



IPA 2K Silicamörtel

2-component mineral product for coating and lining of containers and conductions with high chemical resistance

Product description

IPA 2K Silicamörtel is a purely mineral product with adhesive agent based on silicates.

IPA 2K Silicamörtel consists of:

- Powder component IPA 2K Silicamörtel
 - Liquid component IPA 2K Silicamörtel Mix liquid
- Classified according to DIN 19573 as WW coating mortar
DIN 19573 - B2 -XWW4 (BBSK)

Application areas

For protective coating and lining of mineral surfaces of containers and conductors with humidity exposure, which are subject to a high chemical exposure.

Mode of action/characteristics

IPA 2K Silicamörtel is a mineral adhesion system, which:

- is solvent-free
- has an optimal chemical resistance
- is open for water vapour diffusion
- is waterproof
- has a good abrasion resistance
- is usable on humid surfaces
- is rapidly hardening
- is inflammable in accordance with DIN 4102 T.1
- adheres well on many mineral surfaces
- is resistant against biogenous sulphuric acid with pH 0,5

Abrasion:

Acc. to Böhme 7,0 cm³/50 cm² (DIN 52 108)

Darmstadt procedure 0,434 mm (DIN 1 230)

Dyn. E-Module 23,0 kN/mm²

Water absorption coefficient 0,2 kg/m².h^{0,5} (according to DIN 52 617 E)

Water vapour diffusion - μ = 55

Chemical resistance

High resistance against: organic solvents, oils, greases, water, leaches, concrete-damaging salts such as NH₄⁺-, SO₂⁻-, Mg²⁺- salts

Resistant against: diluted acids (up to pH 1)

Limited resistance against: higher concentrated acids (pH < 1)

Technical Data

	IPA 2K Silicamörtel Powder IPA	IPA 2K Silicamörtel Liquid
Appearance	Grey powder	Transparent liquid
Material basis	Mineral	Aqueous silicate solution
Grit size	3 mm	
Apparent density/Density	Approx. 1,7 kg/dm ³	Approx. 1,35 kg/dm ³
pH-value		Approx. 12
Solids content		> 30 weight %
Mixing ratio	50 kg (= 2 sacks)	Approx. 8,8 kg = 6,4 l
Fresh material		
Consistency	From rigid to malleable	
Consumption time at 15°C	Approx. 60 min.	
At 25°C	Approx. 30 min.	
Beginning of solidification	approx. 60 min. (at 20 °C)	
Gross density	Approx. 2,2 kg/dm ³	
Consumption	Approx. 2,2 kg/m ² /mm	
Minimum layer thickness	8 mm	
Usability after working	Earliest usability after surface hardening approx. 24 hours den	
Solid material Characteristic values after storage at 20°C and 65 % rel. air humidity		
Gross density	ca. 2,2 kg/dm ³	
Adhesive tensile strength	> 1,6 N/mm ² (on concrete, cohesion fracture)	
Strengths	Compression strength	Bending tensile strength
3 hours	1,15 N/mm ²	0,44 N/mm ²
6 hours	7,5 N/mm ²	1,6 N/mm ²
1 d	50,5 N/mm ²	8,2 N/mm ²
3 d	70,2 N/mm ²	11,5 N/mm ²
7 d	73,2 N/mm ²	11,7 N/mm ²
28 d	94,0 N/mm ²	13,0 N/mm ²

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Working instructions surface:

Clean surface. Remove completely adhesion-reducing material. Peel completely damaged concrete, especially after biogenous sulphuric acid attack.

Insulate surface against pressuring water (IPA Dichtschlämme BHD). Level previously deeper blow-outs with IPA concrete substitution mortars;

Surface should be moistened in advance in order to make it capillary saturated with humidity (dully humid). Avoid water films.

Mixing procedure:

Mix intensely and homogenously 50 kg IPA 2K Silicamörtel Powder (=2 sacks) with approx. 8,8 kg (approx. 6,4 l) IPA 2K Silicamörtel Mix liquid in a clean mix container using a forced mixer.

Mixing time: Minimum 2,5 minutes.

Treatment:

1) Build of a adhesion bridge with IPA Silica Haftbrücke (see product data sheet IPA Silica Haftbrücke).

When working with spraying method the adhesive bridge is not necessary.

2) We recommend to apply layer thickness check marks (min. 8 mm).

3) Application of IPA 2K Silicamörtel with a smoothing device, a dipper or wet spraying method. Max. application thickness 8 mm per layer. Work is carried out "fresh in fresh", i.e. the IPA Silica Haftbrücke should not have reacted yet. Just prime as much as you can apply within the open time for the coating.

4) Rework with a wooden grinding panel and a smoothing device.

Don't humidify the surface with water for grinding purpose. During working and up to 24 hours after, the surface- and material temperature must not be lower than +5°C. Avoid formation of condensation water on the surface.

Special instructions

After hardening of the surface and before applying a new IPA 2K Silicamörtel layer it is necessary to prime again with IPA Silica Haftbrücke.

IPA 2K Silicamörtel is a coat and may not be considered in the calculation of the static.

After treatment:

During the hardening phase assure protection against direct water exposure (also condensation water films), frost and rapid desiccation. Strong exposures during fresh condition may cause a loss of surface quality.

Cleaning and disposal:

The working tools are cleaned with clean water. Material residuals, delivery packages and/or mix containers are to dispose according to the official disposal norms. Disposal codes in hardened condition: liquid LAGA-no. 524 02 EWC-no. 06 02 99 powder component LAGA-no. 314 09 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 a eye flushing bottle with a sterile solution in order to flush the eyes thoroughly. Afterwards immediately consult a oculist. Please respect the security data sheets and the norms of the professional associations about treating of cement coated materials.

Delivery form

IPA 2K Silicamörtel Mix liquid 11 kg

Plastic can

IPA 2K Silicamörtel Powder 25kg sack

Storage Storage in the unopened original packing in dry rooms and in accordance to WHG § 19. Storage temperature should be lower than +5°C and not higher than +30°C.

Storage durability 12 months with appropriate storage

Version 1906

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