

# Technical Data Sheet

## Rajasil Kalkputz HS NA OWA

(Lime Render)

<b>Rajasil Kalkputz HS NA OWA:</b>	Dry factory-mixed mortar GP, CS II, W 0 in accordance with DIN EN 998-1 (P II according to former DIN V 18 550), with hydraulic lime and HS NA OWA (high sulphate resistance; low alkaline) cement as binders. Colour: grey																																						
<b>Properties:</b>	Rajasil KP HS NA OWA (Kalkputz HS NA OWA, lime render HS NA OWA) hardens in a low-tension manner and is water-vapour diffusion-open																																						
<b>Areas of Application:</b>	<p><b>Basecoat</b> for mineral finishing coats.</p> <p><b>Finishing coat</b>, to be left "as is" or for coating with open-porous, low-tension curing coating systems. For interior and exterior use; Without additional protection not to be used on surfaces exposed to harsh weather conditions.</p> <p><b>Not for use on wall bases!</b></p> <p>Responsibility for any usage outside these areas of application lies solely with the user.</p>																																						
<b>Composition:</b>	Hydraulic lime, HS NA Zement (HS NA cement) and limestone sands, additive to achieve optimum processing properties, can be delivered with flax fibres and adhesive additive if necessary.																																						
<b>Technical Data:</b>	<table border="1"> <thead> <tr> <th></th> <th><b>Coarse</b> max. grain size approx. 8,0 mm</th> <th><b>Medium</b> max. grain size approx. 3,5 mm</th> <th><b>Fine</b> max. grain size approx. 1,0 mm</th> </tr> </thead> <tbody> <tr> <td>Mortar group</td> <td colspan="3"><b>GP, CS II, W 0 with DIN EN 998-1, (P II with former DIN V 18550 )</b></td> </tr> <tr> <td>Cured mortar gross density</td> <td>approx. 1,75 kg/dm<sup>3</sup></td> <td>approx. 1,5 kg/dm<sup>3</sup></td> <td>1,3 kg/dm<sup>3</sup></td> </tr> <tr> <td>Flexuryl strength</td> <td>approx. 1,6 N/mm<sup>2</sup></td> <td>approx. 1,3 N/mm<sup>2</sup></td> <td>approx. 0,8 N/mm<sup>2</sup></td> </tr> <tr> <td>Impact resistance</td> <td>approx. 5,0 N/mm<sup>2</sup></td> <td>approx. 3,0 N/mm<sup>2</sup></td> <td>approx. 2,5 N/mm<sup>2</sup></td> </tr> <tr> <td>Rake DIN 4108 thermal conductivity</td> <td>0,89 W (m·K)</td> <td>0,89 W (m·K)</td> <td>0,89 W/(m·K)</td> </tr> <tr> <td>E - module</td> <td>approx. 8500 N/mm<sup>2</sup></td> <td>approx. 5000 N/mm<sup>2</sup></td> <td>approx. 2400 N/mm<sup>2</sup></td> </tr> <tr> <td>c - value (capillary water absorption)</td> <td>&gt; 0,4 kg/(m<sup>2</sup>·min<sup>0,5</sup>)</td> <td>&gt; 0,4 kg/(m<sup>2</sup>·min<sup>0,5</sup>)</td> <td>&gt; 0,4 kg/(m<sup>2</sup>·min<sup>0,5</sup>)</td> </tr> <tr> <td>μ - value</td> <td>approx. 20</td> <td>approx. 12</td> <td>approx. 12</td> </tr> </tbody> </table>				<b>Coarse</b> max. grain size approx. 8,0 mm	<b>Medium</b> max. grain size approx. 3,5 mm	<b>Fine</b> max. grain size approx. 1,0 mm	Mortar group	<b>GP, CS II, W 0 with DIN EN 998-1, (P II with former DIN V 18550 )</b>			Cured mortar gross density	approx. 1,75 kg/dm <sup>3</sup>	approx. 1,5 kg/dm <sup>3</sup>	1,3 kg/dm <sup>3</sup>	Flexuryl strength	approx. 1,6 N/mm <sup>2</sup>	approx. 1,3 N/mm <sup>2</sup>	approx. 0,8 N/mm <sup>2</sup>	Impact resistance	approx. 5,0 N/mm <sup>2</sup>	approx. 3,0 N/mm <sup>2</sup>	approx. 2,5 N/mm <sup>2</sup>	Rake DIN 4108 thermal conductivity	0,89 W (m·K)	0,89 W (m·K)	0,89 W/(m·K)	E - module	approx. 8500 N/mm <sup>2</sup>	approx. 5000 N/mm <sup>2</sup>	approx. 2400 N/mm <sup>2</sup>	c - value (capillary water absorption)	> 0,4 kg/(m <sup>2</sup> ·min <sup>0,5</sup> )	> 0,4 kg/(m <sup>2</sup> ·min <sup>0,5</sup> )	> 0,4 kg/(m <sup>2</sup> ·min <sup>0,5</sup> )	μ - value	approx. 20	approx. 12	approx. 12
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<b>Coverage:</b>	Approx. 1.5kg powder / m <sup>2</sup> / mm render thickness																																						
	<p><b>Yield:</b> 10kg powder will yield approx.. 6,5 l wet mortar</p>																																						
<b>Substrate:</b>	Make sure all substrates are sufficiently structurally sound, free from dust, and absorbent.																																						
<b>Preparation of the Substrate:</b>	<p>Clean dust and loose particles off substrate. Remove brittle joint mortar to a depth of approx. 2cm. Apply Rajasil Spritzbewurf in a web-like pattern. Mixed masonry or low-absorbent masonry requires the application of a bonding bridge with Rajasil Spritzbewurf (fully covering). Moisten masonry prior to the application of Rajasil Spritzbewurf; make sure it is sufficiently hardened before proceeding.</p> <p>On surfaces made from lightweight wood shavings boards, e.g. panels of roller-shutter casings, special measures are necessary to prevent the formation of cracks (see DIN EN 13168). Observe recommendations of wall construction material manufacturer!</p>																																						
<b>Application and Substrate Temperature:</b>	<p>+ 5 °C minimum; lower temperatures during the curing phase can have a sustained negative effect on product properties.</p> <p>With high environmental temperatures (and/or strong wind), additional measures are necessary to prevent premature loss of mixing water.</p>																																						
<b>Preparation of the Product:</b>	Mix to a lump-free consistency using a mixing pump or manually/with power stirrer in a clean mortar bucket. Hopper mixers are also suitable.																																						
<b>Application:</b>	<p>Apply using a plastering machine or manually; Rajasil Kalkputz HS NA OWA grob can only be applied manually. Cast hollow areas, holes and larger indentations with Rajasil Kalkputz HS NA OWA mittel (or, better, grob/coarse) prior to actual render application. This levelling render layer must be thoroughly cured before continuing with render application. Thoroughly roughen surface during stiffening process.</p> <p><u>Basecoat:</u> Depending on absorbency and weather conditions, thoroughly moisten masonry prior to render application. Then, in a first step, apply Rajasil Kalkputz HS NA OWA onto the pale-damp masonry surface. Once this layer begins to set, cast on another layer of mortar wet-on-damp until required basecoat thickness is obtained.</p> <p>Observe recommendations of wall construction material manufacturer!</p>																																						

**Application:**Surface Treatment:

- a) If it is planned to apply a mineral, thin-layer, textured finishing coat, vertically and horizontally level and smooth surface with h-profile feather edge (smoothing board) immediately after render application.
- b) If it is planned to apply a HECK mineral decorative render or another coat of Rajasil Kalkputz OWA as finishing coat, vertically and horizontally level and smooth surface with h-profile feather edge and thoroughly comb scratch/key horizontally during stiffening process.
- c) Use as finishing coat  
After allowing for a drying time for the basecoat of 1 day/mm, 14 days minimum, Rajasil Kalkputz OWA can be applied as finishing coat for various render finishes:  
"Altdeutscher Putz", traditional "old German style" finish (Kalkputz HS NA OWA mittel)  
Using a trowel, throw on mortar evenly; afterwards, rework using a block brush and not too much water.  
Felt-float finish (Kalkputz HS NA OWA fein)  
Finishing coat thickness 6mm max. Do not use too much water for felt-float finishing or smoothing. And, do not "over-finish" to prevent binder agglomerations on the surface.

**Application:**Render thickness:

On exterior surfaces, observe the overall render thickness (basecoat and finishing coat) of 20mm required by former DIN V 18 550.

Per-coat render thickness:

Rajasil Kalkputz OWA COARSE	10 - 25mm (not machine applicable)
Rajasil Kalkputz OWA MEDIUM	8 - 25mm
Rajasil Kalkputz OWA FINE	8 - 25mm

Wall bases:*Refurbishment of old buildings:*

On moist, salt-contaminated masonry, apply a Rajasil renovation render system, starting above grade, up to at least 80cm above moist or salt-contaminated areas (refer to Technical Data Sheets of Rajasil renovation render systems).

*New buildings:*

For wall bases, we recommend Rajasil LSP (Leichtsockelputz).

**After Treatment:**

**Due to the slow curing process, particularly careful after treatment is necessary in order to prevent premature loss of mixing water.**

Protect freshly applied render from premature dehydration (sun, wind, high temperatures) and from rain and frost.

**Subsequent Surface Coating:**

Rajasil Kalkfarbe can be applied directly onto fresh Kalkputz HS NA OWA (only if render is non-waterrepellent) or after Kalkputz HS NA OWA has dried. Given a normal curing process, low-tension curing, open-porous systems, such as Rajasil Silikat-Fassadenfarbe, can be applied after approx. 14 days.

Apply paint coats on Rajasil Kalkputz HS NA OWA in several thin-layer coats (at least one prime and top coat respectively).

**Notes:**

Due to the usage of mineral raw materials, follow-up deliveries may vary in colour shade. Only use material from the same production batch for continuous surfaces, especially if no surface coating is performed.

Variations in colour shade and surface texture over the course of time due to weather and 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 if applied as finishing coat; this does not constitute a reason for complaint.

**Safety Instructions:**

Rajasil Kalkputz HS NA OWA contains hydraulic lime and thus react 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, thoroughly rinse 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.

**Storage:**

Store in dry place; shelf-life in original container: approx. 9 months.

**Quality Control:**

Constant monitoring of production through laboratory analyses.



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