

Technical Data Sheet

StoPox 590 EP

EP coating, cementitious, skid- and slip-resistant, crack-bridging, for tested surface protection systems



Characteristics

Area of application	<ul style="list-style-type: none"> interior exposed to the weather wearing course in the tested surface protection system OS 8.15 for industrial flooring and traffic areas subject to medium to high mechanical stress
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Properties	<ul style="list-style-type: none"> very good adhesion on slightly damp, mineral substrates durable surface crack-bridging
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Appearance	<ul style="list-style-type: none"> gloss
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Information/notes	<ul style="list-style-type: none"> product is in accordance with EN 1504-2 product is in accordance with EN 13813
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Technical data

Criterion	Standard / test specification	Value/ Unit	Notes
Bond strength (28 days)	EN 1542	> 2.0 MPa	
Flexural strength	EN ISO 178	> 30 MPa	
Density (mixture 23 °C)	EN ISO 2811	1.52 - 1.62 g/cm ³	

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	<p>General:</p> <ul style="list-style-type: none"> - Tested surface protection systems: dry, load-bearing - Non-tested surface protection systems: dry or damp, load-bearing - Free from separating, native, or foreign substances - Remove weak layers.
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- Remove any accumulation of fine concrete particles on the surface.

Dry substrate, tested surface protection systems:

- Depends on the compressive strength class
- Dry according to the definition contained in the DAfStb (German) Repair Guideline, issue 2001-10.

Moisture content:

- Measure the moisture content of the concrete substrate with a calcium carbide meter.
- Moisture content for concrete qualities up to C30/37: max. 4 CM per cent
- Moisture content for concrete qualities up to C35/45: max. 3 CM per cent

Dry or damp substrate, non-tested surface protection systems:

- Dry or damp in accordance with the DAfStb (German) Repair Guideline, edition 2001-10

Substrate temperature: at least +8 °C, 3 K above the dew point Bond strength, average: 1.5 N/mm²

Bond strength, lowest single value: 1.0 N/mm²

Preparations

1) Prepare all the above-mentioned substrates using a mechanical method, see "Substrate, requirements".

Example:

- Shot-blasting
- Milling followed by shot-blasting
- Abrasive blasting

Application

Application temperature

substrate and air temperature
 minimum temperature: +8 °C
 Maximum temperature: +30 °C

Application temperature:
 minimum temperature: +8 °C
 Maximum temperature: +30 °C

Relative humidity:
 maximum: 85 %

Time for application

At +10 °C: approx. 120 minutes
 At +23 °C: approx. 60 minutes
 at +30 °C: approx. 30 minutes

Mixing ratio

component A : component B
 A : B
 100.0 : 14.3 parts by weight

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Material preparation

Notes:

- Component A and component B are supplied in the correct mixing ratio and should be mixed in accordance with the following instructions.
- Observe the order of the "Preparing material" steps.
- The material temperature is between +15 °C and +25 °C.
- The temperature of all components is between +15 °C and +25 °C.

Mixing time:

- The length of the mixing time depends on the temperature of the material and the ambient temperature.
- Mix each container for the same length of time.

Possible consequences if mixing times are too long or too short:

- Mixing the product too long will shorten the time for application.

Preparing material:

- 1) Stir component A.
- 2) Add all of component B.
- 3) Mix the components until the hardener is well distributed, the mixture is homogeneous, and a streak-free mass is produced.

Paddle mixer: slow running mixer, max. 300 rpm

Mixing time: at least 3 minutes

- 4) Ensure the the mixing equipment covers the floor areas and the edge zones of the mixing container. The hardener must be evenly distributed.
- 5) Transfer the mixture to a clean container. Mix the components again.

Consumption	Type of application	Approx. consumption	
	per mm layer thickness	1.6	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

A: scatter coating for medium mechanical stress, slip-resistant, crack-bridging

- 1) Prepare the substrate.
- 2) Optional priming coat: e.g. StoPox 452 EP or StoPox GH 205
- 3) Scatter: StoQuarz 0.3-0.8 mm
- 4) Apply the scatter coating: StoPox 590 EP
- 5) Scatter: StoQuarz 0.3-0.8 mm or StoQuarz 0.6-1.2 mm or granite chippings from Röhrig
- 6) Sealing: StoPox DV 100

B: Surface protection system OS 8.15

- 1) Prepare the substrate.
- 2) Priming: StoPox GH 502

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- 3) Scatter: StoQuarz 0.3-0.8 mm
- 4) Applying a wearing course: StoPox 590 EP
- 5) Scatter: StoQuarz 0.3-0.8 mm
- 6) Sealing: StoPox DV 100

Application

A: scatter coating for medium mechanical stress, slip-resistant, crack-bridging

1) Prepare the substrate.

2) Optional priming coat:

- The prime coating is only necessary in the case of highly absorbent substrates.
- e.g. StoPox 452 EP or StoPox GH 205
- Flood apply the product. Tools: rubber squeegee
- Rework the product and spread evenly with a roller.
- Consumption: approx. 0.2-0.4 kg/m² depending on the roughness of the substrate
- Note: Avoid the formation of puddles.

3) Scatter:

- StoQuarz 0.3-0.8 mm
- Do not scatter an excess of the fresh prime coating.
- consumption: approx. 0.5 - 1.0 kg/m²

4) Apply the scatter coating:

- StoPox 590 EP
- Apply the product unfilled without quartz sand. Tools: squeegee, e.g. Sto-Notched Blade, notching: 48, 95
- Spread the product evenly and de-air. Tools: spiked roller
- Consumption: minimum 2.0 kg/m²
- Note: Material consumption increases for roughness depths > 0.5 mm.

5) Scatter:

- StoQuarz 0.3-0.8 mm or StoQuarz 0.6-1.2 mm or granite chippings from Röhrig
- Scatter the surface full-faced in excess.
- consumption of StoQuarz 0.3-0.8 mm: approx. 5-6 kg/m²
- consumption of StoQuarz 0.6-1.2 mm: approx. 5-6 kg/m²
- consumption of granite chippings: approx. 8-10 kg/m²
- Röhrig granite chippings: see <http://www.roehrig-granit.de>

6) Sealing coat:

- StoPox DV 100
- Remove the unbound quartz sand.
- Apply the product evenly. Tools: rubber squeegee
- Rework the product and spread evenly in a criss-cross pattern with a roller. Tools: short-pile roller
- consumption: approx. 0.6-1.0 kg/m², depending on the scattering
- Note: Avoid the formation of puddles.

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B: Surface protection system OS 8.15

1) Prepare the substrate.

2) Priming:

- StoPox GH 502

- Flood apply the product. Tools: rubber squeegee

- Rework the product and spread evenly with a roller.

- Consumption: approx. 0.2-0.3 kg/m² depending on the absorption capacity of the substrate

- Note: Avoid the formation of puddles.

3) Scatter:

- StoQuarz 0.3-0.8 mm

- Do not scatter an excess of the fresh prime coating.

- consumption: approx. 0.5-1.0 kg/m²

4) Applying a wearing course:

- StoPox 590 EP

- Apply the product unfilled without quartz sand. Tools: squeegee, e.g. Sto-Notched Blade, notching: 48, 95

- Spread the product evenly and de-air. Tools: spiked roller

- consumption: approx. 2.5 kg/m²

5) Scatter:

- StoQuarz 0.3-0.8 mm

- Scatter the surface full-faced in excess.

- consumption of StoQuarz 0.3-0.8 mm: approx. 5-6 kg/m²

6) Sealing coat:

- StoPox DV 100

- Remove the unbound quartz sand.

- Apply the product evenly. Tools: rubber squeegee

- Rework the product and spread evenly in a criss-cross pattern with a roller.

Tools: short-pile roller

- consumption: approx. 0.6-0.8 kg/m²

- Note: Avoid the formation of puddles.

Consumption, application:

- The details on consumption and application relate to horizontal surfaces.

- On inclinations: test a sample surface area first. If required, work in multi-layers and add thixotropic additive or more quartz sand to the materials.

Drying, curing, ready for next Reworking time:

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coat At +10°C: approx. 24 h
At +23°C: approx. 16 h
At +30°C: approx. 12 h

Cleaning the tools Clean tools with StoDivers EV 100 or StoCryl VV.

Notes, recommendations, special information, miscellaneous

- 1) Observe the general application instructions:
 - see www.stocretec.de, Products
 - see technical manual, notes
- 2) Observe the implementation instructions.

Declaration of performance, CE marking:
- declaration of performance: see www.stocretec.de
- The abrasion resistance specified in the declaration of performance refers to the smooth, not scattered covering.

Delivery

Colour shade light grey
not a RAL colour shade
depending on the sealing coat

Packaging pail and tin

Article number	Name	Container
03781/003	StoPox 590 EP Set	30 kg set

Storage

Storage conditions Store in dry and frost-free conditions. Protect from direct sunlight.

Storage life The product quality is best guaranteed in its unopened original container until its shelf life has expired. The first digit of the batch number is the final digit of the year. The second and third digits indicate the calendar week. Example: 1450013223 - shelf life until end of calendar week 45 in 2021. See product packaging

Identification

Product group Coating

Safety This product is subject to compulsory labelling in accordance with the current EU regulation.
You will receive an EU Safety Data Sheet with your first order.
Please observe the information regarding the handling of the product, its storage, and disposal.
Handling epoxy resins: "Praxisleitfaden für den Umgang mit Epoxidharzen",

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(Practical guide for handling epoxy resins) and test report: "Prüfbericht zur Schutzwirkung von acht Chemikalienschutzhandschuhen gegenüber EP-Beschichtungen" (Test report on the protective effect of eight chemical protective gloves against EP coatings), Gloves: "Handschuhe für den Umgang mit lösemittelfreien Epoxidharzen" (Gloves for handling solvent-free epoxy resins), and Protective gloves: "Die richtige Anwendung von Schutzhandschuhen" (The correct use of protective gloves)
<https://www.bgbau.de/themen/sicherheit-und-gesundheit/gefahrstoffe/umgang-mit-epoxidharzen/>

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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 the Internet.

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