

Note on English translation / Hinweise zur englischen Fassung

This is a translation of the product 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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Plaster and Façade Systems

P248.de

Product Data Sheet

2017-09



SM300

Bonding and reinforcement mortar

Product description

System-tested, mineral-based bonding and reinforcement mortar for use on façades and plinth areas.

Composition

Lime hydrate, cement, graded limestone grains, limestone powder, silica sand, special fibres, special bonding agent, water-repellents and additives.

Storage

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

Quality

In compliance with EN 998-1, the product is subject to initial type testing and continuous factory production control and bears the CE mark. Furthermore, the product is subject to external monitoring.

Properties and added value

- Compressive strength category CS III acc. to EN 998-1
- With bonding admixture

- Highly water-repellent
- High adhesive force
- Diffusion permeable
- Grain size 1.0 mm
- For machine or hand application
- Colour shade grey

Field of application

For Knauf WARM WALL systems as

- Adhesive for WARM WALL systems Slim
- Adhesive and reinforcement mortar for WARM WALL systems Plus, Basis, Duo and Keramik
- Reinforcement mortar for Mak3 scratch render
- Adhesive and reinforcement mortar for WARM WALL Keramik
- Mineral-based bonding plaster primer

Application

Substrate and pretreatment

Substrate	Pretreatment
Non-stable paint layers	Remove completely
Plaster hollows and cavities	Remove completely and fill with a suitable render, take the drying times into account
Concrete, paint coats, old renders	If necessary, clean with a high-pressure water cleaner until free of dust and allow to dry completely. If necessary, solidify by applying Grundol primer
Chalking or sanding surfaces	Solidify surface by applying Grundol primer. The Tiefengrund primer should be completely absorbed
XPS insulation panels with smooth surface	Roughen surface, remove dust completely and apply additional dowels

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" issued by the German Bundesverband Ausbau und Fassade (German only). Protect weather-exposed surfaces from precipitation and direct sunlight.

Preparation of the substrate in accordance with the substrate and pretreatment table. 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.

Test the stability and compatibility of existing coats (old renders and paint coats) before application of SM300.

Machines / equipment

Knauf PFT mixing pumps G 4

- Stator D4-3 1/2 capacity
- Mortar hoses Ø 25 mm
- Wet mortar pumping distance up to 30 m

Application

Adhesive mortar

Apply insulation panels immediately (max. 10 minutes after mortar application) in the fresh bonding mortar bed by pushing, floating and pressing.

Ribbon and dab method

Apply SM300 adhesive with the ribbon and dab method with an adhesive area ratio of $\geq 40\%$ on the substrate after the insulation panels have been pushed on. Apply an approx. 50 mm wide ribbon of mortar around the perimeter and 3 palm-sized adhesive mortar dabs or strips in the middle. Alternatively, SM300 can be machine applied directly to the substrate as meandering mortar strips where the bonding ratio should be $\geq 60\%$ (spacing between strips maximum 80 mm). On even substrates, it is possible to apply the adhesive mortar on the entire surface of the insulation panel with a notched trowel. A bonding area ratio of $\geq 50\%$ is sufficient with machine application of adhesive mortar for the double side coated insulation panels MW Volamit 040 and MW Wolle 035 plus.

Bonding of MW Wolle 035 is performed by hand application on the uncoated side. Before applying the adhesive, we recommend that you "press skim" the insulation panels, i.e. apply a thin coat and press it firmly to work it into the surface. Subsequently apply SM300 *fresh on partly dry* with an adhesive area ratio of $\geq 40\%$.

Basecoat

Fully embed strips of reinforcement mesh at the inner corners between window and reveal as well as Gewebeeckwinkel 100/150 mesh corner angles perpendicular and flush in the SM300. Also apply diagonal reinforcement using Gewebeeckpeile mesh corner arrows or reinforcement mesh strips

(approx. 300x500 mm) starting directly from the corner. Subsequently embed reinforcement mesh 4x4 mm on the entire surface with at least a joint overlap of 100 mm *fresh-in-fresh* in the upper third of the basecoat layer. The reinforcement mesh should be fully covered with SM300.

Thickness of the basecoat layer on Knauf WARM WALL systems:

- 5 to 7 mm

Layer thickness with Mak3:

- 7 mm

With the exception:

- on basecoats approx. 4 mm

A drying time of at least 1 day/mm basecoat thickness is required prior to application of mineral-based finishing coats. Paste-like finishing coats may not be applied before SM300 is fully dry, however, the minimum drying time is 10 days. In addition, we strongly recommend application of a Quarzgrund Pro primer before paste-like finishing coats are applied. The stated drying times may be significantly longer in case of cool or wet weather.

If a double-layer reinforcement is required (see table "Reinforcement in dependence on the finishing render and luminosity of the finishing coat"), the first layer is applied with a thickness of 3 to 4 mm while embedding the reinforcement mesh with at least ≥ 100 mm joint overlap. After hardening of the first reinforcement layer apply a second layer of SM300 with a thickness of approx. 2 to 3 mm on the first basecoat layer, while embedding a second layer of reinforcement mesh, again with ≥ 100 mm joint overlap. The diagonal reinforcements are embedded below the last reinforcement mesh layer. Allow a drying time of at least 1 day/mm layer thickness.

Plaster bonding layer

On concrete, XPS-R, wood fibre panels and similar substrates. Apply SM300 with a thickness of at least 5 mm. Spread the mortar using a widely notched trowel and roughen the surface with a broom. Allow a drying and setting time of at least 3 days.

Plinth application

Seal and protect all coated surfaces with contact to the soil or gravel layer up to approx. 50 mm above the ground line against moisture acc. to DIN 18195. For this purpose, Sockel-Dicht plinth sealing can be applied with a layer thickness of at least 2.5 mm (double-layer). Apply a fleece laminated dimpled sheet after drying.

Application temperature / climate

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

Cleaning

Clean the machines and tools with water immediately after use.

Note

Please observe the Knauf System Data Sheet and the German National Technical Approval for the corresponding Knauf WARM WALL system for application as an adhesive and reinforcement mortar.

Reinforcement in dependence on the finishing plaster and luminosity of the final coating

Finishing render on SM300	Graining mm	Luminosity of the final coating				
		100 to 30	29 to 25	24 to 20	19 to 15	14 to 10
SP260, RP 240, Noblo	2.0 – 5.0	•	•	•	• ¹⁾	• ¹⁾
Noblo	1.5	•	•	••	•• ¹⁾	•• ¹⁾
Noblo Filz	1.0 – 1.5	•	•	••	•• ¹⁾	•• ¹⁾
Mak3	2.0 – 4.0	•	○	○	–	–
Conni, Addi, Kati	1.5 – 3.0	•	•	•	•	• ¹⁾
MineralAktiv	1.5 – 3.0	•	○	–	–	–
Carrara	1.0	••	○	–	–	–

1) When using TSR paint in conjunction with white finishing plaster.

- Single layer mesh reinforcement
- Double layer mesh reinforcement
- On request

Technical data

Description	Unit	Value	Standard
Reaction to fire	–	A1	EN 13501-1
Graining	mm	1.0	–
Compressive strength	Category	CS III	EN 1015-11
Bond strength	N/mm ²	≥ 0.08	EN 1015-12
Water vapour diffusion resistance μ	–	≤ 25	EN 1015-19
Thermal conductivity λ _{10, dry mat at}			EN 1745
P = 50 %	W/(m·K)	≤ 0.82	
P = 90 %	W/(m·K)	≤ 0.89	
Capillary water absorption	Category	W 2	EN 1015-18

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

Material requirement and efficiency

Application	Coat thickness mm	Consumption approx. kg/m ²	Yield approx.	
			m ² /bag	m ² /ton
Adhesive (rough substrate)	–	6.5	3.9	154.0
Adhesive (level substrate)	–	4.3	5.8	233.0
Mesh reinforcement	5.0 – 7.0	7.6	3.3	132.0

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

Product range

Product designation	Application	Graining	Packaging unit	Material number	EAN
SM300	25 kg	1 mm	42 bags/pallet	00178249	4003950086755
	Bulk		Silo	00178250	4003950086762



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