



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 (tixotrophy). Ipa Polyschicht can also be carried out as an antistatic (electrically conductive) coating when required. IPA Polyschicht is certified by DIBT (German Institute for Construction engineering).



Zulassung Z-59 12-374

Application area:

In case of high chemical and mechanical exposure of the coating material such as application of mortar coatings in canal constructions, separation plants for grease and light liquids and waste water plants, i.e. separation plants for fermentation towers, pipes, sewers, also with biogenic sulphuric acid exposure.

Mode of action (characteristics):

IPA Polyschicht is well workable when used vertically or overhead and it is stable. It adheres on mineral surfaces, concrete and steel.

Characteristics:

- resistant against chemicals from pH 14 up to pH 0, also, fuel, oil, grease, inorganic acids like sulphuric acid and cleaning agents
- IPA Polyschicht is solvent-free, water vapour diffusible and doesn't contain Voc components.
- against biogenic sulphuric acid corrosion, prevents concrete corrosion
- Heat resistant up to 140°C

Chemical resistance stable 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	

Working instructions:

Surface:

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

Technical data:

	Binder	Hardener	Powder
Material basis	Pu-Polymer	Silicate	Mineral Powder
Colour	Black (conductive), grey, clear grey, other colours upon request	transparent	beige
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 - +30° C		
Layer thicknesses	1,8 - 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 Breakage in concrete		
Adhesive tensile strength on steel	28 days approx. 6 N/mm ²		
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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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.

Treatment:

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 mounting from the substrate make a thin first coating, then apply the mixed material by brush or with adequate spraying equipment in 1,5-2mm 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.

Antistatic (electrically conductive) Coating

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.

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.

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