

Technical Information Sheet  
Article No. 0402

# Restoration Render

## Fibrous, one-layer restoration render

According to WTA data sheet 2-9-04/D and DIN EN 998-1 for interior and exterior use, also in one layer as undercoat or finishing render. Test certificates and independent supervision by the German Quality Association for Limestone, Lime and Mortar e.V. Cologne

### Range of use

Remmers Restoration Render is suitable for the repair, renovation and restoration of damp wall surfaces, also with salt load such as:

- Interior wall surfaces in cellars and old buildings
- Facades, historical buildings and monuments.
- In combination with Remmers Undercoat Render when there are salt loads
- For all mineral wall building materials suitable for the application of render such as masonry brick – even porous, sand-lime brick, concrete according to DIN 1045, aerated concrete, masonry work made with natural building materials to which render can be applied, building materials with hydraulic setting binders according to DIN 1164, DIN 1060, DIN 4211.



GB 0402 - 10.08.doc

### Property profile

Remmers Restoration Render is a factory-mixed, cementitious, light-weight mortar for restoring buildings. The mortar has the following outstanding properties:

- Easy to use and texture the surface in a single layer up to 30 mm!
- Can be worked by machine, very stable
- Fibre and texture reinforced, sets and dries crack-free
- Promotes drying, resistant to salts and sulphates, large active pore space (> 50 %)
- Prevents the loss of heat caused by moisture penetration
- Condensation does not form on the surface
- Resistant to water, weather and frost



## Characteristic data of the product

Bulk density:	approx. 0.9 kg/dm <sup>3</sup>
Colour:	antique white
Water requirement:	approx. 6 l/20 kg bag
Working time:	approx. 1 hour
Working temperature:	at least + 5 °C
Requirement profile:	according to WTA Code of Practice
Compressive strength:	corresponds to CS II
Capillary water absorption:	> 0.3 kg/m <sup>2</sup>
Water penetration depth:	< 5 mm
Water vapour diffusions coefficient $\mu$ :	< 12
Thermal conductivity coefficient:	approx. 0.25 W/mK
DIN 4102 "Behaviour under fire:	non-combustible building material class A 1

## Substrate

**Pre-treatment:** The substrate must be load bearing and free of material that could interfere with the adhesion of the render (e.g. release agents, loose material, dust, sanding, efflorescence, dirt). Remove damaged old render at least 80 cm above the damaged zone and chase out joints 2 cm deep. Thoroughly remove coats of paint and coatings.

The substrate may be dry or matt damp (max. 6% by mass) but should not show any pressing moisture. Rising damp or moisture penetrating from the exterior on exterior cellar walls should be waterproofed beforehand in the Remmers Kiesol System. In case of heavy salt loads, apply Remmers Undercoat Render first before Restoration Render is applied.

**Pre-wetting and rough cast:** Pre-wet absorbent render bases until they have become matt damp (not wet). On normally absorbent masonry work, the restoration render is applied first as a full surface rough cast which is followed by a layer of restoration render, wet-on-wet. Mineral grout waterproofing with Remmers Sulfatex Grout Rapid can also be carried out in this manner the same day.

On poorly absorbent, smooth render bases (e.g. dense brick, concrete), apply Remmers Preparatory Mortar net-

like/nodular. On highly absorbent substrates and on hardened cement bound waterproofing, apply a full cover rough cast made of Remmers Preparatory Mortar modified with Aida Haftfest (1 part by volume Haftfest to 5 parts by volume water). The render can be applied after the Preparatory Mortar has hardened (24-48 h).

## Working

Pour **approx. 6 litres of water** into a clean container/mortar tub, add **20 kg Remmers Restoration Render** and mix with a suitable mixer (e.g. BEBA double shaft positive mixer) for approx. 3 minutes until homogeneous and the proper working consistency has been achieved. When working by machine, the respective water setting depends on water pressure and the conveyor screw used.

**Working time: approx. 1 hour**

After the render base has been pre-treated, apply the mixed render by hand or machine. **Restoration Render is applied in one layer in a range between 2 and 3 cm thick.** A 10 mm contact layer is applied first which is allowed to initially set and then the render is applied in the intended layer thickness. When there are heavy salt loads, Restoration Render should be used in combination with a layer of **Remmers Undercoat Render** at least 15 mm thick.

Render bases that are very uneven should be worked in two

layers to avoid greater fluctuations in the thickness of the render which could lead to cracks or the formation of hollow areas. The first layer should be roughened with e.g. a comb to provide good anchorage for the second layer. The second layer is applied after the surface of the first layer has sufficiently dried, at the earliest the following day.

If only a short waiting time is possible, two coats can be applied, wet-on-wet (wet-on-damp), in one working operation. In this case, Remmers Render Reinforcement Fabric TG 14/1 should be placed between the layers.

We also recommend the use of reinforcement fabric for critical substrates which should be worked into the upper third of the restoration render.

**Freshly applied Remmers Restoration Render** is immediately closed with a moistened toothed float and levelled with a rule.

After the surface has become matt, it is carefully worked over with a soft sponge float. After further hardening, the surface is finished with the same sponge float.

Very smooth, fine surfaces are achieved if the surface is worked over with a grated scraper after sufficient setting. Remmers Fine Render can be applied after a waiting time of at least 3 days. If a finish/decorative render with Remmers Dekor Render in a rubbed or grooved texture is planned, the surface is coated with Remmers Quartz Primer after 14 days at the earliest. After 8 hours at the earliest and 12 hours at lower temperatures, Dekor Render is applied the thickness of the grain with a smoothing trowel and textured with a wood or plastic float.

## Notes

Initially set mortar cannot be made workable again by adding water or fresh mortar. Do not use at temperatures below + 5 °C. Lower temperatures accelerate, higher temperatures reduce working and setting time. If the render is applied

by machine, see the information given in the pamphlet "Working Remmers Factory-Mixed, Dry Mortars by Machine". Do not use Remmers Restoration Render on gypsum substrates.

Protect Remmers Restoration Render from drying out too quickly, especially in direct sunlight and wind and from drafts and thermal loads indoors. If necessary, net/spray with water afterward. Remmers Restoration Render antique-WTA cannot dry at a humidity >65%, e.g. in poorly ventilated areas. As a result, salts that damage the render can penetrate through the entire layer of render and reach the surface. To ensure that restoration measures are successful, proper drying conditions must be created, e.g. by setting up space heaters, after sufficient hardening of the render (at the earliest after 7 days) see WTA data sheet 2-9-04/D. The render surface should be free of directly visible cracks. Fine hair cracks are not serious and no reason for objections since they do not impair the technical values of the render.

### Tools and cleaning

Render machine with agitator, e.g. P.F.T. G 4 or G 5 with Rotoquirl, Putzknecht S 48.3 or S 58 - each with agitator R3, positive mixer, double shaft mixer, continuous mixer with a long mixer tube, trowel, smoothing trowel, wooden float, plastic float. Clean tools and

equipment with water while the material is still fresh.

### Packaging, application rate, shelf-life

#### Packaging:

Net packages: 20 kg paper bags

#### Application rate:


Approx. 8.5 kg/m<sup>2</sup> per cm layer thickness, for a 20 mm thick layer of render approx. 17 kg dry mortar per m<sup>2</sup>

#### Shelf-life:

At least 12 months in closed bags stored dry and protected from moisture on wooden grids.

### 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.

	
Remmers Baustofftechnik GmbH Bernhard-Remmers-Straße D-49624 Lönninge 07	
EN 998-1 Restoration Render Restoration Render Mortar CS II for internal and external use	
Behaviour under fire:	A 1
Water absorption / penetration depth:	>/= 0, 3 kg/m <sup>2</sup> / < 5 mm
Water vapour permeability μ:	≤ 12
Adhesive pull strength:	≥ 0.08 N/mm <sup>2</sup> (at rupture B)
Thermal conductivity group	T 1
Thermal conductivity λ <sub>10 dry</sub>	≤ 0.27 W (m · K) P= 50%
Durability:	Based on experience it is suitable for load group III corresponding to DIN 4108



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.

Remmers (UK) Limited Crawley  
United Kingdom  
Tel: +44(0) 845 373 0103  
Fax: +44(0)845 373 0104  
www.remmers.co.uk

Remmers (Far East) Pte. Ltd.  
Singapore  
Tel: +65 6 7410277  
Fax: +65 6 7417158