



### 1. Product description

KEIM NHL-Kalkputz-Fein is a dry bagged mortar manufactured to DIN EN 998-1, based on sand, lime (white lime, highly hydraulic natural lime) and hydraulic additives, as well as additives for a better processing and adherence. The strength complies with mortar category CS II or PII as per DIN V 18550.

### 2. Field of application

KEIM NHL-Kalkputz-Fein is a lime-bound fine render for manual and machine application and is used as a topcoat render for interior, exterior and damp areas. It can be used on any conventional undercoat renders, but not on gypsum-containing, plasto-elastic or saponifiable substrates. KEIM NHL-Kalkputz-Fein acts also as a bonding bridge for subsequently applied lime renders. KEIM NHL-Kalkputz-Fein is particularly suitable for historic renovation and remediation work and for low environmental impact residential applications.

### 3. Product properties

- Grain size: 0 - 0.6 mm
- Low environmental impact and excellent building physics
- Good machine application
- Particularly easy to apply
- Wide variety of textures
- Water-repellent
- Good adherence properties
- Partial or full cover embedding of fabric (e.g. KEIM Glasfaser-Gittermatte (glass fibre wire mesh)

#### Material characteristics to DIN EN 998-1

- Compressive strength: 1.5–5.0 N/mm<sup>2</sup>, CS II
- Flammability: A1
- Water vapour permeability  $\mu$ : approx. 10
- Water absorption: W 2
- Tensile bond strength:  $\geq 0.08$  N/mm<sup>2</sup> (fracture pattern A, B or C)
- Thermal conductivity:

$$\lambda_{10, \text{dry}}: \leq 0.83 \text{ W/(mK) für P = 50%*}$$
$$\leq 0.93 \text{ W/(mK) für P = 90%*}$$

(\*tabular values to EN 1745)

### 4. Application instructions

#### Substrate preparation

The substrate must be solid, sound and free from dust and dirt. Cracks need a wedge-shaped enlargement. Strongly absorbent substrates may need to be prewetted. The surface must be properly set and hardened. Particularly smooth surfaces need to be roughened well beforehand. Very sanding undercoat renders need to be solidified by a pretreatment with KEIM Fixativ (diluted with water 1:1 or 1:2).

#### Application

KEIM NHL-Kalkputz-Fein can be processed by hand; small quantities can be mixed with a blunger. However, processing with conventional commercial rendering and mixing machines makes more sense. Mix sufficiently, but do not overmix as a severe drop in strength is otherwise observed.

Water usage: approx. 280–320 ml/kg (corresponding to 7-8 l/sack). When applied as a topcoat render, minimum thickness is 2 mm and maximum thickness 5 mm. KEIM NHL-Kalkputz-Fein is applied with a steel trowel and in the first stage smoothed to a good opaque finish. Once solidification has begun, the final texture can be applied, for example with a steel, felt or sponge float, by free modelling or spraying - it can be even applied like a filling coat by brush.

#### Reinforcement

For embedding fabric apply KEIM NHL-Kalkputz-Fein with a thickness of 3 - 4 mm, embed KEIM Glasfaser-Gittermatte (glass fibre wire mesh), overlap by 10 cm where pieces meet and cover over wet-on-wet with another layer of KEIM NHL-Kalkputz-Fein of approx 2 mm. Total thickness of the reinforcement should be approx 5 - 6 mm.

To act as a bonding bridge apply KEIM NHL-Kalkputz-Fein to a thickness of 3–5 mm, roughen thoroughly, leave to harden for 1–2 days or overcoat wet-on-wet with a thin layer of KEIM NHL-Kalkputz-Fein. KEIM NHL-Kalkputz-Fein must be applied before it begins to solidify. Previously set material must not be remixed. In basement areas, only use as a topcoat render if in-situ water is avoided by a coarse gravel drainage layer.

#### Note

In case of a thin layer application or excessively fast drying process, the finished render surface has to be rewetted once or more times. Heat interior spaces carefully to avoid a too fast drying process (cracks, low strength).



**Application conditions**

Do not apply and let dry below +5°C and above +30°C wall and air temperature. Avoid strong sunlight and air draught.

**Drying times**

A setting time of at least one day per mm render thickness is required before further coating. From then on, coatable after 10 more days. High air humidity and low temperatures can extend the setting time definitely. In case of a thin-layer application or excessively fast drying process, the finished render surface has to be remoistened once or more times.

**Finishing**

KEIM NHL-Kalkputz-Fein can be coated with any thin-layer KEIM finishing render and any KEIM coating system - it can also be tiled. For a subsequent coating with KEIM Purkristalat, a layer thickness of 5 mm is required.

**Consumption**

Material consumption:

approx. 1.2 kg per m<sup>2</sup> per mm thickness.

Yield:

approx. 21 l /sack = approx. 840 l /t.

**Cleaning of tools**

Immediately with water after use.

**5. Packaging**

25 kg sack (42 sacks per pallet = 1,050 kg)

**6. Storage**

Under dry and protected conditions. Storage should not exceed 12 months.

**7. Hazardous substances ordinance class**

Xi Irritant

- R 37/38: Irritation to respiratory system and skin.  
 R 41: Risk of serious damage to eyes.  
 S 2: Keep out of reach of children.  
 S 22: Do not breathe dust.  
 S 24/25: Avoid contact with skin and eyes.  
 S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 S 36/37/39: Wear suitable protective clothing, gloves and eye/face protection.  
 S 46: If swallowed, seek medical advice immediately and show this container or label.

**8. Transport hazard class**

n/a

**9. Disposal**

EC Waste Code No. 10 13 99

Any residues must be emptied out of containers before recycling.

**10. Safety instructions**

Lime has an alkaline action in combination with water. Cover surfaces which are not to be treated. Any splashes on surrounding areas must be rinsed off immediately with plenty of water. Protect the eyes and skin from splashes. Keep out of reach of children.

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