

Technical Data Sheet

Rajasil SP3

(renovation render)

Rajasil SP2: Dry factory-mixed mortar, R, CS II, W 2, T 2, in accordance with DIN EN 998-1 (P II according to former DIN V 18 550); contains sulphate-resistant binder, Quick and easy to process; high yield; high pore volume

Areas of Application: For interior surfaces (e. g. basement walls) and exterior surfaces above grade
Single-layer application; in certain cases, two-layer application is required (refer to Application section).
The responsibility for any usage exceeding these areas of application lies solely with the user.

Composition: Sulphate-resistant binders; lightweight mineral aggregates; carefully composed aggregates; admixtures for water-repelling properties, pore formation and optimal workability. Due to the specialpurpose admixture combination, the hydrophobising effect sets in at a very early stage.
Maximum grain size: approx. 1.5mm, Colour: grey

Technical Data: The requirements according to the WTA leaflet 2-9-04/D are met by Rajasil SP3 (restoration plaster SP3).

Mortar group	CS II according to DIN 998-1 PII according to the former DIN V 18550
Air void content of the fresh mortar	> 25 % by volume
Cured mortar gross density	< 1.0 kg/dm ³
Water vapour diffusion resistance factor μ	< 12
Compressive strength f_{cd}	1.5 - 5.0 N/mm ²
Porosity of the cured mortar	> 50 % by volume
Thermal conductivity λ according to DIN EN 1745 table 12	0.21 / 0.23 W/mK
Capillary water absorption W_{24}	> 0.3 kg/m ²
Depth of water penetration h	< 5 mm
Salt resistance	Passed
Building material class DIN 4102	Building material class A1

Coverage: approx. 7.5 kg of dry mortar/m² per cm of render thickness

Preparation of the Substrate: Remove existing render up to 80cm in excess of moist areas and efflorescences. Scrape out brittle joint mortar to a depth of approx. 2cm. Clean brickwork thoroughly and remove dust.
Immediately dispose of any chipped-off material.

With normally absorbent brickwork (e. g. clay bricks, some natural stone types), prior application of Rajasil SPB is not necessary. On low-absorbent, smooth substrates, apply Rajasil SPB in a web like pattern. In case of moisture penetration levels of the plaster base higher than 40 %, this requires drying measures before plastering and/or a reinforcement plaster layer after the application of the restoration plaster.

Application and Substrate Temperature: Factory dried mortar, mixing water, plaster base and ambient temperature should be between minimum 5 °C and maximum 30 °C. Lower and higher temperatures during the curing phase can have a lasting adverse effect on product properties.
At high temperatures (and/or under wind load), additional measures must be taken to prevent excessively fast dehydration of the mixing water.

Preparation of the Product: Manual application
Mix the content of a bag with approx. 7.5 litres of tap water in a clean mortar mixing container using a power stirrer without producing any clots. In manual processing, a sufficient mixing time (approx. 3 minutes) and maturing period must be ensured.

Machine application
All conventional mixing pumps can be used. Depending on the machine type, the use of a secondary mixer may be necessary. The decisive factor here is that the above-mentioned fresh mortar properties as per WTA Recommendation 2-2-91 are obtained.

Application: Normally, Rajasil SP3 is applied to the substrate in a single layer. In the case of high nitrate or chloride contamination and high moisture levels in the brickwork (> 40%), two-layer application of Rajasil SP3 is necessary.
Thoroughly roughen first layer (minimum thickness 10mm); the second layer (thickness 10 - 15mm) can then be applied on the superficially dry first layer.
During the setting process, rub surface down with felt float or texture in other ways. In order to prevent cracks and visible joints, treat transitional areas between existing render and renovation render first as water loss may be accelerated here.

Application:	<p>Render thickness: In case of single-layer application, apply Rajasil SP3 to a thickness of at least 2cm; maximum thickness: 4cm.</p> <p>Recommended application method: Apply a 10mm layer; allow to set briefly, then continue to apply to desired thickness. In case of very irregular substrates or deep, wide joints, we recommend applying an equalising layer using Rajasil SP3; thoroughly roughen the surface of this layer afterwards. With unevennesses that would require an overall renovation render layer thickness of more than 40mm, the use of Rajasil EGM is necessary; please refer to Rajasil EGM Technical Data Sheet. We also recommend embedding a reinforcement layer using Rajasil AGG into the upper third of the render layer.</p>				
Curing / After Treatment:	<p>Protect newly applied render adequately from premature dehydration (sun, wind, high temperatures), frost and rain. With dry, warm weather conditions, after treatment is necessary to prevent premature loss of water. With extremely high air humidity, e. g. in basements without sufficient ventilation, the renovation render cannot cure and thus will not be able to develop its hydrophobising properties. As drying depends on the environmental climate, adequate drying conditions (condensation dryer) must be provided for. Do not heat up interior spaces too quickly after render application, however, in order to prevent tension cracks. Curing time prior to application of additional coatings: 1 day per mm of render thickness; with render thicknesses exceeding 10mm, at least 10 days - depending on curing and drying conditions.</p>				
Coating:	<p>Coating layers, such as finishing coats or paint coats, must not impair the water vapour permeability properties of the render system.</p> <p>Requirements to be met by coating layers: diffusion equivalent air layer thickness $s_d < 0.2$ m (of each separate layer) For exterior use, the following additional requirements apply:</p> <table border="1"> <tr> <td>for paint coats:</td> <td>$w < 0.2 \text{ kg}/(\text{m}^2\text{h}^{0.5})$</td> </tr> <tr> <td>for finishing coats: water-repellent (former DIN V 18 550)</td> <td>$w < 0.5 \text{ kg}/(\text{m}^2\text{h}^{0.5})$</td> </tr> </table> <p>Trowel-applied smooth coatings, using e. g. the traditional marmorino technique or a smooth lime finish, are unsuitable even if mineral-based, as this application method can result in a compacting of the surface.</p> <p>Suitable finishing coats: Rajasil SPG, Rajasil SSL, Rajasil EP WD, Rajasil FAS, Rajasil KFP, Rajasil RP, HECK SIP</p> <p>Suitable paint coats: Rajasil SHF, Rajasil SIF, Rajasil SIF INTERIOR for interior application</p>	for paint coats:	$w < 0.2 \text{ kg}/(\text{m}^2\text{h}^{0.5})$	for finishing coats: water-repellent (former DIN V 18 550)	$w < 0.5 \text{ kg}/(\text{m}^2\text{h}^{0.5})$
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Notes:	<p>Due to the usage of mineral raw materials, follow-up deliveries may vary in colour shade. For continuous surfaces use only material from the same production batch, especially when no surface coating is performed. Variations in colour shade over the course of time due to weather or environmental factors, e.g. atmospheric particles, are not covered by warranty. Technical functionality remains unaffected. Under adverse conditions, the possibility of the formation of micro-organisms, such as algae, cannot be ruled out; this does not constitute a reason for complaint. Seal renovation render at areas in contact with the ground using e. g. Rajasil DS FLEX.</p>				
Safety Instructions:	<p>Rajasil SP3 contains lime and cement and thus reacts alkaline when fresh. Avoid contact with eyes and skin. Protect eyes and skin. If product gets on skin, wash off immediately. If product gets in eyes, rinse thoroughly with water immediately and seek medical attention. Wear suitable protective gloves. If product is swallowed, seek medical attention immediately. Keep product out of the reach of children. For further information, see Safety Data Sheet.</p>				
Storage:	<p>Store in a dry place; shelf-life in original container: approx. 3 months.</p>				
Quality Control:	<p>Constant monitoring of production through laboratory analyses. The Rajasil SP3 system with its components Rajasil SPB Rajasil EGM Rajasil SP3 Rajasil SP3 PLUS is certified by WTA: All requirements as laid down in WTA Recommendation 2-9-04/D, also those pertaining to internal and external controls, are met. The products are allowed to carry the service mark.</p>				



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