



TECHNICAL DATA SHEET

GRANITAL® EXTERIOR MINERAL SILICATE PAINT

1. PRODUCT DESCRIPTION

KEIM GRANITAL® is the original ready-to-use potassium silicate-based coating for exterior masonry, concrete, and stucco surfaces. GRANITAL is a traditional water repellent, historically appropriate 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 or 3 coat system formulated for use on new or bare, absorbent mineral surfaces. It is ideally suited to masonry, brick, and stone as well as aged concrete substrates, CMU, cement boards, plasters, and Portland Stucco. Granital is ideal for historic restoration, maintenance, and new construction in moderate exterior climates. In addition, it is perfectly suited to earthen surfaces such as adobe, rammed earth, and straw bale construction. It is not suitable for use over previously painted surfaces of elastomeric, oil-based, or lacquered and varnished materials, or fresh concrete without a suitable primer (see Section 4, Specifications/Systems). Do not use on floors.

3. PRODUCT PROPERTIES

KEIM GRANITAL® has a proven track record of extremely long-life in moderate climates. The potassium silicate emulsion binder provides excellent weather resistance and color retention. Colors are non-yellowing and won't fade, no matter how harsh the U.V. exposure. It is also impervious to acid rain and other environmental pollutants.

- Non-film-forming, won't ever peel
- Mineral matte finish — very natural appearance
- Non-flammable – will not burn
- Anti-static – surfaces stay clean longer
- Lightfast – will not fade

- All components are completely 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 – extremely low VOC
- Easy application
- Very durable even in extreme freeze-thaw environments
- Uniquely mineral appearance, can be applied to appear like a "suede" finish

Technical data

Specific Weight	approx. 1.45 g/cm ²
pH Value @ 20°C	11
Wind-Driven Rain ASTM E 514	Passes—no water leaked through
Water Vapor Permeability ASTM E 96	80 - 85 perms
Accelerated Weathering Test ASTM G 154	Passes No change after 2016 hours
Mildew Resistance ASTM D3273/D3274	Passes
Gloss at 85°	0.5 Mineral Dead Flat
Flashpoint	Non-Flammable
Color Stability Color code acc. To BFS Tech. No 26	A1 Best in class rating No color change after 4 years
VOC	0 g/liter
All test results performed on 2 coats Granital applied at 300—350 SF/GAL and 14-day cure @ 77°F & 50% RH	

Color shades and Textures

White and full color range, including monochrome concentrate colors. Custom color matches are also available. The texture of Granital is relatively smooth, with a slightly sandy finish.

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Environmental Compliance

EPA	YES
LEED	YES
CARB	YES
SCAQMD	YES
EPD	YES
Cradle to Cradle Certification	YES

4. SPECIFICATIONS/SYSTEMS

For proper waterproofing and weather resistant performance, 2 coats of KEIM GRANITAL® must be applied at recommended coverage rates. Surface should be fully coated, with no pinholes, runs, voids or holidays.

Masonry (new or aged, bare)

1 coat GRANITAL (diluted up to 20%)

1 coat GRANITAL (undiluted)

Cast or Pre-cast Bare Concrete

Pretreat: Keim Heavy Duty Cleaner Concentrate (for new concrete)

1 coat CONTACT PLUS Bonding Primer (for new concrete)

1 coat GRANITAL (diluted up to 20%)

1 coat GRANITAL (undiluted)

CMU Block

For new, extremely porous block:

1 coat CONTACT-PLUS GROB Block Filler

1 coat GRANITAL (diluted up to 20%)

1 coat GRANITAL (undiluted)

Waterproofing System on bare masonry or concrete

Pretreat: KEIM Silan 100 Silane Water Repellent

1 coat GRANITAL (diluted up to 10%)

1 coat GRANITAL (undiluted)

Stucco (new or aged, bare)

Pretreat: Keim Lime Remover (for new stucco)

1 coat GRANITAL (diluted up to 20%)

1 coat GRANITAL (undiluted)

Adobe or earthen surfaces that have not been painted or waterproofed

If surfaces are extremely sandy or dusty, pretreat them with Keim Fixative, mixed at a ratio of 1 part to 3 parts water. Saturate surface and allow to dry overnight.

1 coat Granital (diluted up to 20%)

1 coat Granital (undiluted)

Previously Acrylic Painted Surfaces

1 coat CONTACT—PLUS Bonding Primer

1 coat GRANITAL (diluted up to 20%)

1 coat GRANITAL (undiluted)

Do not apply to aged, oil base, epoxy or urethane coatings.

5. SURFACE PREPARATION

WARNING! Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

The substrate must be sound, dry, absorbent, clean and free from dust and grease. Loose areas, dirt, oily substances, release agents, curing compounds, moss and algae must be completely removed.

Existing film-forming paint coatings, which are loose or poorly bonded must be removed with paint stripper, or by mechanical means.

Highly absorbent, sanding surfaces:

Pretreat by saturating surface with KEIM Fixative, mixed with 3 parts water, and allow to dry and cure for 12 hours.

New Portland Stucco:

Sinter layers on new Portland stucco or stucco repairs should be pretreated with KEIM Lime Remover, rinsed with copious amounts of clean water, and allowed to dry.

New Concrete Surfaces:

Remove all release, form, or curing oil residues with KEIM Heavy Duty Cleaner Concentrate, rinse, and allow to dry. In some cases, abrasive water blasting may be necessary to re-

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move sealers, release compounds, and provide an anchor pattern. Concrete and mortar must be cured at least 7 days at 75°F. Use a primer coat of Contact Plus Bonding Primer on new concrete. Aged, clean, strong, and sound concrete requires no pre-treatment or primer.

6. APPLICATION

KEIM GRANITAL may be applied by brush, roller or airless spray.

- Brush - Use a natural bristle or nylon/polyester brush
- Roller - Use a ½" to ¾" nap synthetic roller cover
- Airless Spray
 - Pressure: 3000 psi
 - Tip Size: .029--.031 in

NOTE: To achieve a "limewash" or sueded appearance, use a large natural bristle brush and apply the final Granital coat in random "X" patterns to completely cover the surface. Brush both upward and downward to create color movement in the finish layer.

First coat

KEIM GRANITAL® may be diluted up to 20% with KEIM Spezial Dilution depending on the substrate's absorbency. Allow it to dry 12 hours or overnight before recoating.

Top coat

Apply KEIM GRANITAL® undiluted. There is no recoat window after the first coat has dried.

NOTE: For extreme weather conditions or critical, intensive color shades it is recommended to apply a three-coat system.

Application conditions

Ambient and substrate temperature: 40°F and rising and below 86°F. Do not apply to sun-heated substrates. Protect coated surfaces from wind and rain during and after application for a minimum of 12 hours.

Drying times

Drying times are temperature, humidity, and coverage dependent.

	@ 40-50°F	@ 50°F +
Touch:	4--6 hour	2--4 hours
Recoat:	24--48 hours	24 hours

Coverage*

SUBSTRATE	COVERAGE*
Masonry or Brick	250—300 SF/GAL
Natural Stone Masonry	225—275 SF/GAL
Cast or Pre-Cast Concrete	275—325 SF/GAL
Fiber Cement Siding	275—325 SF/GAL
Portland Stucco	150—200 SF/GAL
CMU Block (smooth)	100—150 SF/GAL
CMU Block (split-faced or fluted)	50—100 SF/GAL
Adobe, Rammed Earth or Straw Bale	100—150 SF/GAL

*Stated values are based on our experience on smooth surfaces. Surface texture, porosity, application conditions and type of equipment used will all vary consumption. Only a test application, using desired mixing ratio and under production conditions will forecast consumption of the system components accurately.

Cleaning

Clean spills, splatters, hands and tools immediately after use with soap and warm water. After cleaning, flush spray equipment with a compliant cleanup solvent to prevent rusting of the equipment. 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 GRANITAL® and the related system products, they must not be mixed with other products or additives and never be diluted with water.

7. PACKAGING

Quart, Gallon and 4 Gallon

8. STORAGE

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

9. DISPOSAL

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

HAZARDOUS SUBSTANCE CLASS

n/a

10. LIMITATIONS

KEIM GRANITAL® is a façade paint finish and should not be used on floors, roofs or decks or where water will collect. Not for use below grade.

11. SAFETY INSTRUCTIONS

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.

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.

The information and recommendations set forth in this Technical Data Sheet are based upon tests conducted by or on behalf of KEIM Mineral Coatings. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult <http://www.keim-usa.com/Technical-Data-Sheets> for the latest in product technical information.

