturated sol.         | ●                              | ●          |
| 12    | Lithium chloride, saturated sol.          | ●                              | ●          |
| 11    | Lithium hydroxide, saturated sol.         | ●                              | ●          |
| 10    | Magnesium chloride, saturated sol.        | ●                              | ●          |
| 12    | Magnesium sulphate, saturated sol. (26 %) | ●                              | ●          |
| 9     | Maleic acid                               | ●                              | ●          |
| 12    | Sea Water                                 | ●                              | ●          |
| 7     | Methacrylic ester                         | ○                              | ○          |
| 7     | Methyl acetate                            | ○                              | ○          |
| 7     | Methylbutyl ether                         | ○                              | ○          |
| 5     | Methyldiglycol                            | ○                              | ○          |
| 7     | Methyl ethyl ketone                       | ○                              | ○          |
| 7     | Methyl formate                            | ○                              | ○          |
| 5     | Methylene glycol                          | ○                              | ○          |

| Group | Substance Name<br>(in alphabetical order)                                | Disbon Water Protection System |            |
|-------|--|--------------------------------|------------|
|       |  | WHG-New                        | WHG-AS New |
| 7     | Methyl glycol acetate  | ○                              | ○          |
| 7     | Methyl isobutyl ketone   | ○                              | ○          |
| 7     | Methyl propyl ketone   | ○                              | ○          |
| 9     | Lactic acid < 50 %   | ●                              | ●          |
| 6b    | Monochlorobenzene  | ○                              | ○          |
| 13    | m-Xylylene   | ●                              | ●          |
| 13    | N-Aminoethyl piperazine  | ●                              | ●          |
| 4     | Naphta   |                                | ●          |
| 4a    | Naphthalene  | ○                              | ●          |
| 11    | Sodium, saturated sol.   | ●                              | ●          |
| 12    | Sodium chloride, saturated sol.  | ●                              | ●          |
| 10    | Sodium metabisulfite, saturated sol.                                     | ●                              | ●          |
| 11    | Sodium hydroxide (caustic soda) up to 50 %                               | ●                              | ●          |
| 11    | Sodium hypochlorite (Chlorine bleach, active chlorine content ≤ 160 g/l) | ●                              | ●          |
| 12    | Sodium nitrate, saturated sol.   | ●                              | ●          |
| 12    | Sodium nitrite, saturated sol.   | ●                              | ●          |
| 12    | Sodium sulphate, saturated sol.  | ●                              | ●          |
| 11    | Sodium sulfide, saturated sol.   | ●                              | ●          |
| 13    | N, N-dimethylaniline   | ●                              | ●          |
| 4     | Octane   | ●                              | ●          |
| 9     | Oleic acid   | ●                              | ●          |
| 2     | Gasoline, DIN 51 600, DIN 51 607   |                                | ●          |
| 9     | Oxalic acid, saturated sol.  | ●                              | ●          |
| 7     | Oxal säurediethylester   | ○                              | ○          |
| 9     | Palmitic acid  | ●                              | ●          |
| 4     | Paraffins  | ●                              | ●          |
| 4     | Pentane  | ●                              | ●          |
| 5     | Pentanol (amyl alcohol)  | ○                              | ○          |
| 7     | Pentanone  | ○                              | ○          |



| Group | Substance Name<br>(in alphabetical order) | Disbon Water Protection System |            |
|-------|---|--------------------------------|------------|
|       |   | WHG-New                        | WHG-AS New |
| 4     | Petroleum                                 | ●                              | ●          |
| 10    | Phosphoric acid up to 60%                 | ○                              | ○          |
| 5     | Polyethylene glycol                       | ○                              | ○          |
| 5     | Propanols                                 | ○                              | ○          |
| 8     | Propionaldehyde                           |                                | ●          |
| 9     | Propionic acid 30 %                       | ●                              | ●          |
| 5     | Propylene glycol                          | ○                              | ○          |
| 10    | Nitric acid ≤ 15 %                        | ●                              | ●          |
| 10    | Hydrochloric acid ≤ 37 %                  | ●                              | ●          |
| 10    | Sulfuric acid up to 90 %                  | ●                              | ●          |
| 10    | Sulphurous acid 5-6 %                     | ●                              | ●          |
| 4     | Shellsole                                 | ●                              | ●          |
| 4     | Skydrol                                   | ●                              | ●          |
| 4     | White spirit                              | ●                              | ●          |
| 13    | Tetraethylenepentamine                    | ●                              | ●          |
| 4a    | Toluene                                   | ●                              | ●          |
| 13    | Triethanolamine                           | ●                              | ●          |
| 13    | Triethylenetetramine                      | ●                              | ●          |
| 4a    | Trimethylbenzene                          | ●                              | ●          |
| 13    | Trimethyl hexamethylene-TMD               | ●                              | ●          |
| 11    | sodium silicates                          | ●                              | ●          |

| Group | Substance Name<br>(in alphabetical order) | Disbon Water Protection System |            |
|-------|---|--------------------------------|------------|
|       |   | WHG-New                        | WHG-AS New |
| 9     | Tartaric acid, saturated sol.             | ●                              | ●          |
| 4a    | Xylene                                    | ●                              | ●          |
| 12    | Zinc chloride, saturated sol.             | ●                              | ●          |
| 12    | Zinc nitrate, saturated sol.              | ●                              | ●          |
| 12    | Zinc sulphate, saturated sol.             | ●                              | ●          |
| 10    | Stannous chloride, saturated sol.         | ●                              | ●          |
| 9     | Citric acid, saturated sol.               | ●                              | ●          |

Stress Levels acc. to TRWS 132/1997 Design of Sealing Surfaces:  
 ● High ≤ 28 days; ● Medium ≤ 14 days ; ○ Low ≤ 7 days; very low ≤ 72 hours.  
 \*In some cases discolouration and chalking effects may occur on the surface.

Package Size / Colours

| Product         | Packaging size  | Colours     |
|-----------------|---|-------------|
| DisboXID 5011   | 30 kg<br>20 kg hobbock (base)<br>10 kg tin bucket (hardener)      | Transparent |
| DisboXID 5033   | 30 kg<br>24 kg hobbock (base)<br>6 kg tin bucket (hardener)       | Pebble grey |
| DisboXID 5044   | 30 kg<br>24kg hobbock (base)<br>6 kg tin bucket (hardener)        | Pebble grey |
| DisboPOX W 5022 | 10 kg<br>2 kg plastic bucket (base)<br>8 kg tin bucket (hardener) | Black       |

Discolouration and chalking effects may occur with weathering and UV light exposure. The colourants 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 mechanical loads with grinding effect. Proper functioning of the coating will not be affected by these changes.

Storage

| Product                    | Storage                     | Shelf life                              |
|----------------------------|-----------------------------|---|
| DisboXID 5011              | Cool,<br>dry,<br>frost-free | 12 months,<br>in the original packaging |
| DisboXID 5033              | Cool,<br>dry,<br>frost-free | 12 months,<br>in the original packaging |
| DisboXID 5044              | Cool,<br>dry,<br>frost-free | 12 months,<br>in the original packaging |
| DisboPOX W 5022            | Cool,<br>dry,<br>frost-free | 6 months,<br>in the original packaging  |
| DisboADD 973<br>Kupferband | Dry                         | Unlimited                               |

If temperatures are low, the material should be stored at 20 °C before application.

## Application

Suitable Substrates

All types of mineral substrates. For interior and exterior use.  
For a coating according to technical approval, the substrate must comply with the requirements of the construction and testing principles. The substrates must be sound, dimensionally stable, solid and free from all materials that may prevent good adhesion, e.g. loose/brittle materials, dust, oils, fats/greases or abraded rubber contamination (scuff/skid marks).  
Cementitious flow mortars, ameliorated with synthetic resin, must be checked for compatibility by trial application, if necessary.  
The adhesive tensile (pull-off) strength of substrates must be 1.5 N/mm<sup>2</sup> on an average, with a minimum individual value of 1.0 N/mm<sup>2</sup>.  
Substrates must have achieved their equilibrium moisture content:  
Concrete and cement-based composition floor (screed): max. 4 % by weight  
Rising damp/moisture must be avoided.

Substrate Preparation

Prepare the substrate by suitable means, e.g. grit blasting (shot peening) or milling, in order to meet the above mentioned requirements. Remove existing coatings. Repair spallings and defects with Disbocret® PCC or Disbon EP mortars, filling them flush with the surface.

Note: In catch basins all inner edges have to be formed as grooves/concave filltes. DisboXID 5011 + quartz sand mr 1:7 to 1:9 is suitable.

Preparation

DisboXID 5011, DisboXID 5033, DisboPOX W 5022 und DisboXID 5044 are being delivered in a matched mixing ratio.

Add the hardener to the base material and stir intensively with a low-speed electric paddle (agitator; max. 400 rpm), until a homogeneous, streak-free mass is achieved. Pour the mixture in another clean container and stir again very thoroughly.

For work on vertical or inclined surfaces, add 2-4 % by weight of DisboADD 952 to the finishing coat.

**System WHG-New****1. Priming coat**

Pour DisboXID 5011 on the prepared substrate and spread it uniformly, using a rubber scraper. To avoid glossy spots, rework the complete surface with a medium pile roller or a sealing brush. Scatter/strew the priming coat with quartz sand 0.3-08 mm.

Consumption:

DisboXID 5011 approx. 350–450 g/m<sup>2</sup>

*Scattering:*

Quartz sand 0.3-0.8 mm approx. 500-1000 g/m<sup>2</sup>

**2. Grooves/concave filltes**

Prime the substrate as described in 1.

Prepare the mortar consisting of:

DisboXID 5011 1 part by weight

DisboADD 946 10 parts by weight

Apply the fresh material as grooves/concave fillets with a 5 cm radius, using appropriate tools, e.g. a concave bevelled trowel.

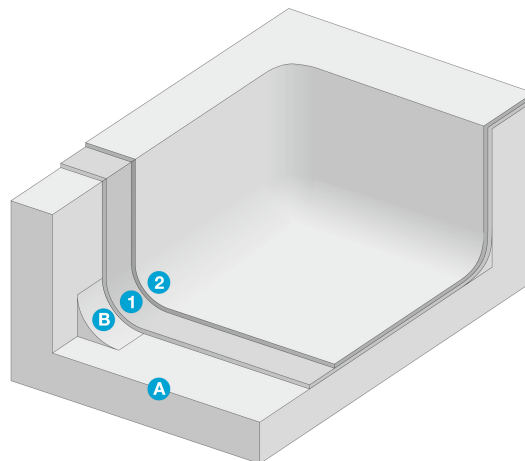
**3. Finishing coat**

After waiting min. 6-8 hours at 20 °C and 50 % relative humidity, remove excess quartz sand from the priming coat. Pour Disbon WHG 5044 Verlaufschiicht on the prepared surface using a hard rubber scraper with a suitable notching size and spread the material uniformly.

Note: Deaerate the coating with a spiked roller.

Consumption:

DisboXID 5044: 2,500 g/m<sup>2</sup>



**Figure 1:** Coating structure WHG-New System

(A) Substrate

(B) Wall-/floor connection, groove made of e.g. Disbon EP-Mörtelbelag

(1) DisboXID 5011, scattered/strewn with quartz sand 0.3-0.8 mm

(2) DisboXID 5044 (for vertical and inclined surfaces, add DisboADD 952)

## System WHG-AS New

### 1. Priming coat

Pour DisboXID 5011 on the prepared substrate and spread uniformly using a rubber scraper. To avoid glossy spots, rework the complete surface with a medium pile roller or a sealing brush. Scatter/strew the priming coat with quartz sand 0.3-0.8 mm.

Consumption:

DisboXID 5011 approx. 350–450 g/m<sup>2</sup>

### 2. Grooves/concave filltes

Prime the substrate as described in 1.

Prepare the mortar consisting of:

DisboXID 5011 1 part by weight

DisboADD 946 10 parts by weight

Apply the fresh material as grooves/concave fillets with a 5 cm radius, using appropriate tools, e.g. a concave bevelled trowel.

Consumption:

DisboXID 5011 150 g/m

DisboADD 946 1500 g/m

### 3. Conductive intermediate coat

After waiting min. 7 hours at 20 °C and 50 % relative humidity stick self-adhesive copper strips Disbon 973 (length: approx. 50 cm) circulating the wall area (see figure) in a distance of max. 20 m. A minimum of two earth connections is required. Surfaces that are separated by joints are to be separately grounded.

Clean the thoroughly applied copper strips with a cloth, wetted with thinner Disboxid 419. The copper strips must be connected (by an expert for electrical supply) with the earthing/grounding of the building after having finished the application of coatings. A maximum distance of  $\leq 20$  m between copper strips must be respected in case of large connected surfaces, by applying additional earth connections to pylons or other mounting parts. After installing the copper band, apply DisboPOX W 5022 on the complete surface, using a hard rubber slider, then spread uniformly with a pile roller.

Note: Before applying the finishing coat, the conductivity of the intermediate layer has to be checked. The bleeder resistance, measured according to DIN EN 1081 must not be below  $10^5$  Ohm.

Consumption:

DisboPOX W 5022 approx. 120 g/m<sup>2</sup>

### 4. Conductive finishing coat

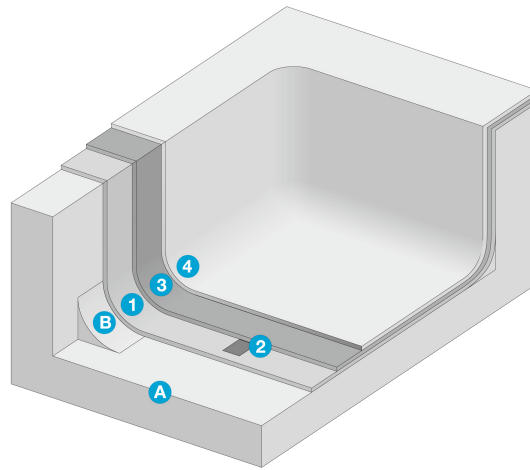
After waiting min. 12 hours at 23 °C and 50 % relative humidity, pour DisboXID 5033 on the prepared substrate and spread the material uniformly, using a hard rubber scraper with appropriate notching.

Note: Material consumption must not be exceeded, to guarantee good conductivity. The deaeration with a spiked roller is mandatory in order to align the carbon fibres.

Consumption:

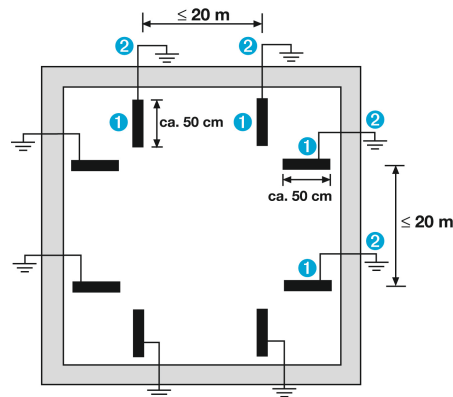
DisboXID 5033 max. 2,500 g/m<sup>2</sup>

Note: For use outside WHG-accredited projects, a normal conductive coating of DisboXID 5033 with reduced consumption of approx. 1.5-2.0 kg/m<sup>2</sup> can be applied.



**Figure 2:** Coating structure system WHG-AS New

- (A) Substrate
- (B) Wall-/floor connection, groove made of e.g. Disbon EP-Mörtelbelag
- (1) DisboXID 5011
- (2) DisboADD 973
- (3) DisboPOX W 5022
- (4) DisboXID 5033 (for vertical and inclined surfaces, add DisboADD 952!)



**Figure 3:**

Layout earthing connection System WHG AS New

DisboADD 973: Braided wire made of copper, 4 mm<sup>2</sup> for connection to the earthing/grounding (ring life)

Working Temperature

**Material, atmospheric, and substrate temperature:**  
see table:

| Product         | min.  | max.  |
|-----------------|-------|-------|
| DisboXID 5011   | 10 °C | 30 °C |
| DisboPOX W 5022 | 10 °C | 30 °C |
| DisboXID 5033   | 10 °C | 30 °C |
| DisboXID 5044   | 10 °C | 30 °C |

Substrate temperature should always be min. 3 °C above the dew point temperature.

Drying Time

At 20 °C and 50% relative humidity, DisboXID 5011 is walkable and recoatable after approx. 6-8 hours.

DisboXID 5033 is walkable after approx. 14-18 hours, ready for mechanical and chemical loads after approx. 7 days.

DisboPOX W 5022 is walkable/recoatable after approx. 14-18 hours at the earliest.

DisboXID 5033 V is walkable after approx. 14-18 hours, ready for mechanical and chemical loads after approx. 7 days.

Note: DisboXID 5033 must not be recoated with itself in order to maintain conductivity.

Tool Cleaning

Immediately after use or during longer breaks. Clean equipment by appropriate means (see table below).

| Product   | Cleaning agent            |
|---|---------------------------|
| DisboXID 5011<br>DisboXID 5033<br>DisboXID 5044 | DisboADD 419              |
| DisboPOX W 5022                                 | Water or warm soapy water |

## Advice

Coating of Collection Basins (Spill Sumps)

Hazard warnings, safety advices, Giscodes, disposal, VOC and CE labelling for the single system components:

Please follow the corresponding technical informations:

DisboXID 5011  
DisboPOX W 5022  
DisboXID 5033  
DisboXID 5044

### Demands on the processor:

The coating system may only be installed by companies that are responsible for this Activities Specialist company according to § 3 of the Ordinance on Systems for Handling water-polluting substances from March 31, 2010 (Federal Law Gazette I p. 377). After completion of Coating is a clearly visible sign with information on the coating system, Execution date and processor to be attached. Appropriate signs can be obtained from Disbon be requested

### Structural requirements:

For the planning and dimensioning of catch basins, catchment areas and surfaces made of reinforced concrete the regulations according to DIN EN 1992-1-16 and DIN 1045-27 apply in connection with DIN EN 206-18 as well as DIN 1045-39 in conjunction with DIN EN 1367010, with a crack width limitation to be taken into account according to the crack-bridging ability of the coating system note Catch basins, catchment areas and areas that are to be coated with the coating system must not have any cracks with widths greater than

- 0.2 mm when using the coating system with the addition of an extender of up to 2% and
- 0.3 mm when using the coating system with no additive added exhibit or be expected.

Any cracks or defects that may be present must be closed or repaired before the coating system is applied.

In addition, the following structural requirements must be met before the installation (application) of the coating system: – Construction joints are to be avoided. If construction joints are unavoidable, they must be designed in accordance with DIN 1045-3, Section 8.4 (5) in conjunction with DIN EN 13670, Section 8. – Internal edges are to be designed as fillets. – Water exposure to the back of the coating system must be avoided. If groundwater, seepage or other water can enter the building from the rear, it must be sealed in accordance with DIN 18533-112, DIN 18533-213 and DIN 18533-314. – Concrete surfaces must be at least 28 days old, dry (residual moisture  $\leq 4\%$ , CM measurement) and free from contamination and have sufficient surface adhesion before they are coated. The average surface tensile strength must be at least 1.5 N/mm<sup>2</sup>. – Before the application of the coating system, the concrete surfaces must be prepared in accordance with the provisions of this decision and the information provided by the applicant and, if necessary, repaired only with the products specified by the applicant that are suitable and compatible with the coating system. – The concrete surface to be coated is to be assessed and approved by the company according to Section 3.2.1 (1) in accordance with Section 3.2.2 of the AbZ. The coating system may only be applied when the aforementioned structural requirements are met.

Cleaning and Maintenance

See general cleaning instructions and maintenance recommendations for Disbon floors. The product-specific maintenance recommendations are available at the Caparol Customer Service Center.

Further Information

When processing the Disbon water protection systems, the information provided by the German Institute for structural engineering in the building inspectorate approval System WHG-Neu: Bauaufsichtliche Zulassung Z-59.12-348 System WHG-AS Neu: Bauaufsichtliche Zulassung Z-59.12-349

Further Details

See Material Safety Data Sheets (MSDS).  
During application follow Disbon's instructions for handling construction chemicals.

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](http://www.caparol.com)

## System Data Sheet Water Protection Systems - Issue: June 2023

All suggestions and application instructions herein are based on our latest technical experience. Due to the wide variety of individual project conditions, we cannot be held responsible for their content. These instructions do not release the purchaser/ applicator from his responsibility to determine the suitability of the product in consideration of the project characteristics. These instructions are to be considered void when a new edition is released. Our general conditions of sale and delivery in their latest edition apply. This document is a translation of our German System Data Sheet Water Protection Systems - Issued: May 2022