

Technical Data Sheet

StoCrete PU SM

Self-smoothing, hybrid polyurethane floor finish
(3 – 6 mm)



Characteristics

Area of application

- Hygienic floor for kitchen, wet food & beverage processing and packaging plants
- Chemical resistance floor for chemical process, containment area and wash down rooms
- Thermal shock resistance floor for freezers, refrigerators and oven installed areas
- Mechanically durable floor for loading docks and warehouses

Properties

- Excellent resistant to a wide range of chemicals
- Microbiologically inert
- Seamless without joints for optimum sanitation and hygienic finish
- Seamless, thus easily cleaned and maintained
- High temperature resistance up to 90°C (at 6mm thick)
- No solvent odour during application
- High wear, abrasion and impact resistance
- Speedy installation allowing rapid access

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Criteria	Standard / test specification	Value/ Unit	Notes
Density		1.8 – 1.9 g/cm ³	Mixed
Compressive strength	EN 13892-2	> 40 N/mm ²	
Flexural strength	EN 13892-2	> 15 N/mm ²	
Adhesion strength	EN 13892-8	> 1.5 N/mm ²	
Abrasion resistance	EN 13892-4	< 0.05 mm	
Coefficient of thermal expansion	ASTM C531	8.7 x 10 ⁻⁵ °C ⁻¹	

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 +10°C and 3 K above dew point.

Average adhesion strength >1.5 N/mm².

For higher mechanical and thermal loads, a minimum adhesion strength of >2.0 N/mm² is recommended.

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Preparations	<p>Prepare the substrate using a suitable mechanical process such as shot-blasting, milling and then shot-blasting, or abrasive blasting.</p> <p>Prepare grooves in 5mm (width) x 5mm (depth), at all edges, bay joints columns, doorways and drains for anchoring purpose. A minimum 50mm distance is recommended from the perimeter of the walls.</p>							
Application								
Application temperature	<p>Lowest application temperature: +10°C</p> <p>Highest application temperature: +30°C</p>							
Service temperature	<p>At 3 mm : approx. - 5°C to 70°C</p> <p>At 6 mm : approx. - 20°C to 90°C</p>							
Time for application	<p>At +10°C : approx. 35 minutes</p> <p>At +15°C : approx. 25 minutes</p> <p>At +30°C : approx. 15 minutes</p>							
Mixing ratio	Comp A to Comp D = 3 : 3 : 13.9 : 0.2 parts by weight							
Material Preparation	<p>Shake Comp A and pour into a clean mixing pail. Add Comp D (liquid colour paste) and mix thoroughly with a suitable electrical mixer (300 - 400 rpm) ensuring a homogenous mixture is obtained.</p> <p>Shake Comp B and pour into the pail and carry on mixing for 10 seconds.</p> <p>With the mixer still running, add Comp C into the pail and continue to mix for 1 minute until a fully homogenous mixture is obtained.</p> <p>It is also vital to stir thoroughly at the sides and the bottom in order to evenly distribute the mixture.</p> <p>Before mixing a new pack, scrape out and discard all previously leftover mix from the sides of the drum.</p>							
Consumption	<table border="1"> <thead> <tr> <th>Type of application</th> <th>Approx. coverage</th> </tr> </thead> <tbody> <tr> <td>Scratch Coat @ 1mm thickness</td> <td>2 kg/m²</td> </tr> <tr> <td>Sealing Coat @ 3 mm thickness per 20.1 kg set</td> <td>3.5 m²</td> </tr> </tbody> </table>	Type of application	Approx. coverage	Scratch Coat @ 1mm thickness	2 kg/m ²	Sealing Coat @ 3 mm thickness per 20.1 kg set	3.5 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>
Type of application	Approx. coverage							
Scratch Coat @ 1mm thickness	2 kg/m ²							
Sealing Coat @ 3 mm thickness per 20.1 kg set	3.5 m ²							
Coating build-up	<ol style="list-style-type: none"> 1) Substrate preparation 2) Scratch coat 3) Placing of StoCrete PU SM 							
Application	<ol style="list-style-type: none"> 1) Substrate preparation 2) Scratch coat Apply StoCrete PU SM as scratch coat of 1 mm thickness. 3) Placing After 14 hours of cured StoCrete PU SM scratch coat, spread StoCrete PU SM self-smoothing mortar to the desired thickness (3 – 6 mm) using a pin rake (Sto-Pin Leveller) or squeegee (tooth shape 48). Trowel smooth with a flat trowel within the stated working life. Continuous mixing so that each new mix comes to the floor typically every 5 minutes is needed to ensure uniformity. 							

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Immediately after laying the material, finish with a spike roller (Sto-Spike Roller) to aid air release and to get an even surface.

Once material is laid, ensure that the area is not disturbed as it can impair the final appearance.

Note:

1. StoCrete PU SM should not be applied on material or floor temperatures below 10°C.
2. Temperature should not fall below 5°C in the first 24 hours after application
3. All movement joints must be carried through StoCrete PU SM and properly sealed.
4. Construction joints and cracks may be covered, however if substrate movement occurs, StoCrete PU SM will reflect the crack.
5. Yellowing that appears under UV light does not affect the technical characteristics of the product.
6. All StoCrete PU SM components must be used immediately. No partial usage is allowed.

Drying, curing, ready for next coat	Over-coating time At +10°C : approx. 32 hours At +20°C : approx. 12 hours At +30°C : approx. 8 hours
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Drying, curing, ready for next coat	Curing time:		
		<u>25°C</u>	<u>35°C</u>
	Foot traffic	30 hours	24 hours
	Light traffic	36 hours	30 hours
	Full cure	7 days	5 days

Cleaning the tools	Tools must be cleaned immediately after use with cleaning solvent. Small unreacted Comp B in container to be decontaminated with 5% solution of washing soda (sodium carbonate) prior to disposal. Hardened material is virtually impossible to remove.
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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	Selected standard colour range, matt finish <u>Premium Colour</u> Blue, Orange, Green <u>Standard Colour</u> Light Grey, Dark Grey, Grey, Buff, Red, Yellow, Cream
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Packaging	Name	Packing
	StoCrete PU SM	20.1 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 9 months from the manufacturing date.
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Identification

Product group Mortar

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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