



1. Product description

KEIM Royalan is a ready-to-use exterior mineral silicate paint system for use in subtropical/tropical conditions. It offers water repellency, high vapor permeability and forms a chemical bond with the mineral substrate. KEIM Royalan is made using pure inorganic mineral fillers, absolutely lightfast inorganic pigments, additives and potassium silicate binder.

2. Field of application

KEIM Royalan can be used for all mineral, absorbent surfaces. Due to its outstanding product characteristics, KEIM Royalan is particularly suitable for old and new surfaces. In combination with the products of the KEIM Royalan system the most various application areas are possible. KEIM Royalan should not be applied to horizontal or slightly inclined areas.

3. Product properties

KEIM Royalan is a long life exterior silicate-based paint with a modified potassium silicate binder. KEIM Royalan has excellent hiding power and contains only absolutely lightfast inorganic pigments. KEIM Royalan protects the substrates from environmental influences.

- Highly water vapor permeable
- Lightfast
- Hinders mold and fungal growth
- Easily cleaned
- Easy to overcoat
- Non-flammable
- Non-film-forming
- Mineral matt

- All components UV-resistant
- High resistance to weathering
- Resistant to industrial pollution and acid rain
- Water repellent
- No solvents added
- Ease of application
- Resists extreme climatic conditions

Material characteristics

- Diffusion equivalent
air layer thickness: $s_d = 0.02 \text{ m}$ (2 coats)
- Water vapor
transmission rate: $V = 1.050 \text{ (g/m}^2\text{d)}$
(2 coats)
- ASTM E96 Water vapor permeability 83 perms
- Density: $Q = 1.46$ (white)
- Liquid water
permeability: $w = 0.2 \text{ kg/m}^2 \cdot \text{h}^{0.5}$
(2 coats)
- Thermal Expansion: comparable to the mineral substrate to which it is applied.
- Flash point: non-flammable
- ASTM G154 Accelerated Weathering Test
2016 hours: "No change to the KEIM Royalan"
- ASTM E514 Wind-Driven Rain Test
Results: "No water leaked through"

Color Shades

Standard colors according to the KEIM Palette Exclusiv with specials available. On-site tinting only with Royalan tinting concentrates.

4. Application instructions

Substrate Preparation:

The substrate must be sound, dry, absorbent, clean, dust- and grease-free. Loose and brittle parts, dirt,



oily and greasy materials, moss, algae and other surface contaminants are to be entirely removed by suitable mechanical and/or chemical means. Old, film-forming coatings which may hinder the vapor diffusion and/or which are not well adhering must be removed with KEIM Bio Stripper (paint stripper) or by mechanical means.

Well adhering organic old coatings that will remain on the surface must be coated with KEIM Contact-Plus as bridging coat prior to subsequent applications of KEIM Royalan or KEIM Royalan-Grob. Not suitable for application over old plastoe-elastic coatings or coatings and substrates that are susceptible to saponification.

For strongly absorbent or sanding substrates a pretreatment with KEIM Royalan-Dilution, undiluted, is recommended. Possible sinter layers on new renders/stuccos/plasters must be removed with KEIM Lime Remover (Ätzflüssigkeit) according to the product instructions. Repairs to render/stucco/plaster must be treated with KEIM Lime Remover (Ätzflüssigkeit) according to the product instructions in the technical data sheet. A pretreatment is recommended for areas subject to strong weathering or environmental stress with KEIM Silan-100 or KEIM Silangrund to ensure maximum weathering protection.

Application

KEIM Royalan may be applied by brush, roller or airless spraying (nozzle size 0.79 mm/0.031 in.). Application by brush or roller for base coat is recommended to ensure full coverage working it well into all surfaces.

Base coat

KEIM Royalan, diluted by, depending on the absorbency of the substrate, up to 20% with KEIM

Royalan-Dilution (25 kg and max. 5 l /1.32 gal Dilution).

Top coat

KEIM Royalan, undiluted or with up to 5 % with KEIM Royalan Dilution, after a minimum drying period of 12 hours.

To equalize structural differences and/or to cover small hairline cracks (≤ 0.2 mm), KEIM Royalan -Grob is to be used. When larger structural differences and/or numerous hairline cracks (≤ 0.5 mm) exist, KEIM Contact-Plus, applied by brush, should be used as base coat.

Please note that under certain conditions a three-coat-system may be required. Further information upon detailed request available.

Working conditions

Air and surface temperature: $> 5^{\circ}\text{C}$ (41°F).

Do not apply under direct sun or on heated surfaces. Substrates should be protected during and after application from direct sun, wind and rain.

Drying times

A drying time of 12 hours minimum is to be respected between the different coats of KEIM Royalan and/or KEIM Royalan-Grob and/or KEIM Contact-Plus.

After a pretreatment with KEIM Silan-100 or KEIM Silangrund the first coat should be applied after 4 hours.

Consumption per 1 m² (10.8 sq ft)

For two coats onto a smooth surface approx. 0.4 kg KEIM Royalan and 0.05 l (1.7 fl oz) KEIM Royalan-Dilution.



These consumption figures are typical values and strongly depend upon the texture of the substrate as well as on the application procedure. Exact consumption ratios may only be defined by trial applications on the project.

Tools

Clean immediately after use with water.

Mixing with other products

In order to maintain the specific features of KEIM Royalan and the related system products, they may not be mixed with other products or additives nor may they be diluted with water.

5. Packaging

5 kg and 25 kg containers

6. Storage

Approx. 12 months in original unopened sealed container in cool, frost-free conditions. Protect from heat and direct sunlight.

7. Hazardous substances ordinance class

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

S 26: Avoid release to environment. Refer to special instructions/safety data sheets.

8. Transport hazard class

n/a

9. Disposal

EC Waste code No. 08 01 11

Dispose of completely emptied containers in accordance with local, state and federal regulations.

10. Safety instructions

KEIM Royalan is alkaline. Cover all areas which are not to be coated, especially glass, ceramics and natural stone. Any splashes on surrounding surfaces or traffic areas must be rinsed off immediately with plenty of water. Protect the eyes and skin from splashes. Do not swallow. Keep out of reach of children.

Refer to the relevant safety data sheets.

Contains Propiconazole: may produce an allergic reaction.

This product is only intended for the sale to and the application by professional applicators. The application instructions as well as the labeling are to be adhered to. The recommendation values and characteristics stated are the result of intensive development work and practical experience. Our verbal and/or written recommendations regarding the use and application of our products are to assist in the choice of our products and are not the basis of a contractual and/or legal relationship. They do not release the purchaser and/or applicator from the obligation to verify the suitability of our products for the intended application with due diligence. The prevailing general rules of building technology are to be respected. KEIMFARBEN GmbH & Co. KG has adopted a policy of constant product development. Modifications serving the improvement of the product or its application are reserved. This edition supersedes all earlier editions.

