

IPA POLYSCHICHT®

Polymer/Silicate Coating system with General building supervision approval



Product description:

IPA Polyschicht® is a solvent-free, 2- or 3- component coating material, consisting of binder-, hardener- and if necessary a powder component to modify the viscosity (thixotropy). IPA Polyschicht® can be carried out as an antistatic (electrically dissipative) coating when required. IPA Polyschicht® is certified by DIBT (German Institute for Construction engineering) with approval NOS: Z-59 12-374 and Z-59.41-510 2206) and supervised by TÜV SÜD.

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Chemical resistance after 2 years of exposure:

Sulfuric acid	30%
Chromic acid	25%
Nitric acid	25%
Formic acid	35%
Hydrochloric acid	20%
potassium hydroxide solution	40%
Biodiesel, fuel oil, gasoline, aviation fuel others on request	

Application area: Sealing and restoration of impermeability of:

- Containment systems for handling liquid water-polluting substances in accordance with § 62 WHG for handling liquid water-polluting substances
- Manhole shafts of tank installations
- Sewer constructions, Sewage systems, e.g. pipes, shafts, digestion towers and flow channels
- Separator systems for oil, grease and fuel
- Collecting pans for chemicals
- Plants with biogenic sulfuric acid contamination
- Biogas plants

Mode of action (characteristics):

- Resistant against chemicals up to pH = 0, also, fuel, oil, grease, inorganic acids (as sulfuric acid) and cleaning agents
- IPA Polyschicht® is solvent-free, water vapor diffusible and doesn't contain VOC components.
- Against biogenic sulfuric acid corrosion, prevents concrete corrosion
- Heat resistant up to 140°C

Working instructions:

Surface:

All substrates consisting of concrete, steel and all IPA concrete maintenance- and repairing mortars

Preparation:

Cleaning of surfaces according to ZTV-SIB, Table 2. Remove all loose parts and anti-adhesive agents such as oil, grease or other material- and coating residuals up to the sustainable surface, in order to form an optimal adhesive compound. Recommended surface adhesive tensile strength 1,5 N/mm². For steel: Standard purity degree SA 2 ½ according to DIN 55928. Surfaces must be dry and 3°C higher than dew point temperature. Relative air humidity must be lower than 80%. For mineral surfaces: Surface must be optically dry. For humid surfaces or water seepage insulate and/or pre-treat with IPANEX Stopfmörtel, IPA Unimörtel ph+ or IPANEX Flächendicht WF. Repair spalled parts or uneven substrate with IPA Unimörtel Rapid.

Mixing method:

Mix IPA binder- and IPA hardener and agitate at least 3 minutes with a fast running wing agitator at 600 RPM until you form a homogenous mass. Then after 2 minutes waiting time add if necessary the powder component and mix again with double agitator at least 2 minutes.

Attention: Longer mixing times shorten the package working time.

Application:

3C System (Mortar system):

Apply the mixed mortar with a scoop, plastic- or steel smoothing device on the prepared surface in a layer of 3-5 mm. Wait at least 3 hours between the single layers, when applying more layers. Traces caused by scoop strokes must be smoothed immediately with a smoothing scoop or device. For the surface finishing eventually apply a scratch filling. During and up to 72 hours after working surface temperature should be not lower than + 8° C and not higher than + 30° C, relative air humidity should not exceed 80%. Material temperature should not be lower than + 10° C and not higher than 30° C. During and up to 12 hours after working the treated surfaces must be protected from rain, solar irradiation and condensate precipitation. Layer thickness 3-5 mm.

2C System (Coating system)

To avoid air infiltration from the substrate, make a thin first coating, then apply the mixed material by

brush or with adequate spraying equipment in 1,5-2 mm thickness.

During and up to 72 hours after working surface temperature should be not lower than + 8° C and not higher than + 30° C, relative air humidity should not exceed 80%. Material temperature should not be lower than + 10° C and not higher than 30° C. During and up to 12 hours after working the treated surfaces must be protected from rain, solar irradiation and condensate precipitation.

Layer thickness 2 mm.

Note: To avoid air mounting from the substrate make a thin first coating, then apply the mixed material by brush or with adequate spraying equipment in 1,0mm thickness. When the first coat is hardened (4-6hours) apply the wires and make a final coating of 1mm.

Antistatic (electrically dissipative) coating

If a dissipative coating is required, the IPA conductive tape is attached to the 1st cured layer and then the 2nd coat/troweling (conductive top coat) is applied.

Cleaning and disposal

Pre-clean the working tools with clean water. Final cleaning with PU-cleaner. Don't dispose residuals in the canalization. Material residuals, delivery packages must be disposed according to the official disposal norms. Disposal codes in hardened condition: EWC-no. 17 01 01

Safety at work:

During work please wear protection clothes, protection glasses and protection gloves. During the working process don't smoke, eat or drink! Avoid strong formation of dust. In case of skin contact and splashes in the eyes immediately flush at least for 15 minutes with clean water. It is recommended to keep ready an eye flushing bottle with a sterile solution in order to flush thoroughly. Afterwards immediately consult an oculist. Please respect the security data sheets and the norms of the professional associations about handling of polymer-/silicate coated materials.

Version 2212

Technical data:

	Binder	Hardener	Powder
Material basis	PU-Polymer	Silicate based	Powder
Color	Black (dissipative), grey, clear grey, other colors upon request	transparent	Black or white
Density 20°C	1,14 g/m ³	1,32 g/cm ³	1,43 g/cm ³
Mixing Ratio and packaging size	6,8kg can	4,2kg can	11kg jug
Fresh coating or mortar			
Package workability time at 20° C	approx. 20-25 minutes (depending on temperature)		
Working temperature	+8° C to +30° C		
Layer thicknesses	1,8 to 2mm		
Solid mortar (with powder)			
Compression strength	1 day: 19,8 N/mm ²		28 days: 30,4 N/mm ²
Bending tensile strength	1 day: 7,1 N/mm ²		28 days: 14,2 N/mm ²
Adhesive tensile strength	28 days approx. 3,4 N/mm ² rupture in concrete		
Material consumption	1,3 kg/m ² /mm		
Delivery form:	2C set 11kg		
Storage:	6 months; in unopened original package, dry at +5°C- +30°C		



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