

Technical Data Sheet

StoPox KU 405

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



Characteristics

- Area of application**
- Interior
 - On floor areas
 - As a coloured floor coating in industrial or public areas

- Properties**
- Free from benzyl alcohol
 - Low-emission and low-odour
 - Mechanical and chemical resistance
 - Excellent flow and ventilation properties

- Appearance**
- Gloss

- Information /notes**
- Product fulfils requirements from the Singapore Green Building Council as a Green Mark certified leader
 - Product is in accordance with EN 13813

Technical Data

Criteria	Standard / test specification	Value/ Unit	Notes
Density	EN ISO 2811	1.35 - 1.45 g/cm ³	
Compressive strength	ASTM C579	> 90 N/mm ²	
Flexural strength	ASTM C580	> 30 N/mm ²	
Adhesion strength	ASTM D7234	> 1.5 N/mm ²	
Shore D hardness	ASTM D2240	79 – 85	
Viscosity	EN ISO 3219	1,400 - 2,200 mPa.s	
Abrasion resistance according to Taber device	ASTM D4060	50 mg	CS 10/1000U/1000g

The characteristic values stated are average values or approximate values. 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.

Substrate

- Requirements**
- The substrate must be sound, dry, load-bearing and free from native and foreign substances that have a separating effect. Remove less strong layers and laitance. The maximum moisture content of the substrate should not exceed 4% by weight measured with the CM device.
- Substrate temperature greater than +8°C and 3 K above dew point.
- Average adhesion strength > 1.5 N/mm². Adhesion strength of the single smallest value 1.0 N/mm².

- Preparations**
- Prepare the substrate using a suitable mechanical process such as shot-blasting, milling and then shot-blasting, or abrasive blasting.

Technical Data Sheet

StoPox KU 405

Application

Application temperature	Lowest application temperature: +15°C Maximum approved relative humidity 60% Highest application temperature: +30°C Maximum approved relative humidity 85%
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Time for application	At +15°C : approx. 75 minutes At +20°C : approx. 60 minutes At +30°C : approx. 30 minutes
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Mixing ratio	Component A : component B = 100.0 : 23.0 parts by weight
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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.</p> <p>Stir Component A, then add all of Component B. Mix thoroughly with a slow-running paddle mixer (max. 300 rpm) until a homogeneous, streak-free compound develops.</p> <p>It is also vital to stir thoroughly at the sides and the bottom in order to evenly distribute the hardener. Mixing time at least 3 minutes.</p> <p>Do not apply from the delivery container! After mixing, transfer the material into a clean container and stir it thoroughly once again. The temperature of the individual components must be min. +15°C when mixing.</p>
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Consumption	Type of application	Approx. consumption
	As a sealing coat, depending on substrate	0.20 – 0.25 kg/m ²
Per mm layer thickness, for a coating up to 1mm	1.4 kg/m ²	
Per mm layer thickness, for a coating up to 2mm	1.2 kg/m ²	

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.

Coating build-up	<p>Industrial / Public floor coating, smooth</p> <ol style="list-style-type: none"> 1) Substrate preparation 2) Prime coating of StoPox GH 205 3) Scratch coat (optional, e.g. roughness > 0.5mm) 4) Coating of StoPox KU 405 (unfilled / filled depending on the layer thickness) 5) Matting sealing coat of StoPox WL 150 transparent (optional) 6) Care treatment using StoDivers P 105 / StoDivers P 120 (optional)
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Application	<p>Industrial / Public floor coating, smooth</p> <ol style="list-style-type: none"> 1) Substrate preparation 2) Prime coating of StoPox GH 205 Apply in flood coat using a rubber squeegee and distributed evenly by rolling down to ensure complete sealing of all substrate pores. Avoid puddle formation. Consumption: approx. 0.20 – 0.30 kg/m², depending on substrate and application conditions. If the coating is not to be overcoated within 48 hours, the fresh primer should be scattered off with Sto Filler 60/100 or Sto Filler 30/60 (not to excess, but grain to grain). Consumption: approx. 0.5 – 1.0 kg/m².
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Technical Data Sheet

StoPox KU 405

- 3) Scratch coat (optional for roughness depths > 0.5 mm)
For very rough substrate fill StoPox GH 205 1 : 1 by weight with Sto Filler 60/100
Consumption of StoPox GH 205 approx. 0.3 – 0.4 kg/m²
Consumption of Sto Filler : approx. 0.3 – 0.4 kg/m²
Consumption of ready filled mixture: approx. 0.6 - 0.8 kg/m²
- 4) Coating of StoPox KU 405
Apply the mixed materials evenly with a roller for coating at approximately 0.3mm.
Apply the mixed material with a squeegee (48 or 95 notching) and evenly spread it for self-levelling. De-air by using a spiked roller in a criss-cross pattern. For thickness < 0.8mm use a loop roller instead.
The minimum consumption depends on the substrate and the desired appearance/hiding power.
Coating at 0.3 mm (Roller Applied):
Consumption of StoPox KU 405: Approx. 0.2 kg – 0.25 kg/m²/coat
Minimum of 2 coats is required
Coating up to 1 mm (Self-levelling):
Consumption of StoPox KU 405, unfilled: at least 1.4 kg/m²
Coating up to 2 mm (Self-levelling):
Consumption of StoPox KU 405: approx. 1.2 kg/m²/mm layer thickness
Consumption of Sto Filler 60/100: approx. 0.3 kg/m²/mm layer thickness
Consumption of total mixture: approx. 1.5 kg/m²/mm layer thickness
- 5) Matting sealing coat of StoPox WL 150 transparent (optional)
Dilute the mixed material with approx. 15% water and mix again.
Apply using a nylon roller (pile length 13 - 14 mm) in a criss-cross pattern. 1 to 2 application cycles may be required.
Consumption: approx. 0.13 - 0.15 kg/m² per application cycle
We recommend applying StoPox WL 150 transparent with a 25 cm roller and then rolling it in a criss-cross pattern using a 50 cm wide roller.
- 6) Care treatment using StoDivers P 105 / StoDivers P 120 (optional)
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. 0.02 – 0.05 lit/m² per application cycle

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 slows down curing and can lead to quality defects (e.g. visual impairments)

Exposure to direct sunlight, high temperatures, and draughts should be avoided during application.

Any yellowing which occurs under UV stress does not impair the technical properties. Lighter colour shades are particularly affected.

Technical Data Sheet

StoPox KU 405

Drying, curing, ready for next coat	Reworking time: At +15°C : approx. 48 hours At +25°C : approx. 36 hours At +30°C : approx. 30 hours
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Cleaning the tools	Tools must be cleaned immediately after use with cleaning solvent.
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Notes, recommendations, special information, miscellaneous	Please consult the local sales office for further information and any site assistance required.
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Delivery

Colour	Basic range (PG 11) Special range (PG 12)
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Packaging	Name	Packing
	StoPox KU 405	30 kg

Storage

Storage conditions	Store in cool dry conditions; avoid direct sunlight.
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Storage life	This product has a shelf life of 12 months from the manufacturing date.
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Identification

Product group	Self-Levelling
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Safety	Please refer to Safety Data Sheet.
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Special Notes

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.

Sto SEA Pte Ltd
 159 Sin Ming Road
 #06-02 Amtech Building
 Singapore 575625
 Phone: +65 6453 3080
 Fax : +65 6453 3543
info.sg@sto.com
www.sto-sea.com

Sto SEA Sdn Bhd
 28, Jalan Rajawali 3
 Bandar Puchong Jaya,
 47170 Selangor, Malaysia
 Phone: +60 3 8080 9066
 Fax: +60 3 8080 9255
info.my@sto.com
www.sto-sea.com

Sto SEA Pte Ltd
 3656/49-52 Green Tower, 16th Floor
 Rama IV Rd, Klongton, Klongtoei,
 10110 Bangkok, Thailand
 Phone: +66 2 1684 921 Ext. 230
 Fax: +66 2 1684 999
info.sg@sto.com
www.sto-sea.com

StoCretec GmbH
 Gutenbergstr. 6
 65830 Kriftel,
 Germany
 Phone: +49 6192 401 104
 Fax: +49 6192 401 105
info.sg@sto.com
www.sto-sea.com

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