

## KEIM Restauro®-Top (Finish mortar)



### 1. Product description

Mineral dry bagged masonry restoration mortar based on Trass with hydraulic binders.

### 2. Field of application

KEIM Restauro-Top is a natural stone/masonry replacement material for surface zones. KEIM Restauro-Top is used for reproducing the color and texture of the original stone. Can be applied directly on the damaged masonry substrate, or it may also be cast in open forms.

### 3. Product properties

#### Material characteristics acc. to WTA technical bulletin 3-11-97/D

- Bulk density: approx. 1.40 g/cm<sup>3</sup>
- Water consumption: approx. 0.13 - 0.16 l/kg  
(approx. 4.4 - 5.4 fl oz per kg)
- Working time: at most 45 minutes
- Setting time: approx. 5 hours
- Compressive strength: approx. 10 N/mm<sup>2</sup>
- Bending tensile strength: approx. 4.1 N/mm<sup>2</sup>
- Modulus of elasticity: approx. 9.0 KN/mm<sup>2</sup>
- Thermal dilatation: 7 x 10<sup>-6</sup> (1/K)
- Hygric dilatation: 1.6 mm/m

#### Color shade

Shades from KEIM's natural stone color swatches. Special shades to match stone sample on request. Only certain shades from KEIM's Palette Exclusiv range are available (see table in this document). All shades can be mixed with one another. Color shades are adjusted for cast surfaces which are carved and finished. Slight variations in shade due to tooling, differing temperatures, levels of atmospheric humidity and amount of water used in the mix cannot be ruled out.

### 4. Application instructions

#### Application temperature

Ambient and substrate temperature must not fall below +5°C (41°F).

#### Substrate preparation

Chisel out old masonry:

Chisel out defective natural stone/masonry which is to be repaired with KEIM Restauro system. Masonry should be chiseled back to a sound base using a notched chisel or similar tools. Especially on flat areas of natural stone, a box-shaped recess 2 cm/0.8 in. in depth should be formed when chiseling back to provide a good key for the restoration mortar. If, for sculptural reasons, chiseling back in this manner is not feasible, care must be taken at least to ensure that the edges of the damaged area do not feather out.

Cleaning:

Any stone dust must be carefully removed from the areas to be repaired with compressed air or with clean water and a brush.

Pre-wetting:

The restoration mortar must only be applied onto a moist substrate. Adequate pre-wetting is absolutely essential. Surface should be wet but with no standing water, remove any excess water with a sponge.

#### Application

Mixing:

KEIM Restauro-Top is mixed with water only, approx. 4 l (1.06 gal) per 30 kg. Use a hand mixer or professional mixer for larger quantities. After a maturing period of 5 minutes, the mortar should have the consistency of moist soil.



**Application:**

The matured mortar is applied (pressed) onto the roughened and pre-wetted damaged area, for example using a trowel, ensuring that the layer thickness does not exceed 3 cm/1.2 in. The final layer should stand at least 2 mm/0.08 in. proud of the original stone surface to allow for the required finishing.

**Finishing:**

While the product is still setting, after approx. 2 - 4 hours, KEIM Restauro-Top may be finished with KEIM Restauro carving tools or similar masonry tools that were used to reproduce the original surface. Milling with a rough stone disk is also possible. Total working time can be as long as 8-12 hours depending on conditions.

At least 8 days must elapse before finishing using masonry techniques is possible. Protect freshly applied mortar from sun, wind and rain for 48 hours.

**Consumption**

Approx. 20 kg per m<sup>2</sup> (10.8 sq ft) at a layer thickness of 1 cm (0.4 in.)

Approx. 4.7 kg / sq.ft. / 1 in. thickness

**Cleaning of tools**

Clean with water immediately after use.

**Note**

Final color shading and matching can be performed with KEIM Restauro-Lasur if needed at least 10 days after final application of Restauro-Top.

**5. Packaging**

30 kg sacks

**6. Storage**

12 months in original unopened sack under dry conditions.

**7. Hazardous substances ordinance class**

Xi	Irritant,
R 38:	Irritating to the skin.
R 41:	Risk of serious damage to the eyes.
S 2:	Keep out of reach of children.
S 22:	Do not breathe dust.
S24/25:	Avoid contact with skin and eyes.
S 26:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 37/39:	Wear suitable gloves and eye/face protection.
S 46:	If swallowed, seek medical advice immediately and show this container or label.

**8. Transport hazard class**

n/a

**9. Disposal**

EC Waste Code no. 17 01 01

Any residues must be emptied out of sacks before recycling.

Solidify any residual material with water and, after consulting the relevant authorities, dispose of in a building material landfill site.



## 10. Safety instructions

Provide appropriate protection for surfaces which are not to be treated. Any splashes on surrounding surfaces or traffic areas must be rinsed off immediately with water. Protect the eyes and skin from splashes. When using, do not eat, drink or smoke. Keep out of reach of children.

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 those purchasing and applying our products from the duty of establishing for themselves, with due care, the suitability of our products for the intended application. Standard building industry practices must be complied with. We retain the right to make modifications to improve the products or their application. This edition supersedes all earlier editions.

### Colors of the KEIM Palette Exclusiv

9033	9036	9037	9038	9049	9051	9053	9055	9057	9058	9064	9066
9069	9071	9073	9075	9076	9077	9078	9084	9087	9089	9090	9091
9092	9095	9096	9097	9102	9103	9105	9108	9110	9112	9115	9117
9122	9123	9125	9129	9132	9135	9136	9137	9144	9146	9149	9153
9154	9156	9157	9162	9164	9166	9169	9171	9174	9176	9177	9182
9183	9184	9186	9187	9190	9192	9195	9197	9200	9201	9203	9206
9210	9213	9215	9217	9225	9229	9233	9243	9245	9248	9249	9251
9253	9255	9263	9265	9268	9271	9274	9276	9283	9285	9288	9292
9294	9295	9296	9298	9304	9307	9310	9312	9314	9317	9323	9325
9328	9329	9330	9332	9335	9337	9339	9345	9348	9351	9354	9357
9367	9369	9373	9375	9382	9383	9385	9389	9392	9395	9396	9398
9402	9406	9410	9412	9430	9432	9435	9436	9437	9448	9451	9454
9456	9457	9463	9466	9468	9471	9473	9475	9477	9482	9486	9488
9490	9493	9494	9497	9505	9510	9514	9516	9523	9525	9526	9529
9531	9533	9536	9541	9543	9546	9550	9552	9554	9555	9556	9564
9567	9569	9572	9574	9576	9582	9585	9590	9592	9595		

Colors with higher tolerance

These colors cannot be supplied

