

#### Note on English translation / Hinweise zur englischen Fassung

This is a translation of the technical data sheet valid in Germany.

All stated details and properties are in compliance with the regulations of the German standards and building regulations. They are only applicable for the specified products, system components, application rules, and construction details in connection with the specifications of the respective certificates and approvals.

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P251a.de



Plaster and Façade Systems

2014/01

# Knauf UP 210

Lime-cement basecoat

## Product description

Lime-cement basecoat for medium-weight masonry such as lime sandstone, light concrete and brick masonry for interior and exterior use.

### Composition

Hydrated lime, cement, graded limestone or quartz grains, water-retaining and water-repellent additives.

### Order information

30 kg bag                      Material no. 00009388  
Bulk (silo)                    Material no. 00014547

### Storage

Store the bags on wooden pallets in a dry environment. Can be stored for approx. 9 months.

### Quality

In compliance with DIN EN 998-1, the product is subject to initial type testing and continuous factory production control and is marked with the CE marking.

## Field of application

Basecoat for mineral and ready-to-use finishing coats in interior and exterior applications.

As a basecoat

- on medium-weight masonry with a density > 800 kg/m<sup>3</sup>,
- for tiles in wet rooms, bathrooms and kitchens,
- for scratch render.

As a sponge-finished basecoat

- for interior application,
- for the exterior with additional coating system.

## Properties and added value

- General-purpose rendering/plastering mortar GP acc. to DIN EN 998-1
- Compressive strength category CS II acc. to DIN EN 998-1
- Mortar group P II acc. to DIN V 18550
- Suitable for interior and exterior application
- Water-repellent
- For machine or hand application
- 1 mm grains for sponged surface finishes.

### Application

Substrate	Pre-treatment
Brick, expanded clay or pumice masonry, lime sandstones (formats up to 25 x 50 cm)	On highly absorbent substrates or hot summer weather, apply wet in moist in two coats.
Aerated concrete in interiors	Apply in two layers wet in moist.
Smooth concrete, prefabricated concrete units	SM700 Pro, SM300, Sockel-SM or Lustro as a mineral bonding plaster primer.
XPS-R insulation boards	SM700 Pro, SM300, Sockel-SM or Lustro as a mineral bonding plaster primer.
Rough concrete, large format lime sandstone (format > 25 x 50 cm), small format multi-layer wood wool slabs	SM700 Pro, SM300, Sockel-SM or Lustro as a mineral bonding plaster primer or Der Vorspritzer.
Small format brick masonry, dry-stone walls, mixed brickwork	Der Vorspritzer.
Non-stable substrate	Suitable plaster base.
EPS sheathing blocks	SM700 Pro, SM300, Sockel-SM or Lustro as a mineral bonding plaster primer.

### Preparation

Check substrate for compliance with VOB part C, DIN 18350, chapter 3.1 and/or according to VOB part B, DIN 1961 § 4 no. 3. Clean the substrate of dust and loose parts and remove, ensure that the surface is smooth. Cover easily-soiled building components before commencement in accordance with Code of Practice "Abklebe- und Abdekarbeiten für Maler- und Stuckateurarbeiten" issued by the Bundesverband Ausbau und Fassade.

Substrate pre-treatment according to the pre-treatment table. All substrates must be stable, dry, even and free of grease and dust as well as free of any residue that may reduce adhesion.

### Mixing

**Machine application:** For machine application using mixing pumps, e.g. PFT G4, set the desired consistency by adding water.

**Hand application:** Mix the content of one bag with about 5.6 litres of clean water without further additions until an application-ready lump-free consistency is achieved. When mixing, use clean water and do not add other additives. Clean the machines and tools with water immediately after use.

### Application

Apply UP 210 on a pre-prepared substrate with a plaster thickness of at least 10 mm (interior applications) or at least 15 mm (exteriors), strike off level and scrape. Remove fins and protrusions with a lattice plane after initial setting. Undertake scratch tests with the lattice plane. Before working area further, allow to dry and harden at a rate of at least 1 day / mm thickness.

With normally absorbent substrates, such as e.g. brick, pumice, expanded clay or aerated concrete masonry, UP 210 can be sponged with a single layer. On large area concrete surfaces to be plastered, large format lime sandstones

etc., where a primer is necessary in accordance with the above table, apply and sponge another 2-3 mm of UP 210 on the following day. With Mak3 as a top coat apply at least 10 mm UP 210, strike off level and subsequently roughen with a coarse brush.

### Render thickness

Single-layer or double-layer: 10-35 mm.

**Single-layer 10-20 mm:** Drying time min. 1 day / mm.

**Single-layer > 20-35 mm:** Drying time min. 1 day / mm and a further week per cm of additional render thickness exceeding 20 mm. After fully dry and set, apply full surface mesh reinforcement (reinforcing mesh 4x4 or 5x5 mm) with SM700 Pro, SM300 or Lustro.

**Two-layers > 20-35 mm:** Apply the first layer and and roughen with a brush. Allow the first layer to dry for at least 1 day / mm. When fully dry and set, embed basecoat mesh (8x8 mm) on the full area just below the surface in the second layer. Or after fully dry and set, apply full surface mesh reinforcement (reinforcing mesh 4x4 or 5x5 mm) with SM700 Pro, SM300 or Lustro.

### Plinth application

Cement plinth render UP 310 must be used on the plinth and splash water area and on masonry and surfaces in contact with the ground or gravel on masonry of compressive strength category > 8. For lightweight and softer wall materials (stone of compressive strength category ≤ 8), use cement light basecoat LUP. Apply on pretreated XPS-R board surfaces using either the above mentioned basecoats with Knauf basecoat mesh (8x8 mm) or on the basecoat with an additional mesh reinforcement (reinforcing mesh 4x4 or 5x5 mm) with Sockel-SM or SM700 Pro.

After drying out, all rendered surfaces in contact with ground or gravel beds shall be waterproofed/protected against moisture ingress, starting from basement wall waterproof barrier up to approx. 5

cm above ground level, in accordance with DIN 18195. For this purpose, Sockel-Dicht (plinth sealing) can be applied with a thickness of at least 2.5 mm (double layer). Cover with a fleece laminated dimpled sheet after drying.

### On a plaster base

On a professionally applied plaster base, apply about a 10 mm thick coat of UP 210 and level it into the plaster base. Roughen the surface with a brush. After setting apply another approx. 10-15 mm, strike off level and scrape. In order to minimize the occurrence of cracks on the plaster surface, it is recommended that you embed Knauf basecoat mesh (8x8 mm) in the second plaster layer, or even better, apply a full surface reinforcing mesh 4x4 or 5x5 mm with SM700 Pro, SM300 or Lustro. Do not exceed a layerthickness of 4 mm with SM700 Pro and SM300.

### Substrate for tiling

In bathrooms and kitchens (e.g. WC's in schools and bathrooms in hotels, hospitals, residential-care and nursing homes) as substrates for tiles and floor slabs, if the weight of the tiles and floor slabs including the thin-bed mortar does not exceed 25 kg/m². Observe a render thickness of at least 10 mm. Fully remove any existing sinter skin. Allow to dry and set fully before a tile covering is applied. Use a quick setting, workable thin-bed mortar as a tiling adhesive (e.g. Knauf Flexkleber schnell). Additional measures may be required and consultation with the tiling specialist is necessary for tile sizes exceeding 60 x 30 cm. UP 210 is suitable as a basecoat for classifications A, A0, B0 and C in accordance with the ZDB Code of Practice "Verbundabdichtungen" (Waterproofing).

### Reinforcement

In exterior applications with freely textured, brushed surfaces or textured renders where the grain size is less than 2 mm (in acc. with DIN 18350, VOB part C, < 3 mm), on large areas applied with multi-layer wood wool slabs after a drying time of at least 3 weeks or with single layer render thicknesses of > 20-35 mm, an additional full surface mesh reinforcement (reinforcing mesh 4x4 or 5x5 mm) with SM700 Pro, SM300 or Lustro is recommended.

For exterior and interior renders, with a change of material in the background, with insulation panels applied over small areas and multi-layer wood wool slabs etc., apply Knauf basecoat mesh (8x8 mm) in the upper third of the plaster layer with at least 100 mm joint overlay and 200 mm overlap on all sides to the flanking component or apply an additional full-surface mesh reinforcement (reinforcing mesh 4x4 or 5x5 mm) with SM700 Pro, SM300 or Lustro. With SM700 Pro and SM300, do not exceed a render thickness of 4 mm. Apply diagonal reinforcement at corners, on building openings, etc.

## Application

### Machines / equipment

Knauf PFT mixing pump G 4

Stator: D6-3

Rotor: D6-3

Mortar hoses: Ø 25 mm

Wet mortar pumping distance: up to 30 m

### Application temperature/climate

Do not apply at material, air and/or substrate temperatures below +5°C and above +30°C. Protect fresh mortar from frost and rapid drying.

### Special notes

Render must be applied according to DIN EN 13914, DIN V 18550 and DIN 18350, VOB part

C as well as the generally recognized building engineering rules and valid guidelines. Only mix the dry mortar with clean water, do not add other additives. With previous application of gypsum plasters or plasters containing gypsum, it is essential that the plastering machine is thoroughly cleaned (wet zone, plaster spiral, rotor, dry zone, gear wheel, hoses; for dry material feed: transfer hood, supply hose, pressure vessel, injection hood, feed manifold). With different application thicknesses as well as pronounced joints in the mortar, the substrate may shimmer through after sponging.

Should the basecoat remain exposed during the winter, we recommend application of Knauf Grundol primer before the finishing plaster is applied in spring.

Heating in rooms should only be put into operation in stages. Rapid dehumidification, e.g. using dehumidifiers should be avoided.

### Safety instructions and disposal

See Safety Data Sheet.

## Coatings

### Finishing coats

After a drying time of at least 1 day per mm render thickness, mineral-based and ready-mixed-finishing top coats such as Noblo, Noblo Filz, SP 260, Carrara, RP 240, Mak3, Conni, Addi, Kati etc. and any necessary substrate primers can be applied. With groove render such as RP 240, Addi R in 2 mm thickness, a continuous closed surface must be produced or the basecoat must be covered with SM700 Pro.

### Colours

Basecoats must be fully hardened and dry before the paints are applied.

For sponged basecoats used in exterior applications that are to be coloured, after a Grundol primer is applied, two coats of Autol (silicon resin façade paint), Minerol (silicon resin façade paint) or Fassadol (siloxane-reinforced façade paint) are recommended.

Sponged basecoats used in interior applications

can be painted with Rotkalk Farbe E.L.F. (silicate based paint), Silikatweiss E.L.F. (silicate based dispersion paint), Diamantweiss E.L.F. (hybrid-paint), Intol E.L.F. (interior dispersion paint) and Malerweiss E.L.F. (interior dispersion paint). In interior applications, paint coloured finishing renders with Rotkalk Farbe E.L.F. (silicate based paint) or Intol E.L.F. (interior dispersion paint).

## Technical data

DIN EN 998-1

Reaction to fire: A1 DIN EN 13501-1

Grain size: 1.0 mm

Compressive strength (category): CS II DIN EN 1015-11

Adhesive strength:  $\geq 0.08 \text{ N/mm}^2$ , failure pattern: A, B or C DIN EN 1015-12

Capillary water absorption (category): W 2 DIN EN 1015-18

Water vapour permeability coefficient  $\mu$ :  $\leq 25$  DIN EN 1015-19

Thermal conductivity  $\lambda_{10, \text{dry, mat}}$ :  $\leq 0.82 \text{ W/(m} \cdot \text{K)}$ , at P=50 % DIN EN 1745  
 $\leq 0.89 \text{ W/(m} \cdot \text{K)}$ , at P=90 %

The stated technical data were evaluated acc. to the respective test standards. Deviations under site conditions are possible.

## Material requirement / efficiency

Coat thickness mm	Consumption kg/m <sup>2</sup>	Yield m <sup>2</sup> /bag	m <sup>2</sup> /tonne
10	approx. 15.4	approx. 2.0	approx. 65.0
20	approx. 30.8	approx. 1.0	approx. 32.5

The exact consumption can only be determined with a test application on the individual object.

### Knauf Direct

Technical Advisory Service:

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► [www.knauf.de](http://www.knauf.de)

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