



## TECHNICAL DATA SHEET

# KEIM RESTAURO-FUGE®

## 1. PRODUCT DESCRIPTION

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Mineral dry mortar with hydraulic binders.

## 2. FIELD OF APPLICATION

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KEIM Restauro-Fuge is a joint replacement material, especially for natural stone walls. However, it can also be used for other exposed masonry (brick, sand-lime brick, or similar) for joint repair.

## 3. PRODUCT PROPERTIES

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- mineral
- excellent adhesion
- permeable
- fire behaviour: non-flammable (A1)
- titanium dioxide-free

### MATERIAL CHARACTERISTICS:

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|----------------------|----------------------|
| - Setting time:      | approx. 5 h          |
| - Processing time:   | max. 45 min          |
| - Thermal expansion: | approx. 0,000007 1/K |
| - Hygric expansion:  | approx. 0,7 mm/m     |

### CLASSIFICATION:

- |   |                             |
|---|-----------------------------|
| - Classification according to:                            | DIN EN 998-1                |
| - Compressive strength (28d):                             | approx. 8 N/mm <sup>2</sup> |
| - Flexural strength (28d):                                | approx. 3 N/mm <sup>2</sup> |
| - Compressive strength category:                          | CS IV ≥ 6 N/mm <sup>2</sup> |
| - Test standard compressive strength:                     | DIN EN 1015-11              |
| - Adhesive tensile strength:                              | ≥ 0,50                      |
| - Fracture pattern Adhesive tensile strength:             | A,B,C                       |
| - Test standard Adhesive tensile strength:                | DIN EN 1015-12              |
| - Water absorption class:                                 | W0                          |
| - Test standard Water absorption:                         | DIN EN 1015-18              |
| - Thermal conductivity λ <sub>10,dry,mat</sub> for P=50%: | 0.82 W/(mK)                 |
| - Thermal conductivity λ <sub>10,dry,mat</sub> for P=90%: | 0.89 W/(mK)                 |
| - Water vapour diffusion resistance number (μ-value):     | ≤ 25                        |

### COLOUR SHADES:

Standard colour shades according to the following colour swatches:

KEIM Natural Stone, Special colour shades on request: minimum order quantity is 300 kg.

The actual colour shade after drying and hardening depends on the prevailing environmental conditions and the selected application method. We recommended testing the application on test areas.

#### **4. APPLICATION INSTRUCTIONS**

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**SUBSTRATE PREPARATION:**

The substrate must be strong, dry, clean, sound and free from adhesion-reducing residues.

Scrape out: Damaged joint material as well as all cement joints must be completely scraped out to a depth of twice the joint width.

Cleaning: The open joints must be carefully cleaned with a water jet.

Pre-wetting: The grout may only be applied to damp joints. Sufficient pre-wetting is therefore absolutely necessary. Remove excess water by patting with a sponge.

**PREPARATION OF MATERIAL / MIXING & CONVEYING:**

KEIM Restauro-Fuge is mixed with water only, approx. 4.5 l per sack. For larger quantities, use a stirrer or compulsory mixer. After a maturing time of 5 minutes, the mortar should have an earth-moist consistency.

**APPLICATION:**

Press the matured grout firmly into the joint with a grouting iron. The best match with the colour chart results from a scratched surface. With other surface finishes such as "smoothing", greater deviations are possible. The surface is scratched as soon as possible with a suitable tool. For flush joints, apply KEIM Restauro-Fuge beyond the stone surface and then, while setting, remove the excess with the trowel. In other cases, the joint surface is carefully roughened with the sharp edge of the jointing tool.

During stone supplementation work to be carried out beforehand, the joints are to be kept open or cut out again immediately, in the case of wider joints with a polystyrene insert, in the case of press joints with inserted foil. In principle, it is recommended to carry out a trial jointing, which should provide information as to whether the colour shade, strength and flank adhesion meet the requirements.

**CONSUMPTION:**

approx. 0,2 kg/lfdm je cm (for a joint depth and width of 1 cm each).

approx. 0,4 kg/lfdm zum Verfugen bei einem Fugenquerschnitt von 1 x 2 cm.

These material consumption values are guide values for smooth substrates. Exact consumption values must be determined by means of test areas.

**CLEANING OF TOOLS:**

Clean immediately with water.

#### **5. PACKAGING:**

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| Container content | Unit of measure | Quantity on pallet | Type of container |
|-------------------|-----------------|--------------------|-------------------|
| 30                | kg              | 30                 | bag               |

#### **6. STORAGE**

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| max. storage time | Storage conditions                    |
|-------------------|---------------------------------------|
| 12 months         | dry<br>keep container tightly sealed. |

#### **7. DISPOSAL:**

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For disposal information refer to section 13 of the safety data sheet.

**EC WASTE CODE:**

Waste code: 17 01 01

### 8. SAFETY INSTRUCTIONS

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Please, refer to the Material Safety Data Sheet.

**CISCODE:**

GIS code: ZP 1

### 9. GENERAL INFORMATION

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Cover surfaces not to be treated, especially glass, ceramics and natural stone. Any splashes on surrounding surfaces or traffic areas must be rinsed off immediately with plenty of water.

Mixing with products not part of the system or other foreign additives is not permitted.

### 10. CERTIFICATES & QUALITY SEALS

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The stated values and properties are the result of extensive development work and practical experience. Our recommendations for application, whether given verbally or in writing, are intended to provide assistance in the selection of our products and do not establish a contractual relationship. In particular, they do not release the purchaser and processor from the obligation to convince themselves of the suitability of our products for the intended application with due care, which is general practice in trade and crafts. The general rules of construction technology must be observed. We reserve the right to make modifications to improve the product or its application. This edition supersedes all earlier editions.