

Technical Information Sheet Article No. 1053

Universal Render

Repair render.

Factory-mixed, dry mortar in compliance with DIN 18550-4 for indoors and outdoors, with binding agents in compliance with DIN 1164 and DIN 1060. Natural, cementitious aggregates in compliance with DIN EN 13139 and special additives.

Continuous laboratory testing for composition and quality.

Range of use

Remmers Universal Render is suitable for repair, restoration and new render work, in interior and exterior areas. It is used for the production of plinth and exterior cellar wall renders as well as interior wall surfaces in cellars used for living space and for surfaces with ground contact. Universal Render is especially suitable for use in combination with the Remmers Kiesol System for the restoration of old buildings and monument preservation. Universal Render can be used on all cementitious wall building materials suitable for render and render bases such as e.g. masonry work made of building materials with hydraulic setting binders according to DIN 1164, DIN EN 459, DIN 4211 as well as masonry work made of natural, standard and officially approved building materials according to DIN 1053, e.g. masonry brick, sand-lime brick, each in a strength class greater than 6 and concrete according to DIN 1045.

Property profile

Remmers Universal Render is a factory-mixed, cementitious, dry mortar that is ready to use after mixing with water and sets hydraulically.

Characteristic data of the product in the packaged state

Bulk density: approx. 1.2 kg/dm³
Colour: antique white

Requirement profile:

- DIN 18550, part 2, render mortar group P II
- DIN 4102 Behaviour under fire - non-combustible building material, building material class A I
- Water absorption coefficient > 0.2 to < 1.0 kg/m² h^{0.5}
- Water vapour diffusion resistance coefficient $\mu \leq 12$

It can be worked by hand or with conventional machines, e.g. mixing pumps with an agitator – for this see Remmers product information "Working Render by Machine".

The render mortar is smooth, very easy to work and structure, green stable and high yielding. If worked properly, it is suitable for a single layer application thickness of 10 to 25 mm.

The render mortar has high adhesion capacity. Universal Render is pore hydrophobic and water vapour permeable. Its water absorption coefficient complies with the WTA Code of Practice 2-2-91 for capillary water absorption and water penetration depth. Universal Render is water, weather and frost resistant.

Substrate

The render base must be load bearing and free of material that could interfere with the adhesion of

the render (e.g. parting agents, loose material, dust, sanding, efflorescence, soiling). The render base can be dry or damp but should not show pressing moisture. Rising damp should be treated in the Remmers Kiesol System. Old and damaged renders, paint and coatings should be thoroughly removed. Adhesion capacity can be improved on moderate, evenly absorbent rendering bases by e.g. pre-wetting. On weakly absorbent render bases, apply Remmers Preparatory Mortar net-like/nodularly. On highly absorbent render bases and substrates waterproofed in the Remmers Kiesol System, apply Preparatory Mortar as a full cover rough cast, if necessary using Remmers Hafffest in a mixing ratio of 1 part Hafffest and 5 parts water and allow to harden for at least 3 days.

Working

Pour approx. **4.5 litres of water** into a clean container/mortar tub, add **20 kg Universal Render** and mix thoroughly with a mixer/paddle for 2-4 minutes until homogeneous and the proper working consistency is achieved. When worked by machine, the respective water adjustment value depends on water pressure and the conveyor screw used.

Working time: approx. 1 hour, dependent on ambient conditions. After an eventually necessary pre-treatment of the render base has been carried out, apply the mixed mortar by hand. Throw on for a layer thickness greater than 15 mm, or apply by machine in a minimum layer thickness of 10 mm, max. 25 mm in a single layer. The minimum layer thickness should be observed. For a layer thickness greater than 25 mm, 2 layers should be applied, roughly levelling/smoothing the first layer and roughening the surface to provide good anchorage for the second layer. On an even layer thickness, the second layer is applied after the first layer has sufficiently hardened, at the earliest the following day. On very uneven and rough render substrates, considerable deviation in render thickness occurs. Different hardening and drying rates causes tension which can lead to cracks and hollow areas. For this reason, the second render layer can only be applied in an approximately even layer thickness when the first layer has sufficiently hardened and dried, at the earliest after 7 days.

If work is to be continued on the first layer at a much later time when it is less absorbent, it should be pre-wet with water to which a wetting agent has been added. If only shorter waiting/standing time is possible, work can be carried out in one working operation - in two layers, "wet-on-wet" (wet-on-damp). Place reinforcement fabric between the layers.

The freshly applied Universal Render is immediately levelled

with a wet aluminium rule. When the surface has become matt in appearance, it is worked over with a trowel, wood or plastic float. If a smooth surface is desired, a coating with Remmers Fine Render is applied after sufficient drying - at the earliest after 14 days - to the hardened Universal Render.

When using Remmers Grated Scraper - which is especially recommended - Fine Render can be applied after just 24 hours. If a finishing/decorative render with Remmers Dekor Render in a sprayed or grooved structure is planned, the Universal Render surface must be well roughened while fresh with e.g. a broom, or if the applied render is stiff enough with a nail board or saw. Remmers Dekor Render can be applied the following day if the undercoat render has been applied in an even layer thickness.

Notes

Stiffened mortar may not be made workable again - neither by adding water nor by adding fresh mortar. Do not use at temperatures below +5° C. The times given apply for the normal temperature range of +20° C. at approx. 65% relative humidity. Lower temperatures lengthen, higher temperatures reduce working and setting time. Protect Universal Render from drying out too quickly, especially outdoors in sunlight and wind; in interior areas from drafts and thermal loads. If necessary, net with water afterward. The render surface should be free of cracks. Hair cracks/shrinkage cracks are not serious and no reason for objections since they do not impair the technical values of the render. When carrying out render work, always observe DIN 18550. Do not use on gypsum substrates.

Tools and cleaning

Rendering machine with agitator, e.g. P.F.T. G 4 with Rotomix, Putzknecht S 48 classic or S 58 each with agitator, mixing equipment/paddle, positive mixer,

aluminium rule, render comb, broom, nail board, wood or plastic float, trowel, Remmers Grated Scraper.

Clean tools and equipment with water while the material is fresh

Packaging, application rate, shelf-life

Packaging:

net packaging 20 kg paper bags

Application rate:

Approx. 11 kg dry mortar per m² for a 10 mm layer thickness.

Shelf-life:

At least 6 months in original, unopened bags stored dry on wooden grids, protected from moisture.

Safety, ecology, disposal

Further information concerning safety during transport, storage and handling as well as for disposal is found in the latest Safety Data Sheet.

The statements above are compiled from our field of production and according to the latest technological developments and application techniques.

Since application and working are beyond our control, no liability of the producer can be derived from the contents of this information sheet. Any statements made beyond the contents of this information must be confirmed in writing by the producer.

In all cases, our general conditions of sale are valid. With the publication of this Technical Information Sheet all previous editions are no longer valid.

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