

Technical Data Sheet

StoPox KU 611

High chemical and mechanical resistant epoxy coating, electrostatically conductive



Characteristics

Area of application

- For interior application on industrial floor surfaces
- ESD-areas with high mechanical and chemical stresses
- ESD-areas requiring cleanroom systems

Properties

- Electrostatically conductive (EN 1081, DIN IEC 61340-4-1)
- High chemical resistant (see chemical resistance list)
- High mechanical resistance
- High abrasion resistance
- Very good flow and ventilation characteristics
- High temperature cleaning possible at +80°C (briefly) and max. +50°C (permanent wet)

Appearance

- Glossy

Technical Data

Criteria	Standard / test specification	Value / Unit	Notes
Density	EN ISO 2811	1.47 - 1.57 g/cm ³	
Compressive strength	ASTM C579	> 95 N/mm ²	
Flexural strength	EN ISO 178	> 50 N/mm ²	
Adhesion strength	ASTM D7234	> 1.5 N/mm ²	
Shore D hardness	ASTM D2240	76 – 82	

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.

Application

Application temperature

Lowest application temperature: +8°C
Highest application temperature: +30°C

Time for application

At +10°C : approx. 40 minutes
At +23°C : approx. 25 minutes
At +30°C : approx. 15 minutes

Technical Data Sheet

StoPox KU 611

Mixing ratio	Component A : Component B = 100.0 : 21.1 parts by weight	
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 and agitate settlements with a trowel in 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!</p> <p>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>	
Consumption	Type of application	Approx. consumption
	As coating	2.0 - 2.5 kg/m ²
<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>		
Coating build-up	<p>ESD coating</p> <ol style="list-style-type: none"> 1) Substrate preparation 2) Prime coating 3) Scratch coat (optional, e.g. roughness > 0.5 mm) 4) Installation of StoDivers LS 5) Conductive layer 6) Finish coating of StoPox KU 611 	
Application	<p>ESD coating</p> <ol style="list-style-type: none"> 1) Substrate preparation 2) Prime coating <p>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.</p> <p>Consumption: approx. 0.20 – 0.30 kg/m², depending on substrate and application conditions.</p> <p>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).</p> <p>Consumption: approx. 0.5 – 1.0 kg/m².</p> 3) Scratch coat (optional, for roughness depths > 0.5 mm) <p>For very rough substrate fill StoPox GH 205 1 : 1 by weight with Sto Filler 60/100</p> <p>Consumption of StoPox GH 205 approx. 0.3 – 0.4 kg/m².</p> <p>Consumption of Sto Filler : approx. 0.3 – 0.4 kg/m².</p> <p>Consumption of ready filled mixture: approx. 0.6 – 0.8 kg/m².</p> 4) Installation of conductive set StoDivers LS <p>Install and connect to ground using the StoDivers LS (conducting set).</p> <p>A connection to ground is required for every 100 m² of surface. No surface point should be more than 10 m away from a connection point. The connection points should be distributed as evenly as possible. If needed, bridge with conductive ribbon StoDivers LB 100.</p> <p>Only an electrician is permitted to ground the conducting set.</p> 	

Technical Data Sheet

StoPox KU 611

- 5) Conductive layer
 Dilute StoPox WL 110 with approx. 10% water and apply it using a rubber squeegee or roller.
 Consumption: approx. 0.15 - 0.2 kg/m²
 Check the functionality of the applied conductive layer by measuring the resistance to ground before applying the subsequent top coat. The resistance value must not exceed 5 x 10⁴ Ohms.
- 6) Finish coating
 To avoid partial fibre accumulation, StoPox KU 611 must be applied uniformly with a rough toothed rake (tooth shape 48) and immediately refinish it crosswise with a spiked roller.
 Consumption: approx. 2.0 - 2.5 kg/m²
 The material consumption of 2.5 kg/m² must not be exceeded as this would have a negative influence on the electrostatically conductive characteristics.

Note:

- For requirements regarding protection of persons in accordance to VDE 0100-410, refer to the current StoCretec brochure on conductive floor coating systems
- Exposure to direct sunlight, high temperatures and draughts should be avoided during application.
- Depending on chemical load, optical discolorations may appear which however do not affect the technical function of the coating.
- Fibres which are used to guarantee the conductivity are visible and do not present a defect.
- To improve slip resistance, the surface can be scattered additionally with silicon carbide (grain size 0.25 - 0.36mm, 0.85 -1.20mm or others).
- Yellowing that appears under UV light does not affect technical characteristics of the coating.

Drying, curing, ready for next coat	Reworking time: At +10°C: approx. 16 hours At +23°C: approx. 8 hours At +30°C: approx. 4 hours Full cure 7 days
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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 611	30 kg set

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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Technical Data Sheet

StoPox KU 611

Identification

Product group Electro-Static Discharge (ESD)

Safety Please refer to Safety Data Sheet.

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.

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