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Knauf Gips KG denies any liability for applications outside of Germany as this requires changes acc. to the respective national standards and building regulations.

# KNAUF



Plaster and Façade Systems

## P202.de

Product Data Sheet

2017-11



# Rotkalk Grund

Lime basecoat plaster for interiors and exteriors

## Product description

Lime basecoat with Kaolin and clay dust on all types of masonry and concrete for use in interiors and exteriors. The high share of lime facilitates optimum light application properties.

## Composition

Hydrated lime, hydraulic binder, metakaolin, clay dust, graded quartz or limestone grains, water-retaining additives, air entraining admixture and processing additives.

## Storage

Store the bags on wooden pallets in a dry environment. The product can be stored for at least 6 months.

## Quality

In compliance with EN 988-1, the product is subject to initial type testing and continuous factory production control and bears the CE marking.

Tested by the Institut für Baubiologie (building biology) in Rosenheim (IBR) and awarded the "Tested and recommended by the IBR" seal of approval.

For detail see [www.baubiologie-ibr.de](http://www.baubiologie-ibr.de)

## Properties and added value

- General-purpose rendering/plastering mortar GP acc. to EN 998-1
- Compressive strength category CS I acc. to EN 998-1
- For interior and exterior use
- For machine or hand application
- Moisture regulating, thus favourable for the interior climate (vapour permeable)
- Highly alkaline, and acts as a preventative measure against health hazards posed by the formation of mould and mildew
- Contaminant reduction effect for VOC's, formaldehyde and Nitrogen oxide
- Water-resistant
- Colour shade red-brown



### Field of application

Basecoat for use in interiors and exteriors for application of subsequent layers for the creation of free, washed textures or with double-layer application as a sponged surface. Ideal for building subject to preservation orders using machine applied lime plasters if historically relevant lime plasters are required.

- As a basecoat for interior and exterior use
- For sponge finish interior surfaces
- As a substrate for small format tiles in domestic kitchens and bathrooms
- As a basecoat for wall heating systems
- As an equalization plaster under the interior insulation system Rotkalk in

Particularly suitable where the highest physical building requirements are placed on the room hygiene, room air and quality of living.

The high level of lime or hydraulic puzzolan-based binder makes the plaster a low stress plaster and is therefore excellently suited for highly thermally insulating masonry.

### Package

#### Substrate and pretreatment

Substrate	Pretreatment
Brick, expanded clay or pumice masonry, lime sandstones with masonry mortar joints	On highly absorbent substrates and/or hot summer weather, apply <i>fresh-in-fresh</i> in two coats
Aerated concrete	Apply in two coats <i>fresh-in-fresh</i>
Smooth concrete, prefabricated concrete units	SM700 Pro or SM300 (in interiors: Rotkalk Fein) as a mineral bonding plaster primer
XPS-R insulation panels	SM700 Pro or SM300 (in interiors: Rotkalk Fein) as a mineral bonding plaster primer
Rough formwork concrete, lime sandstone with thin-bed mortar, small format wood wool slabs	SM700 Pro or SM300 (in interiors: Rotkalk Fein) as a mineral bonding plaster primer or Der Vorspritzer (Spatterdash with bonding admixture).
Small format brick masonry, random rubble walling, mixed brickwork	Der Vorspritzer
Non-stable substrate	Suitable plaster base
EPS formwork blocks	SM700 Pro or SM300 as a mineral bonding plaster primer

### Preparation

Check the substrate for compliance with VOB part C, DIN 18350, chapter 3.1 and/or according to VOB part B, DIN 1961 paragraph 4 section 3. Clean the substrate of dust and loose parts and remove ensuring 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 - Masking and covering for painting and stucco work" (German only) issued by the Bundesverband Ausbau und Fassade. Protect weather-exposed surfaces from precipitation and direct sunlight.

All substrates must be stable, dry, even and free of grease and dust as well as free of any residual substances that may reduce the adhesion.

### Machines / equipment

PFT mixing pump G 4

- Stator D6-3
- Rotor D6-3
- Mortar hoses Ø 25 mm
- Pumping distance up to 30 m

### Mixing

#### Mixing by hand

Mix the content of one bag with approx. 6.6 litres of clean water without further additions until an application-ready lump-free consistence is achieved.

#### Mixing by machine

For machine application using mixing pumps, e.g. PFT G4, set the desired consistence by adding water.

### Application

#### In interior areas

Apply Rotkalk Grund basecoat on prepared plastering surface in a thickness of 10 mm and if necessary embed Knauf Unterputzgewebe (8x8 mm) basecoat mesh near the surface, rule level and scrape. For sponge finish surfaces, apply approx. 3 mm again on the following day on the dried Rotkalk Grund basecoat and sponge finish.

#### In exterior areas

Apply Rotkalk Grund basecoat on prepared plastering surface with an average thickness of 20 mm. The plaster is applied in two layers. Apply the first layer of maximum 15 mm thickness and then within 30 minutes the second layer *fresh-in-fresh* until the final plaster thickness of 20 mm in applied. If necessary, embed Unterputzgewebe (8x8 mm) basecoat mesh near the surface. Rule the Rotkalk Grund basecoat smooth and scrape.

#### Plinth application

Cement plinth plaster 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 the cementitious lightweight basecoat LUP.

On XPS-R, plinth insulation boards, perimeter insulating panels (with mesh reinforcement) or Sockel LUP, Sockel-SM Pro can be applied with a total plaster thickness of at least 7 mm. Additional subsequent moisture protection is not necessary.

After drying out, all other 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, Knauf Sockel-Dicht plinth sealing can be applied with a thickness of at least 2.5 mm (double-layer). Apply a fleece laminated dimpled sheet after drying.

#### With highly absorbent substrates and/or high summer temperatures

Apply the first layer about 5 to 10 mm thick and smoothen (coarsely) adequately. Apply the second layer within 30 minutes. If necessary, embed Unterputzgewebe (8x8 mm) basecoat mesh near the surface. Rule the Rotkalk Grund basecoat smooth and scrape after setting.

#### On a plaster base

Apply an approx. 10 mm thick coating of Rotkalk Grund basecoat on correctly secured plaster base and level it into the plaster base. Roughen the surface with a brush. After setting, apply another coating about 10 to 15 mm thick, level and scrape. In order to minimize the occurrence of cracks on the plaster surface, a reinforcement plaster of Rotkalk Fein and reinforcement mesh 4x4 or 5x5 mm should be applied.

**Substrate for tiling (not for cementitious bonded masonry and large format lime sandstones)**

In non-commercial bathrooms and kitchens (e.g. WCs in schools and bathrooms in hotels, hospitals, residential care and nursing homes) up to a maximum tile size of 33 x 33 cm as substrate for tiles and floor slabs, if the weight of the tiles and floor slabs including the thin-bed mortar does not exceed 25 kg/m<sup>2</sup>. Ensure a plaster thickness of at least 15 mm. Fully remove any existing sinter skin. Allow to dry and set fully before a tile covering is applied. Allow at least 6 weeks. Use a quick setting, workable thin-bed mortar as a tiling adhesive (e.g. Flexkleber schnell). Use an additional decoupling mat for tile sizes exceeding 33x33 cm up to 60x30 cm.

**Larger plaster thickness**

Apply Rotkalk Grund basecoat in layers not exceeding maximum 15 mm thickness. Work using multiple layers with plaster thicknesses from 15 to 40 mm. Roughen the surface of the lower layer(s) with a brush and allow to dry and harden.

**Reinforcement**

In exterior applications with freely textured, brushed surfaces or textured plasters where the grain size is less than 2 mm (in acc. with DIN 18350, VOB part C, < 3 mm), mixed brickwork, on sides exposed to weather, critical building geometries, large areas applied with multi-layer wood wool slabs, after a drying time of at least 3 weeks or with multiple-layer plaster thickness applications of > 30 mm an additional full surface reinforcement with Rotkalk Fein and reinforcing mesh 4x4 or 5x5 mm is recommended.

For exterior and interior plasters, with a change of material in the background, with insulation panels applied over small areas and multi-layer wood wool slabs etc., apply basecoat mesh (8x8 mm) in the upper third of the plaster layer with at least 100 mm joint overlap and 200 mm overlap on all sides to the flanking component or apply a reinforcement plaster of Rotkalk Fein and reinforcement mesh 4x4 or 5x5 mm. Embed diagonal reinforcement at corners, on building openings, etc.

On final coats using Rotkalk Glätte on the dried Rotkalk Grund, a reinforcement plaster with Rotkalk Fein and reinforcement mesh 4x4 or 5x5 mm should be applied.

**Application temperature / climate**

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

**Drying time**

Before working area further, allow to dry and harden for at least 2 weeks.

**Cleaning**

Clean the machines and tools with water immediately after use.

<b>Notes</b>	Renders must be applied according to EN 13914-1, EN 13914-2, DIN 18550-1 or alt. DIN 18550-2 and DIN 18350, VOB part C as well as the generally recognized building engineering rules and valid guidelines.
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<b>Notes</b>	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).
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<b>Notes</b>	With different application thicknesses as well as pronounced joints in the mortar, the substrate may shimmer through after sponging.  Due to sponge finishing with water as well as due to processing, consistency, weather-related or drying condition factors, it is possible that a uniform colour hue may not be achieved. These features, however, in no way impair quality and shall not provide any justification for claims in respect of the material as they stem from uncontrollable physical conditions at the site and the colour shade can be equalized by application of the necessary coat.
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<b>Notes</b>	Heating in rooms should only be put into operation in stages. Rapid dehumidification, e.g. using dehumidifiers should be avoided.
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**Coatings and linings**

**Finishing plasters**

**In interior areas**

After a drying time of at least 2 weeks and after successful application of the screed, it is possible to apply the optimally suitable finishing coats such as Rotkalk Filz 05, Rotkalk Filz 1, Rotkalk Filz 2, Rotkalk Struktur 1.5 or Rotkalk Fein on top of the Rotkalk Grund basecoat without a primer coat.

**In exterior areas**

After a drying time of at least 2 weeks and a maximum of 4 weeks mineral finishing plasters and top coats such as Rotkalk Filz 2, Noblo, Noblo Filz, SP 260, Carrara, RP 240, etc. can be applied.

**Paints**

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

For sponged basecoats used in exterior applications that are to be colour coordinated, after a Grundol primer is applied, two coats of Mineral or MineralAktiv façade paint are recommended.

Sponge finished basecoats used in interior applications can be painted with Rotkalk Farbe E.L.F. paint. Paint coloured finishing plasters used in interiors with Rotkalk Farbe E.L.F. paint.

### Technical data

Description	Unit	Value	Standard
Reaction to fire	Class	A1	EN 13501-1
Graining	mm	1.2	–
Compressive strength	Category	CS I	EN 1015-11
Bond strength	N/mm <sup>2</sup>	≥ 0.08	EN 1015-12
Failure pattern	–	A, B or C	
Capillary water absorption	Category	W 0	EN 1015-18
Water vapour permeability $\mu$	–	≤ 10	EN 1015-19
Thermal conductivity $\lambda_{10, \text{dry, mat}}$			EN 1745
P = 50 %	W/(m·K)	≤ 0.82	
P = 90 %	W/(m·K)	≤ 0.89	

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

### Material requirement and efficiency

Coat thickness mm	Consumption approx. kg/m <sup>2</sup>	Yield approx.	
		m <sup>2</sup> /bag	m <sup>2</sup> /ton
2.0 – 3.0	3.6	8.4	277.0
10.0	14.3	2.1	70.0
20.0	28.6	1.0	35.0

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

### Product range

Product designation	Package	Graining	Packaging unit	Material number	EAN
Rotkalk Grund	30 kg	1.2 mm	36 bags/pallet	00015142	4003950000416
	Bulk		Silo	00015145	4003950035302



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