



1. Product description

KEIM Purkristalat is a two-component silicate painting system acc. to VOB/C DIN 18363 sect. 2.4.1 for facade coatings of highest durability and excellent colour brilliance. KEIM Purkristalat consists of a fine colour powder component and a liquid water-glass component (Fixativ) as binder.

KEIM Purkristalat colour powder:

Pure mineral colour powder with absolutely light-fast and inorganic pigments and reactive mineral powders.

KEIM Fixativ:

Pure mineral, silicate binding agent for KEIM Purkristalat (5 kg colour powder and 4 l Fixativ equates to approx. 10 kg soaked paint). Dilution for the soaked KEIM Purkristalat paint. Pretreatment for highly absorbent substrates (diluted with water in ratio 1:1 for example). Mixed with water in ratio 1:1 as dilution for the soaked KEIM Purkristalat paint to achieve pure mineral translucent designs and for after-fixing of insufficiently bound silicate coatings.

2. Field of application

KEIM Purkristalat can be applied on mineral, porous, mechanically stable substrates, especially on render. The top render layer must have a minimum layer thickness of 5 mm. Light weight renders are not suitable.

Due to its outstanding product properties KEIM Purkristalat is particularly suited for restoring historic structures as well as application on to building projects with a particular demand for longevity and colour brilliance. With the ideally matched KEIM Purkristalat product components the most versatile applications are possible.

3. Product properties

KEIM Purkristalat is a pure silicate paint. The binder is pure liquid potassium silicate. KEIM Purkristalat provides weatherproof coatings that last for decades. KEIM Purkristalat combines in a sensational way the mineral matt appearance with the luminous colour brilliance that is typical for historic buildings.

- Silicifies unsolvably with the substrate
- Non-film forming
- Highest vapour permeability (s_d -value = 0.01 m)
- Mineral matt

- Absolutely lightfast, inorganic pigments
- All components are UV-resistant
- Non-flammable
- Anti-static
- Wash- and scrub-resistant
- Resistant to industrial pollution
- Resistant to solvents
- Odourless
- Non-swelling
- Any possible design, from translucent to opaque
- Lime-like appearance (historic structures)
- Environmentally friendly – no solvents added or any other harmful substance, therefore suitable for foodstuff application
- Low environmental impact, good eco-balance

Material characteristics

KEIM Purkristalat colour powder

Density: approx. 0.6 – 0.8 g/cm³

KEIM Fixativ

Specific weight: 1.17 g/cm³

ph-value: 11.3

KEIM Purkristalat paint

Vapour diffusion resistance: $s_d = 0.01$ m

Colour fastness: A1

(Fb-Code acc. to BFS guideline No. 26)

Colour shade (KEIM Purkristalat colour powder)

White and according to KEIM Palette Exclusiv.

4. Application instructions

Substrate preparation

The substrate has to be sound, dry, absorbent, clean, free from dust and grease. Loose parts, dirt, oily substances, moss and algae have to be completely removed.

Old, film-forming paint layers have to be totally stripped off with KEIM Dispersionsentferner (paint stripper). Highly absorbing or sanding substrates should be pretreated with KEIM Fixativ, 1:1 diluted with water.

Sinter layers of new render have to be removed with KEIM Ätzflüssigkeit (lime remover); see technical data sheet.

Application

KEIM Purkristalat is applied wet-on-wet, keeping a wet edge, preferably by brush or low pressure spraying (e.g. KEIM facade spray applicator).



Soaking

Soak 5 kg of KEIM Purkristalat powder in 4 l KEIM Fixativ and stir until homogeneity. This mixture equates to approx. 10 kg ready-to-use paint for the finishing coat. Better homogeneity and higher yield (less consumption) is achieved from preparing the material the day before.

For base and intermediate coats the soaked paint is diluted with KEIM Fixativ as prescribed, or if necessary, the filling additive KEIM Kristall-Felsit is added.

Coating system depending on the substrate

Mineral substrates, normal duty

2-coat-system

Base coat: 10 kg KEIM Purkristalat soaked
+ 2 - 6 l KEIM Fixativ

Top coat: KEIM Purkristalat soaked, undiluted

* In case of a few fine hairline cracks add 5 kg of KEIM Kristall-Felsit to the base coat.

Heavier duty

3-coat-system

Base coat: 10 kg KEIM Purkristalat soaked
+ 4 - 8 l KEIM Fixativ

Intermediate coat: 10 kg KEIM Purkristalat soaked
+ 2 - 4 l KEIM Fixativ

Top coat: KEIM Purkristalat soaked, undiluted

* In case of a few fine hairline cracks add 5 kg of KEIM Kristall-Felsit to the base coat.

Substrate with hairline cracks and/or structural differences

3-coat-system

Base coat: 10 kg KEIM Purkristalat soaked
+ 5 kg KEIM Kristall-Felsit
+ 2 - 6 l KEIM Fixativ

Intermediate coat: 10 kg KEIM Purkristalat soaked
+ 5 kg KEIM Kristall-Felsit
+ 2 - 4 l KEIM Fixativ

Top coat: KEIM Purkristalat soaked, undiluted

Substrate with non-moving cracks up to 0.5 mm wide and/or stronger structural differences

3-coat-system

Base coat: 10 kg KEIM Purkristalat soaked
+ 10 kg KEIM Kristall-Felsit
+ 2 - 6 l KEIM Fixativ

Intermediate coat: 10 kg KEIM Purkristalat soaked
+ 5 kg KEIM Kristall-Felsit
+ 2 - 4 l KEIM Fixativ

Top coat: KEIM Purkristalat soaked, undiluted

Aftertreatment

For facade areas exposed to heavy rain loads, like e.g. towers or "weather sides" that are constructively low-protected, it is strongly recommended to apply a colourless water repellent with KEIM Lotexan or KEIM Ecotec after the top coating.

- Application of KEIM Lotexan, at the earliest 8 days after the top coating, two-times wet-on-wet over the entire surface.
- Application of KEIM Ecotec, at the earliest 3 days after the top coating, over the entire surface.

Application conditions

Air and substrate temperature > 5°C. Do not apply under direct sun or onto sun-heated substrates. Protect surfaces during and after application from direct sun, wind and rain.

Drying times

A drying time of at least 12 hours between the individual coatings is required.

Consumption

On a smooth substrate

2-coat-system with KEIM Purkristalat per m²:

ca. 0.35 kg KEIM Purkristalat colour powder

ca. 0.40 l KEIM Fixativ

2-coat-system with 50% Kristall-Felsit added to the base coat per m²:

ca. 0.30 kg KEIM Purkristalat colour powder

ca. 0.10 kg KEIM Kristall-Felsit

ca. 0.40 l KEIM Fixativ

The consumption values given are for guidance only and depend on the substrate condition, coating system and application method. Exact values can only be determined by painting trial areas on the structure to be coated.

Cleaning of tools

Clean immediately after use with plenty of water. Tools should be kept in the product or in water during breaks.

Third-party additives

To preserve the specific characteristics of KEIM Purkristalat do not add any other substances.

5. Packaging

KEIM Purkristalat colour powder
5 kg and 30 kg sacks

KEIM Fixativ
4 and 24 l metal bucket

6. Storage

KEIM Purkristalat colour powder can be stored for unlimited time period if kept dry.
Store KEIM Fixativ cool, but frost-free in tightly closed containers. Shelf life: approx. 12 months.

7. Hazardous substances ordinance class**KEIM Purkristalat Colour Powder:**

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- S 2: Keep out of reach of children.
S 29: Do not empty into drains.
S 61: Avoid release to environment. Refer to special instructions/safety data sheets.

8. Transport hazard class

n/a

9. Disposal

KEIM Purkristalat colour powder:
EC Waste Code No. 08 01 12

KEIM Fixativ:
EC Waste Code No. 06 02 99

Any residues must be emptied out of containers before recycling.

10. Safety instructions

The mineral binder has an alkaline action. Provide appropriate protection for surfaces which are not to be coated (e.g. glass, natural stone, ceramics etc.). Any splashes on surrounding surfaces or traffic areas must be rinsed off immediately with plenty of water. Protect the eyes and skin from splashes. Keep out of reach of children.

Product Code: M-SK 02

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.