

Technical Data Sheet

StoPox KU 405

Solvent free epoxy resin floor, coating, low-emission, free from benzyl alcohol



Characteristics

Area of application	<ul style="list-style-type: none"> • Interior • On floor areas • As a coloured floor coating in industrial or public areas
Properties	<ul style="list-style-type: none"> • Free from benzyl alcohol • Low-emission and low-odour • Mechanical and chemical resistance • Excellent flow and ventilation properties
Appearance	<ul style="list-style-type: none"> • Gloss
Information / notes	<ul style="list-style-type: none"> • Product fulfils requirements from the Committee for Health-related Evaluation of Building Products DIBt/Berlin Committee • Product is in accordance with EN 13813

Technical Data

Data	Criteria	Standard / Test Specification	Value / Unit	Notes
	Bond strength (28 days)	EN 1542	> 2.0 MPa	
	Flexural strength (28 days)	EN ISO 178	> 30 MPa	
	Compressive strength	ASTM C579	> 90 MPa	
	Viscosity (at 23 °C)	ISO 3219	1,360 – 2,040 mPa.s	Mixture
	Shore hardness type D	DIN 53505 EN ISO 868	79 – 85	
	Density (mixture 23 °C)	EN ISO 2811	1.34 – 1.43 g/cm ³	
	Abrasion resistance according to Taber device	EN ISO 5470-1	< 70 mg	CS 10/1000U/1000g

The characteristic values stated are average values or approximate values determined for StoPox KU 405 in the approx. colour shade RAL 7032. Due to the natural raw materials in our products, the stated values can vary slightly in the same delivery batch; this does not affect the suitability of the product for its intended use.

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Substrate							
Requirements	<p>Requirements on the substrate:</p> <p>The substrate must be dry, load-bearing, and free from native and foreign substances that have a separating action.</p> <p>Remove less strong layers and laitance.</p> <p>Dry in accordance with the definition of the DAfStb (German) Repair Guideline 2001-10, but depending on the compressive strength class. Residual moisture may amount to max. 4 wt % for concrete in strength classes up to C30/37 and max. 3 wt % for C35/45 concrete, measured with a calcium carbide meter.</p> <p>Substrate temperature higher than +15 °C and 3 K above dew point Average bond strength 1.5 N/mm²</p> <p>Bond strength of the single smallest value 1.0 N/mm²</p>						
Preparation	<p>Prepare the substrate using a suitable mechanical process such as shot-blasting, milling and then shot-blasting or abrasive blasting.</p>						
Application							
Application Temperature	<p>Lowest application temperature: +15 °C</p> <p>maximum approved relative humidity < 60 %</p> <p>Highest application temperature: +25 °C</p> <p>maximum approved relative humidity < 75 %</p>						
Time for application	<p>At +15 °C: approx. 75 minutes</p> <p>At +20 °C: approx. 60 minutes</p> <p>At +25 °C: approx. 45 minutes</p>						
Mixing ratio	<p>Component A : component B = 100 : 23 parts by weight</p>						
Material preparation	<p>Component A and Component B are supplied in the correct mixing ratio and should be mixed in accordance with the following instructions. Stir component A, and then add all of component B.</p> <p>Mix thoroughly with a slow-running paddle mixer (max. 300 rpm) until a homogeneous, streak-free compound develops. It is also vital to stir thoroughly at the sides and the bottom in order to evenly distribute the hardener. Mixing time is at least 3 minutes.</p> <p>After mixing, pour the compound into a clean container and mix again.</p> <p>Do not apply from the delivery container!</p> <p>The temperature of the individual components must be at least +15 °C when mixing.</p>						
Consumption	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type of application</th> <th style="text-align: right;">Approx. consumption</th> </tr> </thead> <tbody> <tr> <td>per mm layer thickness (unfilled)</td> <td style="text-align: right;">1.4 kg / m²</td> </tr> <tr> <td>per mm layer thickness for a coating of 2 mm filled (1: 0.2)</td> <td style="text-align: right;">1.2 kg/m²</td> </tr> </tbody> </table> <p>Material consumption depends on the application, substrate, and consistency, among other factors. The stated consumption values are only to be used as a guide. If required, determine precise consumption values on the basis of the specific project.</p>	Type of application	Approx. consumption	per mm layer thickness (unfilled)	1.4 kg / m ²	per mm layer thickness for a coating of 2 mm filled (1: 0.2)	1.2 kg/m ²
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Application

Coating build-up

Coating build-up approx. 0.3 mm

- 1) Substrate preparation
- 2) Prime coating of StoPox GH 205 or StoPox GH 300
- 3) Coating of StoPox KU 405 (roller applied, 2 coats, approx.. thickness : 0.30 mm)

Coating build-up approx. 1 mm

- 4) Substrate preparation
- 5) Prime coating of StoPox GH 205 or StoPox GH 300
- 6) Coating of StoPox KU 405 (unfilled , layer thickness : 1 mm)
- 7) Optional : Care treatment with StoDivers P 105 / StoDivers P 120

Coating build-up approx. 2 mm

- 1) Substrate preparation
- 2) Prime coating of StoPox GH 205 or StoPox GH 300
- 3) Coating of StoPox KU 405 (unfilled / filled (1 : 0.2) depending on the layer thickness
- 4) Optional : Matting sealer StoPox WL 150 transparent or StoPox WE Mattsiegel
- 5) Optional : Care treatment with StoDivers P 105 / StoDivers P 120

Application

Smooth floor coating in public and industrial buildings, glossy or with optional matt sealing coat

- 1) Substrate preparation
- 2) Prime coating of StoPox GH 205 or StoPox GH 300

Floors apply the mixed material with a rubber squeegee until the substrate is totally free of pores. Then evenly spread it by rolling/brushing. Avoid forming puddles. Consumption: approx. 0.2 – 0.3 kg/m², depending on the roughness of the substrate.

For roughness depths > 0.5 mm a levelling filler coating is absolutely essential.

If not reworking the fresh prime coating within 48 hours, scatter StoQuarz 0.1 - 0.5 mm or StoQuarz 0.3 - 0.8 mm kiln-dried quartz sand over it (not excessively, but grain by grain). Consumption of StoQuarz 0.1 - 0.5 mm: approx. 0.5 - 1.0 kg/m²

- 3) Coating of StoPox KU 405

3a) Roller Applied

Apply the mixed materials evenly with roller (Sto Roller Nylon RS 13)

Coating approx. 0.3 mm

Consumption of StoPox KU 405: Approx. 0.2 kg – 0.25 kg/m²/coat at least 2 coats is required

3b) Self-levelling

Apply the mixed material with a squeegee (48 or 95 notching, Sto-Tool Catalogue), evenly spread it, and de-air it using a spiked roller in a criss-cross pattern.

Coating approx. 1 mm:

Consumption of StoPox KU 405: at least 1.5 kg/m²

Coating approx. 2 mm:

Consumption of StoPox KU 405: approx. 1.2 kg/m² and mm of layer thickness

Consumption of StoQuarz 0.1 - 0.2 mm: approx. 0.3 kg/m² and mm of layer thickness

Consumption of total mixture: approx. 1.5 kg/m² and mm of layer thickness

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Application

Application

- 4) Optional : Matting sealer StoPox WL 150 transparent or StoPox WE Mattsiegel
 Mix StoPox WL 150 transparent and dilute with approx. 15% water. Apply using a nylon roller (pile length approx., 13 – 14 mm).
 (See the technical data sheet for StoPox WL 150 transparent). Depending on mechanical stress, 1 to 2 application cycles may be required.

Consumption: approx. 0.13 - 0.15 kg/m² per application cycle
 We recommend decanting StoPox WL 150 transparent with a 25 cm roller and then rolling it in a criss-cross pattern using a 50 cm wide roller.

- 5) Optional : Care treatment with StoDivers P 105 / StoDivers P 120
 When the industrial flooring is clean and has cured, evenly apply a thin layer of care treatment. Apply the material using a pre-dampened, lint-free mop. Leave the floor to dry sufficiently, approx. 20 - 30 min.

Carry out the second application cycle at right angles (perpendicular) to the previous application. It is very important to observe the specified drying times between application cycles. Depending on the expected stress, several application cycles may be necessary.

Consumption: approx. 30 - 50 ml/m² per application cycle
 Avoid direct sunlight, high temperatures, and draughts during application.

Note:

Protect StoPox KU 405 from direct contact with water for approx. 36 hours (at +15 °C) after application.

Temperatures under the minimum application temperature of +15 °C slow down curing and lead to quality defects (e.g. visual impairments)

StoPox KU 405 has a tendency to yellow under the influence of UV light. Lighter colour shades are particularly affected. This does not have any effect on the technical properties of the product.

Drying, curing, ready for next coat

Reworking time:
 At +15 °C: approx. 48 hr
 At +25° C: approx. 36 hr
 Observe the longer curing and over-coating times compared to StoPox BB OS.

Cleaning the tools

Clean with StoCryl VV.

Application

Notes, recommendations, special information, miscellaneous

The Declaration(s) of Conformity can be obtained from the StoCretec Technical InfoCenter
 General application instructions can be found at www.stocretec.de (Products) and in the latest issue of the "Technical Data Sheets" manual, in the appendix. The abrasion resistance class specified in the CE marking refers to the smooth, not scattered covering.

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StoPox KU 405

Delivery

Colour shade	RAL colour fan, wide colour shade variety	
	Name	Container
	StoPox KU 405 Set tinted	30 kg set

Storage

Storage conditions	Store in dry and frost-free conditions; avoid direct sunlight.
Storage life	The shelf life of StoPox KU 405 is approximately 12 months if stored in cool dry conditions.

Identification

Product group	Coating
Safety	Please refer to the Safety Datasheet

Special Notes

Technical Support	Please consult Sto Technical Service Centre or the local sales office for further information and any site assistance required.
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Disclaimer The information in this Technical Data Sheet serves to ensure the product's intended use, or its suitability for use, and is based on our findings and experience. Users are nevertheless responsible for establishing the product's suitability and use.

Applications not specifically mentioned in this Technical Data Sheet are permissible only after prior consultation. Where no approval is given, such applications are at the user's own risk. This applies in particular when the product is used in combination with other products.

When a new Technical Data Sheet is published, all previous Technical Data Sheets are no longer valid. The latest version is available on www.sto-sea.com.

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