



FM Hanse

M5, maximum grain size 1 mm

High sulphate resistance and low alkali content (SR/NA)

Trass-lime-cement joint mortar

Type/Name	Strength	Grain size	Availability
			Quantity per pallet
			42
			Size / Quantity
			25 kg
			Type of container
			PE bag
			Container code
			25
			Art. no.
special colour	M5	≤ 1.0 mm	1452

Application rate

Approx. 1.7 kg/l void

Apply to a large enough trial area to determine the precise amount required.



Range of use

- First-time jointing and joint repair
- Brick and natural stone masonry
- Mortar joints 8 - 30 mm



Property profile

- High sulphate resistance and low active alkali content (SR/NA)
- Very low tendency to effloresce
- Good flank adhesion
- Special colours (UV-resistant pigments) available

Characteristic data of the product

Water requirement	Approx. 2.5 l/25 kg
Compressive strength (28 d)	≥ 5 N/mm ² (M5)
Dynamic E-modulus (28 days)	≥ 5000 N/mm ²
External surveillance	GG-CERT
Open porosity	Approx. 30 vol%

The values stated represent typical characteristic data of the product and are not to be understood as binding product specifications.

Certificates

- **GG-CERT Zertifikat**

Possible system products

- **ZM HF [basic] (0220)**
- **Clean AC [basic] (0672)**

Preparation

- **Substrate requirements**
Clean, dust-free and capable of supporting a load.
- **Substrate preparation**
Joint depth min. 2 cm or double the joint width.
Sanded joint sides can lead to lateral detachment.

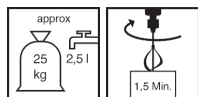
Production of the mixture

■ Mixing

Pour water into a clean container and add dry mortar.

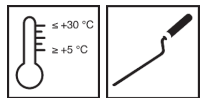
Using a mixer, mix intensively and homogeneously for approx. 1.5 minutes until a workable consistency is obtained.

Mix again and, if needed, add a small quantity of water.





Directions



■ Conditions for use

Temperature of the material, air and substrate: from min. $+5^{\circ}\text{C}$ to max. $+30^{\circ}\text{C}$.
Low temperatures increase, while high temperatures decrease the working and setting time.

■ Working time (+20 °C)

Approx. 2 hours

Apply the jointing in two layers if possible, press in the jointing mortar and level flush but do not "iron".
Only mix as much mortar as can be used within approx. 2 hours.
Pre-wet the open, cleaned joint.
Application of thin layers at the edges of defective areas can be facilitated by adding Remmers Haftfest to the mixing water (mixing ratio 1:10). In this case, hardening will be somewhat delayed but the bonding strength will be increased.
After application, work with a profiling tool (e.g. tubing).
Wait at least 24 hours before applying subsequent layers.

Tips on use

Once it has hardened, mortar must not be made workable again by adding either water or more wet mortar.
The type and duration of the reworking and surface treatment will influence the colour.
Slight deviations in colour between different batches are possible.
Protect wet mortar surfaces against frost, rain and drying out too quickly for at least 4 days.

Notes

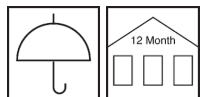
May contain traces of pyrite (iron sulphide).
Do not use on gypsum-based substrates.
The characteristic data of the product were calculated under laboratory conditions at 20°C and 65% relative humidity.
Low chromate content in accordance with Directive 2003/53/EC.
The mixing water must be of drinking water quality.
Special colour according to colour number (MF no., colour swatches, NCS etc.) or submitted sample (in the case of changing or alternating colours, clearly mark the desired colour).
The colour that is obtained after drying and hardening depends on the ambient conditions and the processing method. For instance, a freshly smoothed surface will be lighter than one that is smoothed later or roughened.
Different grain sizes of the same product may lead to slight differences in colour. Substrates soaked from the back may cause discolouration.
Always set up a trial area/trial areas first.
Alkaline binders may cause a dissolution process on non-ferrous metals.
Current regulations and legal requirements must be taken into account and deviations from these must be agreed separately.
The relevant test certificates must be observed when planning and carrying out work.

Tools / Cleaning



Mixing tool, trowel, jointing iron, profiling tool (e.g. tubing)
Clean tools and equipment with water before the mortar sets.

Storage / Shelf life



If stored in an unopened container and in a dry place, the product will keep for approx. 12 months.

Safety data / Regulations

For further information on the safety aspects of transporting, storing and handling the product and on disposal and environmental matters, please see the current Safety Data Sheet.

Disposal

Larger quantities of leftover product should be disposed of in the original containers in accordance with the applicable regulations. Completely empty, clean containers should be recycled. Do not dispose of together with household waste. Do not allow to enter the sewage system. Do not empty into drains.

Declaration of performance

➤ **Declaration of performance**



Declaration of conformity



NB 0785

Remmers GmbH

Bernhard-Remmers-Str. 13, D – 49624 Lönningen

18

GBI-P 78-2

EN 998-2: 2016-11

1452

Standard masonry mortar after suitability test for use in walls, pillars and partition walls made of masonry (interior and exterior components) that are subject to stability requirements.

Compressive strength:

M5

Bond strength::

$\geq 0.08 \text{ N/mm}^2$

Characteristic initial shear strength (adhesive shear strength) tested according to EN 1052-3 (method B) in combination with sand-lime brick according to EN 771 at an intrinsic moisture content of 3-7 % by mass

Chloride content:

$\leq 0.01 \text{ M.-%}$

Water absorption:

$\leq 0.40 \text{ kg/(m}^2\text{min}^{0.5})$

Water vapour permeability (μ):

15/35 (tab. value EN 1745)

Thermal conductivity ($\lambda_{10, \text{dry}}$):

$\leq 0.82 \text{ W/(m}\cdot\text{K)}$ (tab. value EN 1745) for P = 50%

$\leq 0.92 \text{ W/(m}\cdot\text{K)}$ (tab. value EN 1745) for P = 90%

Durability (against freeze-thaw):

Resistant, when used acc. TDS

Fire reaction class:

A1

Dangerous substances:

NPD

Please note that the data and information given above have been calculated as guidelines in the laboratory and from real-life experience and are therefore not binding as a basic principle.

This information is therefore of a general nature only and describes our products and how they are used and worked with. In this respect, it must be borne in mind that the varied and diverse nature of the

prevailing working conditions, materials used and construction sites encountered means that not every individual case can be covered. In this respect, we therefore recommend either conducting tests or liaising with us in the event of any doubt. Unless we have provided express written assurance of the products' specific suitability or characteristics in respect of a contractually stipulated intended use, any technical application-related advice or instruction will never

be binding, even though it is provided to the best of our knowledge. In all other respects, our general terms and conditions of sale and delivery shall apply.

When a new version of this Technical Data Sheet is published, it shall replace the previous version.