



## TECHNICAL DATA SHEET

# KEIM ROYALAN®

## 1. PRODUCT DESCRIPTION

KEIM Royalan is a ready-to-use exterior mineral silicate paint system for use under subtropical or tropical conditions. It offers water repellency, high vapour permeability and forms an insoluble, chemical bond with the mineral substrate. KEIM Royalan is manufactured 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 fields are possible. KEIM Royalan should not be applied to horizontal or slightly inclined areas.

## 3. PRODUCT PROPERTIES

KEIM Royalan is a longlife exterior silicate based paint with a modified potassium silicate binder. KEIM Royalan provides high coverage and contains only absolutely lightfast inorganic pigments. KEIM Royalan protects the substrates from environmental influences.

- Water vapour permeable
- Lightfast
- Hinders mould and fungal growth under certain conditions
- Easily cleaned
- Easy to repaint
- Non-flammable
- Non film-forming
- Mineral matt appearance
- All components UV-resistant
- High weather-resistance
- Resistant against industrial fumes and acid rain
- Water-repellent
- No solvents added
- Simple application
- Resists extreme climatic conditions

### Material characteristics:

- Specific weight: approx. 1.35 g/cm<sup>3</sup> (white)
- pH-value: approx. 11
- Colour stability: A1

(Colour code acc. to BFS technical information No. 26)

## Classification to DIN EN 1062-1:

(for details see certificate FPL)

- Diffusion equivalent air layer thickness:  $s_d = 0.01 \text{ m}$   
Class 1 ( $s_d < 0.14$ )  
to DIN EN ISO 7783-2
- Liquid water permeability (24 h):  $w < 0.1 \text{ kg/m}^2 \cdot \text{h}^{0.5}$   
to DIN EN 1062-3
- Gloss at 85°: 0.5  
matt ( $\leq 10$ )  
to DIN EN ISO 2813

## Colour Shades:

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

## 4. APPLICATION INSTRUCTIONS

### Substrate Preparation:

The substrate must be sound, dry, absorbent, clean, free from dust and grease. Loose and brittle parts, dirt, oily substances, moss, algae and other surface contaminants have to be completely removed by suitable mechanical and/or chemical means. Old, film-forming coatings which may impair the vapour diffusion and/or which are not well adhering must be removed with KEIM Dispersionsentferner (paint stripper) or by mechanical means.

Well adhering organic old coatings should be primed with KEIM Contact-Plus as bridging coat prior to subsequent application of KEIM Royalan or KEIM Royalan-Grob. Not suitable are plasto-elastic old coatings or coatings and substrates susceptible to saponification.

A pretreatment with undiluted KEIM Royalan-Dilution is recommended for strongly absorbent or sanding substrates. Possibly existing sinter layers on new renders need to be removed with KEIM Ätzflüssigkeit (lime remover) according to manufacturer's instructions. (Partial) render repairs have to generally be treated with KEIM Ätzflüssigkeit (see Technical Data Sheet).

A pretreatment with KEIM Silan-100 or KEIM Silangrund is recommended for areas subject to strong weathering or environmental stress before the coating process.

### Decoration:

KEIM Royalan should be applied in two coats to unpainted surfaces using a paint brush or roller and worked well into all surfaces, always keeping a wet edge.



### Base coat:

KEIM Royalan diluted with up to maximal 20% KEIM Royalan-Dilution, depending on the absorbency of the substrate (25 kg and max. 5 l Dilution).

### Top coat:

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

To equalize structural differences and/or to cover small hairline cracks ( $\leq 0.2$  mm), KEIM Royalan-Grob is to be used.

When larger structural differences and/or numerous hairline cracks ( $\leq 0.5$  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:  $> 5^{\circ}\text{C}$

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:

Drying time is 12 hours minimum between the different coats of KEIM Royalan and/or KEIM Royalan-Grob and/or KEIM Contact-Plus.

After a pretreatment with KEIM Silangrund the first coat should be applied after approximately 4 hours.

### Consumption per m<sup>2</sup>:

For two coats onto a smooth surface approx. 0.4 kg KEIM Royalan and 0.05 l KEIM Royalan-Dilution. These consumption figures are typical values and strongly depend on the texture of the substrate as well as on the application method. Exact consumption values can only be defined by applying trial areas on the structure to be coated.

### Tools:

Clean immediately after use with water. Tools should be kept in the paint material or in water during work breaks.

### Mixing with other products:

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

## 5. PACKAGING

5 kg and 25 kg containers

## 6. STORAGE

Approx. 12 months in tightly closed container under cool, frost-free conditions. Protect from heat and direct sunlight.

## 7. DISPOSAL

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

## 8. SAFETY INSTRUCTIONS

KEIM Royalan is alkaline. Cover all areas which are not to be coated with KEIM Royalan, 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.

Please, refer to the relevant EC Safety Data Sheet.

This product is only intended for the sale to and the application by professional applicators. The application instructions as well as the labelling 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 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.

