TECHNICAL DATA SHEET

KEIM PURKRISTALAT®

1. PRODUCT DESCRIPTION

KEIM Purkristalat is a two-component paint in accordance with VOB/C DIN 18363, clause 2.4.1 (silicate paint), designed for façade coatings offering maximum durability and colour brilliance. KEIM Purkristalat consists of a pigment powder component and a liquid water glass component (fixative) acting as a binder. KEIM Purkristalat produces weather-resistant coatings with a service life spanning decades and uniquely combines the mineral-matt surface finish typical of historic buildings with luminous colour brilliance. KEIM Purkristalat colour powder is a purely mineral colour powder containing absolutely lightfast, inorganic pigments and reactive mineral powders. KEIM Fixativ is a purely mineral, silicate-based binder for soaking, for diluting the soaked KEIM Purkristalat colour powder, for pre-fixing on highly absorbent substrates and for post-fixing insufficiently bonded silicate coatings. KEIM Purkristalat has been awarded Cradle to Cradle Certified® Full Scope Silver, Material Health Gold and Circularity Silver in accordance with Version 5.0.

2. FIELD OF APPLICATION

KEIM Purkristalat can be used on mineral-based, porous and mechanically stable substrates, particularly on plaster. The top layer of plaster must have a minimum thickness of 5 mm. Lightweight plasters are not suitable. Due to its product properties, KEIM Purkristalat is particularly suitable for the renovation of historic buildings and for use in construction projects with specific requirements regarding durability and colour brilliance. In combination with the precisely coordinated product components of the KEIM Purkristalat system, a wide variety of applications is possible.

3. PRODUCT PROPERTIES

- Cradle to Cradle Certified® Full Scope Silver (Version 5.0)
- Cradle to Cradle Certified® Material Health Gold (Version 5.0)
- Cradle to Cradle Certified® Circularity Silver (Version 5.0)
- QNG compliant
- permeable
- fire behaviour: non-flammable (Class A1 as per EN 13501-1 acc. to classification report)
- lightfast
- UV-resistant
- antistatic, non-thermoplastic
- inswellable
- solvent-resistant
- resistant against industrial emissions
- unequalled colour stable
- scrub-resistant
- no biocides added
- no plasticisers added
- no solvents added
- titanium dioxide-free

MATERIAL CHARACTERISTICS:

– Density	Colour powder tamped density: 0.6–0.8 g/cbcm / Fixative density: 1.1-1.2 g/cbcm
– Organic content	0 %

– Colour fastness (Fb-code pursuant to BFS Leaflet No. 26)	A1

CLASSIFICATION:

– Classification according to VOB	Silicate paint according to DIN 18363 sec. 2.4.1
– Diffusion-equivalent air layer thickness (sd value)	≤ 0,01 m
– Diffusion-equivalent air layer thickness class	V1
– Standard Diffusion equivalent air layer thickness	DIN EN ISO 7783
– Gloss level	G3 – matt (measuring angle 85°)
– Standard Gloss level	ISO 2813

COLOUR SHADES:
White and colour shades are produced exclusively with purely mineral, lightfast pigments. monochrome shades 9001 to 9010 available.

4. APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION:
The substrate must be solid, dry, clean, sound and free from residues that may impair adhesion. Old, film-forming coatings have to be completely removed with KEIM Dispersion-Remover (paint stripper). New render areas must be pretreated with KEIM Fluat-10 as specified in the Technical Data Sheet to remove sinter layers. A pretreatment with KEIM Fixativ is recommended for highly absorbent or sanding substrates. Please, refer to the Technical Data Sheet regarding application.

Non-suitable substrates:
substrates with salt efflorescences; horizontal and inclined surfaces exposed to weathering; wood substrates; plasto-elastic coatings; saponifiable existing substrates; non-wettable substrates; organic substrates

APPLICATION CONDITIONS:
Ensure the ambient and substrate temperatures are ≥ 5 °C during application and drying. Do not apply in direct sunlight or onto substrates heated by the sun. Protect surfaces from direct sunlight, wind and rain during and after application.

MATERIAL PREPARATION:
Soaking: Soak 5 kg of KEIM Purkristalat colour powder in 4 l of KEIM Fixativ and stir until homogeneous. This mixture yields approx. 10 kg of paint ready for application as a top coat. Soaking the powder one day in advance ensures better homogeneity and higher yield (lower consumption!). For primer and intermediate coats, the soaked-in paint is thinned with KEIM Fixativ in accordance with the instructions and, if necessary, the slurry additive KEIM Kristall-Felsit is mixed in. Consumption of KEIM Kristall-Felsit as a primer coat: approx. 0.5 kg/m². For two coats with a 50% Kristall-Felsit additive in the primer coat: approx. 0.30 kg/m² KEIM Purkristalat colour powder, approx. 0.10 kg/m² KEIM Kristall-Felsit and approx. 0.40 l/m² KEIM Fixativ.

CONSUMPTION:
Approx. 0.35 kg/m² KEIM Purkristalat colour powder and approx. 0.40 l/m² KEIM Fixativ for two coats with KEIM Purkristalat.
The information on material consumption is a guide for smooth substrates. Exact consumption figures must be determined by carrying out test areas.

PROCESSING:
KEIM Purkristalat application wet-on-wet, preferably brush-applied or spray-applied with low-pressure equipment (e.g. KEIM facade spraying unit).

TOP COAT:

PAINT STRUCTURE:
The coating system is tailored to the specific conditions of the structure or substrate.

• Mineral substrates subject to normal wear and tear:
Primer coat: 10 kg KEIM Purkristalat thinned with water + 2–6 l KEIM Fixativ. In the event of a few fine hairline cracks, an additional 5 kg of KEIM Kristall-Felsit should be added to the primer coat.
Top coat: KEIM Purkristalat applied by soaking, undiluted.

• For heavier use:
Primer coat: 10 kg KEIM Purkristalat mixed with water + 4–8 l KEIM Fixativ. In the event of a few fine hairline cracks, an additional 5 kg of KEIM Kristall-Felsit should be added to the primer coat.
Intermediate coat: 10 kg KEIM Purkristalat mixed with water + 2–4 l KEIM Fixativ
Final coat: KEIM Purkristalat mixed into the slurry, undiluted.

• Substrates with hairline cracks and/or variations in texture:
Primer coat: 10 kg KEIM Purkristalat mixed with water + 5 kg KEIM Kristall-Felsit + 2–6 l KEIM Fixativ
Intermediate coat: 10 kg KEIM Purkristalat mixed with water + 5 kg KEIM Kristall-Felsit + 2–4 l KEIM Fixativ
Final coat: KEIM Purkristalat applied as a soak-in treatment, undiluted.

• Substrates with non-moving cracks up to 0.5 mm wide and/or significant variations in texture:
Primer coat: 10 kg KEIM Purkristalat mixed with water + 10 kg KEIM Kristall-Felsit + 2–6 l KEIM Fixativ
Intermediate coat: 10 kg KEIM Purkristalat mixed in with water + 5 kg KEIM Kristall-Felsit + 2–4 l KEIM Fixativ
Final coat: KEIM Purkristalat applied by soaking, undiluted.

• For maximum wetting effect on critical, unevenly absorbent substrates:
Primary coat: KEIM Kristall-Felsit (mixing ratio: 25 kg Kristall-Felsit to 4 litres KEIM Fixativ).
Intermediate coat: KEIM Purkristalat thinned + 2 litres of KEIM Fixativ.
Final coat: KEIM Purkristalat thinned, undiluted.

POST-TREATMENT:
In the case of facade areas exposed to heavy rainfall, e.g. on towers or structurally poorly protected weather sides, it is recommended to apply a clear water repellent coat of KEIM Lotexan or KEIM Ecotec after the final coat:
– KEIM Lotexan, apply twice wet-on-wet over the entire surface no earlier than 8 days after the final coat
– KEIM Ecotec, apply over the entire surface no earlier than 3 days after the final coat.

FINISHING:

DRYING TIME:
Can be overcoated after 24 hours at the earliest (at 23°C and 50% RH). At higher relative humidity, greater layer thicknesses or lower temperatures, the drying time is extended accordingly.

CLEANING OF TOOLS:
Clean immediately with water.

5. PACKAGING

Container content	Unit of measure	Quantity on pallet	Type of container
30	kg	30	bag
5	kg	120	bag

6. STORAGE

Maximum storage time	Storage conditions
unlimited storage time	dry
12 months	cool frost-free keep container tightly sealed.

(Unlimited shelf life and dry applies to the colour powder component / 12 months and frost-proof applies to KEIM Fixativ).

7. DISPOSAL

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

Waste code: 08 01 11 *

8. SAFETY INSTRUCTIONS

Refer to the safety data sheet.

9. GENERAL INFORMATION

Cover surfaces not to be treated, particularly glass, ceramics and natural stone. Splashes on surrounding surfaces or traffic areas must be immediately diluted with plenty of water and removed.
Mixing with products from other systems or other external additives is not permitted.

10. CERTIFICATES & QUALITY SEALS

Titanium dioxide-free

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.

KEIMFARBEN GMBH
Keimstraße 16 / 86420 Diedorf / Tel. +49 821 4802-0
Frederik-Ipsen-Straße 6 / 15926 Luckau / Tel. +49 35456 676-0
www.keim.com / info@keimfarben.de