

KEIM Granital®

Exterior Mineral Silicate Finish compliant with DIN 18 363 2.4.1



1. Product description

KEIM Granital is a traditional water-repellent, ready-to-apply historic potassium silicate based exterior paint in accordance with VOB/C DIN 18 363 2.4.1 (Mineral silicate paint) with absolutely lightfast inorganic pigments and mineral fillers. It offers water repellency, high vapor permeability and forms a chemical bond with the mineral substrate.

2. Field of application

KEIM Granital is a 2 – 3 coat system that can be used for all mineral, absorbent surfaces. Due to its product characteristics, KEIM Granital is particularly suitable for traditional environments that typically have four seasons. Applications include old historic and new surfaces. Ideal absorbent surfaces include but are not limited to, brick, stucco, historic masonry, stone, lime plasters, mortars, CMU, GFRC, cement boards and renders. In combination with products from the KEIM Granital system a wide variety of application areas are possible.

Exceptions not suitable for coating with KEIM Granital are resin based coatings, plasto-elastomeric coatings, saponifiable old paints (e.g. certain oil-based paints), non-wettable substrates (e.g. lacquers and varnishes).

Optional added water repellency can be added with a treatment of KEIM Silan-100 before the first coat of KEIM Granital.

KEIM Granital is not suitable for horizontal and slightly inclined surfaces exposed to weathering or floor surfaces.

3. Product properties

KEIM Granital is a proven extremely long-life exterior silicate based paint with a modified potassium silicate binder. KEIM Granital has excellent hiding power, is non-yellowing and contains only absolutely lightfast inorganic mineral pigments. KEIM Granital protects mineral substrates from strong weathering loads and also from atmospheric pollutants.

- Non-film-forming
- Mineral matt finish
- Non-flammable – will not burn
- Anti-static – surfaces stay clean longer
- Lightfast – will not fade
- All components UV-stable
- Excellent weathering resistance
- Resistant to industrial pollutants and acid rain
- Highly water-repellent
- Extremely vapor permeable
- Resistant to fungal and algae growth
- No solvents
- Easy application
- Very durable even in extreme freeze thaw conditions

Material characteristics

- Specific weight: approx. 1.45 g/cm²
- VOCs (white or tinted) ASTM D6886: 0 g/l
- Light fastness of color pigments: A1
(Fb-Code acc. to BFS technical bulletin No. 26)
- pH-value: approx. 11
- Water vapor DIN EN 1062-1
diffusion density: $V \geq 2100 \text{ g}/(\text{m}^2 \cdot \text{d})$
- Diffusion-equivalent DIN EN ISO 7783-2
air layer thickness: class I $sd \leq 0.01 \text{ m}$
- Water permeability rate: $w < 0.1 \text{ kg}/(\text{m}^2 \cdot \text{h}^{0.5})$
DIN EN 1062-3 class III



- Gloss at 85° DIN EN ISO 2813: matt 0.5
- Vapor permeability ASTM E96 80 - 85 perms
- Accelerated Weathering ASTM G154: Pass
2016 hours "No change to the KEIM Granital"
- Wind-Driven Rain ASTM E514: Pass
Results: "No water leaked through"
- Non-flammable (DIN 4102-A2 & ASTM E84)

Color shade

White and also colors found in the KEIM Palette Exclusiv.

KEIM also offers custom matching to your color selection within our natural mineral range.

4. Application instructions

Substrate preparation

The substrate must be sound, solid, dry, absorbent, clean and free of dust, grease, oils, salts, moss, algae and other substances that would prevent bonding. Old oil based coatings, loose substrate layers and organically bound coats must be removed. Repair damaged areas before painting.

For repaired substrates and also on substrates with textural differences or hairline cracks up to 0.3mm use KEIM Granital-Grob as the base coat instead of KEIM Granital.

Larger cracks 0.3 - 0.9mm or strong differences in texture may require a primer coat with KEIM Contact-Plus (0.3 - 0.5mm) or KEIM Contact-Plus-Grob (0.5 - 0.9mm).

Before KEIM Granital or KEIM Granital-Grob is applied, it is recommended that highly absorbent substrates or surfaces exposed to severe moisture or weathering may be treated with a water-

repellent substrate treatment using KEIM Silan-100 to enhance waterproofing. A subsequent base coat of KEIM Granital or Granital-Grob must be applied after approx. 4 to 12 hours drying time for KEIM Silan-100.

Soft, porous highly absorbent surfaces or old existing mineral coats may be stabilized by pre-treatment with KEIM Spezial-Dilution.

New mortar or masonry surfaces may require treatment with KEIM Lime Remover before painting if they have a sinter layer.

Surface contaminants should 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 old acrylic coatings that will remain on the surface must be coated with KEIM Contact-Plus as primer coat prior to subsequent applications of KEIM Granital or KEIM Granital-Grob.

Very soft, old and sanding substrates may be consolidated first with a treatment of KEIM Fixativ.

Application

KEIM Granital is typically a 2 - 3 coat system applied by brush, roller or airless spraying (nozzle size 0.79 mm/0.031 in.). Application by brush or roller for base coat can be advantageous to ensure full coverage working it well into all surfaces.



A minimum drying time of 12 hours between coats is required.

Two-coat-system:

Base coat: KEIM Granital or KEIM Granital-Grob diluted up to maximum of 20% (25.6 oz/gallon) with KEIM Spezial-Dilution.

Finish/Top coat: KEIM Granital undiluted.

Three-coat-system:

Base coat: KEIM Granital or KEIM Granital-Grob diluted up to maximum of 20% (25.6 oz/gallon) with KEIM Spezial-Dilution.

Intermediate coat: KEIM Granital or KEIM Granital-Grob diluted up to maximum of 10% (12.8 oz/gallon) with KEIM Spezial-Dilution.

Finish/Top coat: KEIM Granital undiluted.

Stir diluted KEIM Granital and KEIM Granital-Grob before and during application. Neither water nor any other materials may be added. For the finish coat it is important to work swiftly wet-in-wet maintaining a wet edge. Work corner to corner or use an architectural feature as a starting and stopping point.

Application conditions

From 41°F up to max. 86°F (+5°C - 30°C) air and substrate temperature.

Only apply in dry weather conditions. Do not apply under direct sun or on sun-heated substrates or in strong wind. After application, surfaces must be protected from strong wind and direct sun until dry (3-6 hours) and from rain until they are cured (12-36 hours). Times depend on temperature and humidity.

Drying times

Dry to touch in 1-3 hours.

For recoating, at least 12 hours between coats.

For the finish coat, allow 12-36 hours.

If a pretreatment of water repellencies was applied allow drying before base coat is applied. Approx. 4 - 12 hours after KEIM Silan-100.

Consumption

The stated consumption figures are guide values for a smooth substrate. Exact values can only be determined by painting test areas on the structure to be coated using tools and techniques that will be used for the final application.

KEIM Granital

275 - 325 sq.ft./gallon

Tools

Clean immediately after use with water.

Mixing with other products

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

5. Packaging

1 gallon
and

4 gallon (packaged in a 5 gal pail)

Only for GR1001 and GR1002 - 1kg, 5 kg and 25kg containers

6. Storage

Shelf life approx. 12 months, if kept cool, but frost-free in tightly closed unopened containers.

Note: Remnants of material from opened containers should be filled in smaller buckets in



order to maintain the air content in the bucket at the lowest possible level.

7. Hazardous substances ordinance class

n/a

8. Transport hazard class

n/a

9. Disposal

EC Waste Code No. 08 01 12

Any residues must be emptied out of containers before recycling.

10. Safety instructions

Provide appropriate protection for surfaces which are not to be coated (e.g. glass, natural stone, ceramics; wood 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 01

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.

