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. It is not suitable for use over previously painted surfaces of elastomeric, oil-based or lacquers and varnishes, or fresh concrete without a suitable primer (see section 4 Specifications/Systems).

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

Technical data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Weight</td>
<td>approx. 1.45 g/cm²</td>
</tr>
<tr>
<td>pH Value @ 20°C</td>
<td>11</td>
</tr>
<tr>
<td>Wind Driven Rain</td>
<td>Passes—no water leaked through</td>
</tr>
<tr>
<td>Water Vapor Permeability</td>
<td>80 - 85 perms</td>
</tr>
<tr>
<td>Accelerated Weathering Test</td>
<td>Passes</td>
</tr>
<tr>
<td>Mildew Resistance</td>
<td>Passes</td>
</tr>
<tr>
<td>ASTM E 84-19B</td>
<td>Passes: Flame Spread = 0</td>
</tr>
<tr>
<td>Gloss at 85°</td>
<td>0.5 Mineral Dead Flat</td>
</tr>
<tr>
<td>Flashpoint</td>
<td>Non-Flammable</td>
</tr>
<tr>
<td>Color Stability</td>
<td>A1 Best in class rating</td>
</tr>
<tr>
<td>Color code acc. To BFS Tech. No 26</td>
<td>No color change after 4 years</td>
</tr>
<tr>
<td>VOC</td>
<td>0 g/liter</td>
</tr>
</tbody>
</table>

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 and mica-based metallic finishes. Custom color matches are also available.

Granital Grob is a Texture Base Coat, that when combined with Granital as a finish, provides a slight sand texture finish. Granital Grob may be tinted, but will be slightly lighter due to aggregate in the finish.

Environmental Compliance

<table>
<thead>
<tr>
<th>Agency</th>
<th>Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA</td>
<td>YES</td>
</tr>
<tr>
<td>LEED</td>
<td>YES</td>
</tr>
<tr>
<td>CARB</td>
<td>YES</td>
</tr>
<tr>
<td>SCAQMD</td>
<td>YES</td>
</tr>
<tr>
<td>EPD</td>
<td>YES</td>
</tr>
<tr>
<td>NaturePlus Certificate</td>
<td>YES</td>
</tr>
</tbody>
</table>
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 (if desired)
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)
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 paints.

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 Fixativ, 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 remove sealers, release compounds, and to 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

First coat
KEIM GRANITAL® may be diluted up to 20% with KEIM Spezial Dilution depending on the substrate’s absorbency. Allow 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. 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.

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Touch</th>
<th>Recoat</th>
</tr>
</thead>
<tbody>
<tr>
<td>40-50°F</td>
<td>4-6 hr</td>
<td>24-48 hr</td>
</tr>
<tr>
<td>@ 50°F +</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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.

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.

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.keimusa.com/Technical-Data-Sheets for the latest in product technical information.