

SigaFlex 520

Solvent-free, highly photo-stable, flexible, 2-component polyurethane coating for decorative flooring

Empowered by Expertise!

Description:

SigaFlex 520 is a photo-stable, pigmented, 2-component polyurethane coating, cures without shrinkage. **SigaFlex 520** is suitable for pale-coloured coatings on decorative interior floors.

The flexible cured coating offers special walking comfort. The coating is especially suitable for interior areas with a high demand to the optical appearance, e.g. living rooms, offices, doctor's offices, fitness centers and wellness areas, schools, and many more. The coating is not suitable for industrially used areas with an increased mechanical load.

The flexible floor coating is applicable for layers starting at 1.5 mm. It is also suitable for deformable substrate, like mastic asphalt, or even older substrate, like e.g. reconstruction areas.

SigaFlex 520 offers good resistance to many common household chemicals, water, salt solutions, diluted acids and bases. Conditionally resistant to solvents.

The coating is available in all standard Colours; the usage is especially reasonable when pale colours are required.

SigaFlex 520 offers good resistance to abrasion. Although it is generally recommended to use a suitable sealer, like e.g. **SigaFlex 535**, or **SigaFlex 537** on top. It is necessary to use the transparent sealer **SigaFlex 535** when scattering with color flakes.

Note: When a low-emission coating is required, use **SigaFlex 522**.

Characteristics:

- Highly photo-stable
- Free flowing
- Convenient to work with
- Flexible
- Solvent-free
- Results in a decorative surface
- Economical
- Free of deleterious substances against varnish

Application:

- Comfortable, jointless floor coating for light mechanical load up to medium mechanical load for resident and commercially used areas without any industrial load.
- For decorative, non-yellowing, smooth flooring, e.g. show rooms, living rooms, and office space.
- Use as coating on inelastic substrate and substrate susceptible to deformation, like e.g. mastic asphalt, wooden and mixed material substrate.

Technical data:

Mixing ratio	Parts by weight	A : B =	3 : 1	
	Parts by volume	A : B =	100 : 44	
Processing time:	Temperature	10 °C / 50 °F	20 °C / 68 °F	30 °C / 86 °F
	Time	40 - 50 min	20 - 65 min	15 - 20 min
Processing temperature		Minimum 10 °C / 50 °F (room- and floor-temperature)		
Curing time (Accessibility):	Temperature	10 °C / 50 °F	20 °C / 68 °F	30 °C / 86 °F
	Time	30 - 36 hrs.	18 - 24 hrs.	15 - 20 hrs.
Curing		2 - 3 days for mechanical load at 20 °C / 68 °F 7 days for chemical resistance at 20 °C / 68 °F		
Further coatings		After 18 - 24 hours, but not longer than 48 hours at 20 °C / 68 °F		
Consumption		Approx. 2.4 - 2.8 kg/m ² for 2 mm layers		
Recommended thickness of layers		Approx. 1.5 - 2.5 mm		
Packaging		Hobbock-Combi 30 kg		
Colours		Colours upon request		
Shelf life		12 months (originally sealed)		

1. Build-up of Coats

Preparing the substrate – mineral substrate

- Substrate, like e.g. concrete, cement screed or other – prepare mechanically, e.g. by shot-blasting.

Build-up of coats without in-between sanding

- Prime with the recommended SIGAS-Base Coats **SigaPox 410**, **SigaPox 481**, **SigaPox 415**, consumption approx. 0.3 - 0.4 kg/m².
- Where necessary: Apply a scratch coat using **SigaPox 410**, **SigaPox 481**, **SigaPox 415** and **SIGAS quartz sand-mix 2/1**, mixing ratio 1 : 0.8 parts by weight, consumption approx. 0.8 - 1.2 kg/m².
- Alternatively apply a scratch coat without in-between sanding using **SigaFlex 511** or **SigaFlex 520** in addition of approx. 20 - 30 % of quartz sand, grain size 0.1/0.3 mm, consumption approx. 0.8 - 1.2 kg/m².
- **Important note:** Only when using base coat **SigaPox 410** or **SigaPox 481**, **SigaFlex 520** may be applied straight on top without in-between sanding after at least 14 hours up to 48 hours at the max. (at 20 °C / 68 °F). When using **SigaPox 415**, **SigaFlex 520** may be applied after 4 hours up to 24 hours at the max. (at 20 °C / 68 °F) as far as the surface is free of pores. When using other base coats or modified time flows in-between sanding is necessary.
- Apply **SigaFlex 520** with a toothed trowel, consumption approx. 2.4 - 2.8 kg/m². Vent with a spiked roller using criss-cross strokes after 10 to 20 minutes.

Preparing the substrate – mastic asphalt

- Prepare the substrate mechanically by shot-blasting.
- Apply a scratch coat using **SigaFlex 511** or **SigaFlex 520** right on top. Add approx. 20 - 30 % of quartz sand, grain size 0.1/0.3 mm, consumption approx. 0.8 - 1.2 kg/m². The surface has to be free of pores for the subsequent coatings.
- Apply the coating **SigaFlex 520** with a toothed trowel, consumption approx. 2.4 - 2.8 kg/m². Vent with a spiked roller using criss-cross strokes after 10 - 20 minutes.

Decorative, low-emission top sealer

- Seal decorative coatings with a transparent or covering sealer using **SigaFlex 535** or **SigaFlex 537**, low-emission when used within the system, consumption 0.150 - 0.180 kg/m². By adding **SIGAS anti-slip additive** to **SigaFlex 535** or **SigaFlex 537** or by using **SigaFlex 535-R10** or **SigaFlex 537-R10** a slip-resistance up to grade R11 can be achieved.

- Scattering with flakes is possible when a subsequent following sealer is used.

Build-up of coating with in-between sanding

- Apply a base coat, e.g. **SigaPox 412**, consumption approx. 0.3 - 0.4 kg/m².
- Scatter the fresh surface with quartz sand, grain size 0.3/0.8 mm, consumption approx. 0.5 - 1.0 kg/m².
- Apply a scratch coat using **SigaFlex 511** or **SigaFlex 520** right on top. Add approx. 20 - 30 % of quartz sand, grain size 0.1/0.3 mm, consumption approx. 0.8 - 1.2 kg/m². The surface has to be free of pores for any subsequent coatings.
- Apply coating **SigaFlex 520** with a toothed trowel, consumption approx. 2.4 - 2.8 kg/m². Vent with a spiked roller after 10 - 20 minutes.

Decorative transparent or pigmented top sealer

2. Substrate

The substrate to be coated has to be levelled, dry, free of dust, has to have adequate tensile and compressive strength, and be free from weakly-bonded components or surfaces. Materials impairing adhesion, such as grease, oil, and paint residues must be removed using suitable methods. For concrete, moisture content must not exceed 4.5 CM-%, remaining residual humidity. The possibility of moisture ingress from the rear must be permanently excluded. Please refer to the product information of the recommended SIGAS-Base Coats, like e.g. **SigaFlex 410**, **SigaPox 415**, **SigaPox 412**, and **SigaPox 481**. Prepare the surface to be coated mechanically. The prepared surface has to be primed accurately, saturated, and free of pores. If the substrate hasn't been sealed completely bubbles and pores may appear because of rising air. Conduct a trail if in doubt. To improve adhesion scatter the surface with approx. 0.5 - 1.0 kg/m² quartz sand, grain size 0.3/0.8 mm.

3. Mixing

Combi trading units will be supplied in the correctly measured mixing ratio. Component A has sufficient volume for the entire trading unit. Decant hardener B completely into the resin A. Blend with a slow speed mixer (200 - 400 r/pm) for at least 2 - 3 minutes, for a material that is homogenous and free of streaks. To avoid mixing errors it is recommended to empty the resin/hardener-mixture into a clean container and mix briefly once again.

4. Processing / Handling

Process immediately after mixing with a trowel or coating knife by pulling out an even layer on the prepared surface. The product is adjusted with an optimum of air venting. To upgrade the moistening of the substrate, optimizing the flow-properties, and removing any air blows, it is recommended to roll with a spiked roller. Roll time-delayed after 10 - 20 minutes. To avoid any shoulders always work "fresh-in-fresh" and divide the working areas.

Sealing **SigaFlex 520** has to be carried out with clean over-shoes. Nail shoes are not permissible.

Fresh coatings with polyurethane are very sensitive to moisture. It is essential to keep the moisture conditions. Coating dewy substrate, using moist sand, as well as sweat will lead to foaming of the material and have to be avoided. Conduct measurements before starting to work.

Floor and air temperature must not fall below 10 °C / 50 °F and humidity must not exceed 75 %. The material to be processed has to be tempered according to the room temperature. The floor-temperature may be 3 °C / 37.4 °F at the max. less than the surrounding temperature to exclude a dew-point situation on the surface to be coated and the fresh coating.

If a dew-point situation occurs curing may be disturbed and foaming may occur. Technical properties may be affected. Do not process at increased insolation or on strongly heated surfaces because processing time will decrease and blisters may appear.

Special remark: For a slightly thickened **SigaFlex 520** use only our thixotropic agent **SigaMot 966**. Other set-up agents may disturb the curing.

If the products to be applied onto the same surface are pigmented, these preferably have to belong to the same lot. Indeed, by using products taken from different lots, slight color variations depending on the raw material cannot be excluded. The lot number is indicated on the container label. With certain colors – particularly white, yellow and orange or with light pastel colors – the recommended coating thickness must be observed, in order to guarantee hiding power.

In specific light and weather conditions and after long and intensive use, color variations, loss of gloss and yellowing may occur.

If the use of swivel chairs or other wheeled pieces of furniture is expected, suitable caster chairs or special floor protection mats are recommended to avoid wearing and abrading the floor.

5. Cleaning

To remove fresh contamination and to clean tools use **Cleaner V30** or **V40** immediately. Hardened material can only be removed mechanically.

6. Storage

Store in dry and at frost-free conditions. Ideal storage temperature is between 10 - 20 °C / 50 - 68 °F. Bring to a suitable

working temperature before application. Tightly re-seal opened containers and use the content as soon as possible.

7. Special Remarks

The product is subject to the hazardous material-, operational safety-, and transport-regulations for hazardous goods. Refer to the DIN-Safety Data Sheet and the information labelled on the containers!

GISCODE: PU 40

Indication of VOC-Content:

(EG-Regulation 2004/42)

Maximum Permissible Value 500 g/l (2010,II,j/lb):

Ready-for-use product contains < 500 g/l VOC.

Technical Data*

Viscosity	Components A + B	Ca. 5.200	mPas	DIN EN ISO 2811-2 (23 °C / 73.4 °F)
Solids content		> 99.7	%	SIGAS-Method
Abrasion (Taber Abraser)		30	mg	ASTM D4060 (CS10/1000)
Density		1.5	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Shore-hardness D		51	-	DIN 53505 (after 28 days)
Water absorption		< 0.2	weight-%	DIN 53495
Weight loss		0.2	weight-%	SIGAS-Method (after 28 days)
Breaking elongation		97	%	DIN EN ISO 527-3

(*Values achieved in sampling are average values. Variation in product specification is possible.)

SigaFlex 520; 0.00/01.03.2017. All information contained herein is based on the current state of our knowledge and practical experience at the time of release. Therefore, please make sure that this is the actual edition of the Technical Data Sheet. All data are only intended as a guideline for informational purposes and do not constitute a legally-binding warranty of the suitability for a certain purpose of use, due to its dependence on site conditions and possible processing, use and applications. All information contained in this technical datasheet is subject to change without notice.

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