



## TECHNICAL DATA SHEET

# KEIM RESTAURO<sup>®</sup>-TOP

## 1. PRODUCT DESCRIPTION

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Mineral restoration dry mortar with hydraulic binders.

## 2. FIELD OF APPLICATION

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KEIM Restauro-Top is a natural stone substitute for areas close to the surface to recreate the colour and structure of the original stone on the object, but also when taking impressions in open moulds.

## 3. PRODUCT PROPERTIES

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- easy to use
- very robust surface
- mineral
- permeable
- fire behaviour: non-flammable (A1)
- titanium dioxide-free

### MATERIAL CHARACTERISTICS:

- Setting time: approx. 5 h
- Processing time: max. 45 min
- Thermal expansion: approx. 0,000007 1/K
- Hygric expansion: approx. 1,6 mm/m

### CLASSIFICATION:

- Classification according to: DIN EN 998-1
- Compressive strength (28d): approx. 10 N/mm<sup>2</sup>
- Flexural strength (28d): approx. 4 N/mm<sup>2</sup>
- Compressive strength category: CS IV  $\geq$  6 N/mm<sup>2</sup>
- Test standard compressive strength: DIN EN 1015-11
- Adhesive tensile strength:  $\geq$  0,08 N/mm<sup>2</sup>
- 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  $\lambda_{10,dry,mat}$  for P=50%: 0.82 W/(mK)
- Thermal conductivity  $\lambda_{10,dry,mat}$  for P=90%: 0.89 W/(mK)
- Thermal conductivity Table value according to: DIN EN 1745
- Water vapour diffusion resistance number ( $\mu$ -value):  $\leq$  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.. All colour shades can be mixed

with each other. The colour shades are matched to refinished surfaces. Slight colour deviations cannot be ruled out due to changing temperature and humidity. Prepare test areas in advance. In case of increased demands on the colour accuracy and if it is necessary to match the existing surface, a subsequent glaze with KEIM Restauro-Lasur is recommended.

### 4. APPLICATION INSTRUCTIONS

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#### **SUBSTRATE PREPARATION:**

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

Pointing:

Damaged natural stone, which is to be supplemented with KEIM Restauro-Top, is to be removed down to the sound core with a tooth cutter or similar tools. Particularly on flat natural stone surfaces, the pointing should be carried out 2 cm deep at right angles or in a dovetail shape so that the restoration mortar can be worked in underneath. If pointing as described is not possible due to sculptural ornamentation, care should at least be taken that the affected damaged areas do not leak to zero.

Cleaning:

Carefully remove existing stone dust from the areas to be supplemented with compressed air or with clear water and a brush.

Pre-wetting:

The restoration mortar may only be applied to a damp substrate. Sufficient pre-wetting is therefore absolutely necessary. Remove excess water by patting with a sponge.

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

Mix KEIM Restauro-Top with approx. 3,8 - 4.2 l (specification per bag) of clean water with a power stirrer to a stiff-plastic consistency without lumps and allow to mature briefly. Do not remix already stiffened material with water.

#### **APPLICATION:**

Application: The matured mortar is applied (pressed on) to the roughened and pre-wetted damaged area, e.g. with a trowel. The layer thickness should be no more than 30 mm. The final layer should be at least 2 mm higher than the original stone surface, so that any necessary reworking is possible.

Reworking: During setting, after 2-4 hours, the surface must KEIM Restauro-Top be scraped with a spatula, scraper, saw blade, toothed iron or similar tools. The surface of the original stone has to be levelled with a scraper, scraper blade, saw blade or similar tools. It is also possible to rub the surface with a rough stone disc. The surface must not be smoothed!

#### **AFTERTREATMENT:**

KEIM Restauro-Top must be protected from drying out too quickly due to sun or wind, or kept moist if necessary.

#### **FINISHING:**

A stonemasonry finish is possible after 8 days at the earliest.

Note: Nuanced colour adjustments and designs can be carried out with KEIM Restauro-Lasur.

#### **SETTING TIME:**

at least 1 day per mm render thickness (depending on temperature and relative humidity). The waiting time before painting must be at least 10 days.

#### **CONSUMPTION:**

approx. 2 kg/m<sup>2</sup> per mm

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.

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### 5. PACKAGING:

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

### 6. STORAGE

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

### 7. DISPOSAL:

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

#### EC WASTE CODE:

Waste code: 17 01 01

### 8. SAFETY INSTRUCTIONS

Please, refer to the Material Safety Data Sheet.

#### CISCODE:

GIS code: ZP 1

### 9. GENERAL INFORMATION

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



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.