



Safety data sheet

Polyschicht

Status: 05.01.2024 Version: 1

Dissipative, plastic-modified polymer silicate with DIBT approval

Product description:

IPA Polyschicht is a two-component, solvent-free, polymer/silicate-based coating system consisting of a binder and hardener component. The coating can be made electrostatically dissipative.

Examination certificate:

Testing the coating system

IPA Polyschicht as a coating for separator systems at TÜV Süd

Areas of application:

- Installations with sealing surfaces in accordance with § 62 WHG for handling liquid substances hazardous to water
- Canal structures
- Wastewater systems, e.g. for pipes, shafts, digesters and flow channels
- Catchment areas of LAU and HBV systems
- Separator systems for greases and light liquids
- Drip trays for chemicals
- Systems with biogenic sulphuric acid load
- Biogas plants

Properties:

- Can be processed well in vertical and overhead applications
- It adheres to mineral substrates, concrete and steel without primer
- Resistant to waste water from pH 0-14, chromic acid 35%, heating oils, solvents, fuels. Oils + greases, - see resistance table
- Polycoat is solvent-free, water vapor diffusible and contains no VOC components
- has a high mechanical strength when cured
- is resistant to biogenic sulphuric acid and thus prevents concrete corrosion
- heat-resistant up to 140°C
- Does not emulsify with water, water-repellent immediately after application
- Complete curing even under water
- crack bridging up to 0.1mm



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Processing instructions Substrate:

Concrete and all concrete repair and repair mortars as well as steel surfaces.

Preparation:

Prepare the surfaces in accordance with DIN-EN 14879-1. Remove all loose parts and binding substances such as oil, grease or other material and coating residues down to the load-bearing substrate to ensure a good adhesive bond. Recommended surface adhesive tensile strength 1.5 N/mm².

For steel:

Standard purity grade SA 2 1/2 in accordance with DIN 55928. Surfaces must be dry and 3°C above the dew point temperature. Relative humidity less than 80%.

For mineral substrates:

The substrate must be visually dry. In the case of damp substrates or moisture penetration, seal or prepare with IPA Unimörtel Rapid. Treat imperfections or roughness depth compensation with IPA Unimörtel Rapid.

Mixing process:

Mix the IPA Polyschicht binder and IPA Polyschicht hardener components as follows:

- Use a paddle mixer (LX 300) for mixing
- Slowly add about 500 ml of the hardener component to the binder component while mixing intensively (1200-1500 rpm)
- Then gradually add the remaining hardener to the resin component within two minutes while continuing to mix intensively until a homogeneous mass is obtained
- Pour the binder component into a clean mixing container and continue mixing
- After a total of at least 4 minutes of mixing, the material is ready for processing

Processing:

The mixed coating material must be applied to the prepared substrate in a total thickness of at least 2 mm by brushing (1-2 coats) or spraying. If the coating is applied by brush, the first coat consists of a thin primer that is worked intensively into the substrate (in order to create a perfect bond to the substrate free of pores and cavities) and a first coat of approx. 1 mm thickness immediately afterwards.

The top coat is applied after a waiting time of at least 6 hours. (Surface must be tack-free and dry / temperature dependent)



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The substrate temperature during application and 72 hours afterwards should be at least + 10° C and at most + 25° C, the relative humidity should not exceed 80%.

The material temperature should be at least + 12° C and not more than 25° C. During the entire application process and for a further 4-6 hours, the treated surfaces must be protected against rain, sunlight and condensation. Layer thickness at least 2 mm.

Dissipative coating:

If a conductive coating is required, the IPA conductive tape is attached to the hardened 1st coat and then the 2nd coat (conductive top coat) is applied. Please refer to the IPA conductive tape technical data sheet.

Substrate leveling:

If substrate leveling is required, IPA Polyschicht 3 K powder can be added to the coating compound until a suitable, trowelable consistency is achieved. In addition, 2 further coats are required as specified.

Occupational safety:

Please wear protective clothing, safety goggles and protective gloves when working and avoid heavy dust formation. Do not smoke, eat or drink during processing! In the event of skin contact and splashes in the eyes, rinse immediately with clean water for at least 15 minutes. It is advisable to have an eye rinsing bottle with the sterile solution ready to rinse eyes thoroughly. Then consult an ophthalmologist immediately. Please observe the safety data sheets and the regulations of the trade associations regarding the handling of polymer/silicate-bound substances.

IPA POLYSCHICHT® EWC-No. 17 01 01

IPA POLYSCHICHT® resin EWC no. 08 01 99

IPA POLYSCHICHT® Hardener EWC-No. 06 02 99

Technical data:

	Binder	Hardener
Material basis	Pu-polymer	Silicate
Color	Black	Transparent
Density 20°C g/m³	1,21	1,32
Fresh mortar		
Container processing time at 20°C (depending on temperature)	Approx. 15-20 minutes	
Processing temperature	+8°C to +25°C	
Layer thicknesses	At least 2mm	
Mixing ratio	6.8kg resin 4.2kg hardener	



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Material consumption	
Delivery form	11kg container (2k), 22kg (3k)
Storage	6 months in unopened original container, dry at +5°C to +30°C

Mechanical values		
Compressive strength	1 day	28 days
	19.8 N/mm ²	30.4 N/mm ²
Bending tensile strength	1 day	28 days
	7.1 N/mm ²	14.2 N/mm ²
Adhesive tensile strength	28 days approx. 3.4 N/mm ²	