

KEIM UNIKRISTALAT

ONE-COMPONENT AND UNCOMPROMISING
MINERAL QUALITY



Monument renovation in the field of tension between being true to the original and feasibility

When renovating a historical object, monument preservation is frequently in the field of tension between a reconstruction that is as close to the original as possible using historical materials and what is technically feasible. This often also applies to the selection of a suitable coating system.

Dispersion-free coating with silicate paints

Pure silicate paints have been in use for the renovation of historical buildings for more than 100 years and have proven to be ideal. They contain no organic binding agents at all and are therefore suitable for the renovation of monuments. Thanks to their purely mineral composition, they are particularly suitable for the selected materials and monuments apart from the classic lime paints. They are of tremendous durability compared to the lime paints.

However, there are unfortunately situations occurring repeatedly in the daily handling of objects, where the use of purely silicate paints is not possible for technical reasons. In these cases, the

wish in monument preservation for purely mineral facade paints for the restoration of historical objects reaches its limits.

Special substrate conditions such as instable plasters or very thin plaster or filling layers frequently led to the use of products containing dispersion in the past.

Problematic substrate conditions



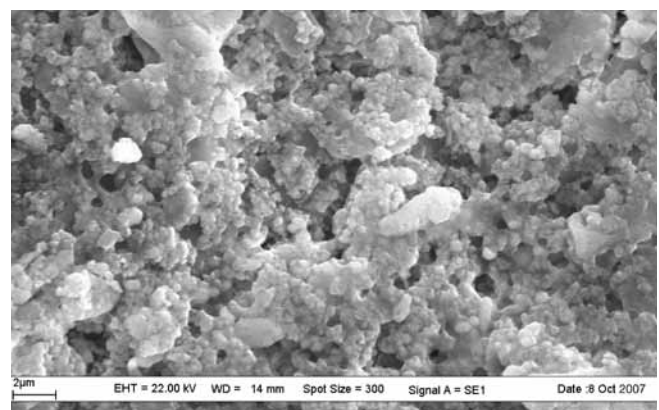
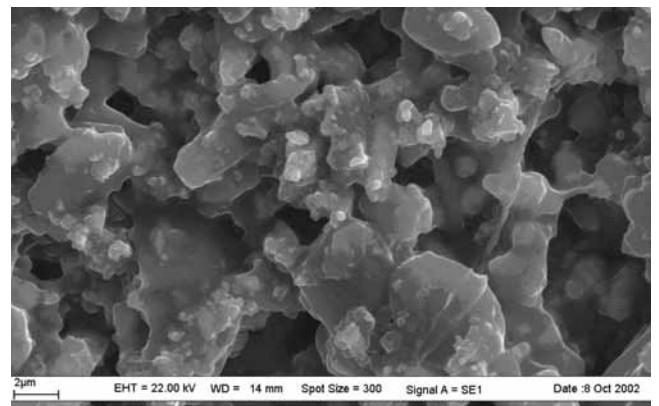
KEIM Unikristalat – innovation in the service of monument preservation

KEIM Unikristalat
- purely silicate,
one-component,
lower tension

With KEIM Unikristalat we have for the first time succeeded in formulating a purely silicate-bound facade paint, which sets with clearly less tension than the classic two-component systems without the addition of dispersion binding agents.

How can that work?

KEIM Unikristalat contains a newly-developed special water glass, which results in tension-free curing by means of a "fine silicification" process. The extremely fine and homogenous structure of Unikristalat creates an inorganic, more flexible bonding. This enables use on less firm and relatively thin plasters.



Top illustration: Binding agent matrix of a two-component, pure silicate paint.

Bottom illustration: The extremely fine structure of Unikristalat becomes visible under the microscope.

KEIM Unikristalat – the purely silicate alternative to KEIM Purkristalat



Application fields

KEIM Unikristalat can be used

... on all plasters from mortar groups P I - III to CS I - IV, and hence also for strengths and layer thicknesses that do not allow the use of two-component, pure silicate systems. In such cases, KEIM Unikristalat now offers the dispersion-free alternative to KEIM Purkristalat.

... on old silicate dispersion coatings. With Unikristalat, old silicate dispersion coatings can be refinished for the first time dispersion-free and purely silicate.



Properties

Ready-to-use formula

Without the addition of dispersion binding agents

Purely inorganic, silicate bonding

Fine silification of lower tension bonding

Without the addition of hydrophobing agents

Pure, inorganic pigments



Application example

Damage

- 1 Partly hollow plaster
- 2 Plasters sanding in parts

Renovation

- 1 Original plaster is partly repaired with similar material.
- 2 Old plaster is removed down to the sound layer and stabilised.

The areas are covered with a thin layer of fine lime plaster to match the texture.

In the interest of material-specific and careful monument preservation, a purely mineral facade coating should be applied. The plaster is too soft for silicate paints and the thickness of the top layer of plaster too low. In such cases, KEIM Unikristalat is the ideal coating solution.

Damage





Application

Preparation

No preliminary work is necessary for clean, absorbent and non-sanding substrates. Lime sinter layers on new plaster are treated with KEIM Ätzflüssigkeit (lime remover) (1). Contaminants and loose parts must be removed. Film-forming coatings are removed with KEIM Dispersionsentferner (paint stripper). In case of difficult substrates such as stripped down areas, plaster repairs, hairline cracks or structural differences, KEIM Kristall-Felsit is used as an additive to the base coat (2).

Painting

For the base coat, KEIM Unikristalat is diluted with a maximum of up to 20 % of KEIM Fixativ depending on the absorbency of the substrate. The top coat must be diluted to at least 10% and at most 20% KEIM Fixativ. For highly moisture-loaded facades, subsequent hydrophobing with KEIM Lotexan or KEIM Ecotec (4)* is recommended.



KEIM Unikristalat system

KEIM Unikristalat

Single-component, pure silicate paint according to DIN EN 1062-1. Dispersion-free, with purely inorganic, lightfast pigments and selected fillers without the addition of hydrophobin agents.

KEIM Fixativ

Pure liquid potassium silicate without organic additives. Dilution for KEIM Unikristalat.

KEIM Kristall-Felsit

Filling additive for Unikristalat on difficult substrates, using Fixativ as dilution. Only for base or intermediate coatings.

*For details regarding the exact application guidelines, please refer to the technical data sheets.





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