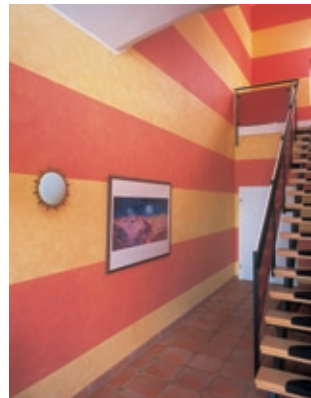


# KEIM interior coatings



since 1878



a durable silicate coating for healthy and beautiful interiors  
enhanced with self-cleaning  $\text{TiO}_2$  photocatalytics

## KEIM Ecosil ME

recommended for schools, hospitals, public spaces and  
institutional/industrial/manufacturing workplaces.

MasterFormat™ Division 09 - Finishes  
Division 07 - Fire and Smoke Protection  
(See Back Cover for complete division listings)



## KEIM Ecosil ME

a revolutionary interior coating combining over 130 years experience in potassium silicate coatings with the disinfection and purification properties of titanium dioxide.

- silicate binding strength
- mineral colors never fade
- $\text{TiO}_2$  self-cleaning surface
- no chemical residues
- less than 1 g/l VOC
- incombustible
- microporous mineral layer
- extremely vapor permeable
- economical
- sustainable and green



### naturally mineral

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Ecosil ME is a natural mineral coating made from waterglass, inorganic mineral pigments, and titanium dioxide crystals. Upon application, it penetrates and bonds by chemical reaction leaving a highly vapor permeable microporous coating that becomes one with the substrate. It is a natural coating for mineral substrates.

### durable

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A strong interior coating well-suited to endure the stresses of working environments, Ecosil ME can accept many cleanings without degrading its appearance. Surfaces may be hosed down when appropriate. Abrasion Resistance test EN ISO 11998: Class 1, very abrasion resistant. Ease of soil removal test DIN 53778: very good.

For heavy soiling conditions found in restaurants, kitchens, operating rooms

and manufacturing, a protective overcoat of KEIM Sealer provides soiling protection with surfaces that may be power-washed clean.

### soiling protection from nature

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KEIM Ecosil ME uses the reduction and oxidizing capacity of anatase titanium dioxide crystals to help maintain clean surfaces. Everyday soiling from hand smudges to tobacco smoke are eventually decomposed. Bacteria and odorous liquids deposited upon surfaces coated with Ecosil ME are eliminated over time reducing maintenance while preserving a fresh and clean environment.

Ecosil ME does not contain acrylic plasticizers and is not an elastomeric film-forming paint. Ecosil ME's unique mineral chemistry combined with natural mineral photocatalysis (the reaction of the  $\text{TiO}_2$  crystals with light) assures naturally clean and bright surfaces without chemical treatments for the life of the coating.

**Ecosil ME helps maintain a healthy indoor environment with the lasting beauty of KEIM.**

**KEIM's MiNOx Effect™, the mineral oxidation of contaminants and pathogens, helps to keep surfaces clean.**

**Nothing compares to KEIM's mineral composition and chemical binding strength for interior protection.**

**Design professionals trust KEIM mineral paints to endure for decades.**

## **economic, healthy and beautiful for life**

Ecosil ME is unique for high performance interior paint with the distinction of lower maintenance cost and a coating life measured in decades. It may be applied over existing organic paints with a priming coat of KEIM Grundierweiss.

Condensation, often appearing on film-forming paints due to cool surfaces in the presence of high humidity, does not occur on the microporous Ecosil ME coating. Instead, these micropores allow the relative humidity of the air to balance within the coating. As the humidity in the room is lowered either by the HVAC system or by open windows, humidity in the coating moves toward the drier air. Water is not allowed to pool on the surface so mold and mildew cannot cultivate. Additional antiseptic activity of the  $\text{TiO}_2$  keeps Ecosil ME free of these spores. This protection lasts indefinitely.

For the chemically-sensitive, coexisting in public and in work places is unavoidable.



Ecosil ME's all natural chemistry has no odor and less than 1 gram per liter VOC. Rooms may be occupied immediately after application.

Using inorganic mineral pigments, Ecosil ME retains its beauty for the life of the coating. It will not fade from sun-washed surfaces nor will its flat matte appearance "wash out" or produce glare in glancing light.

## **fire safety**

Ecosil ME is designed for use in private homes, public buildings, hotels, institutions and heavy industry/manufacturing workplaces. Design professionals need not compromise fire safety for beauty. KEIM Ecosil ME will not burn, smoke or produce poisonous gases. KEIM Ecosil ME and Ecosil ME + KEIM Sealer are completely incombustible.

ASTM E84-05: flame spread = 0, smoke developed index = 0.



## KEIM decor system

### KEIM Ecosil ME coating products

#### KEIM Ecosil ME



KEIM Ecosil ME. Potassium silicate ready-to-use interior mineral coating tinted with inorganic mineral pigments. Enhanced with  $\text{TiO}_2$  anatase crystals for a hygienic surface for life of coating. Apply over mineral substrates and plasters. KEIM Ecosil ME is highly vapor permeable so wall systems may breathe for healthier indoor environments. Dilute with KEIM Spezial Dilution. Dries flat matte. Very low VOC (less than 1 g/l tinted).

#### KEIM Spezial Dilution



A potassium silicate based mineral diluent, used to thin coatings for smooth application and control absorption. Use as primer coat to reduce absorption on highly absorbing substrates. Apply to all mineral substrates and plasters. Very low VOC (less than 1 g/l).

#### KEIM Grundierweiss Primer



Opaque white silicate based primer for interior use. Grundierweiss is used to hide previous paint coats, provide a white painting base for brighter color coats, and equalize differing substrate absorbencies. Very low VOC (less than 1 g/l).

#### KEIM Soliprim Primer



Clear silicate primer for interior use for equalizing differing substrate absorbencies. Very low VOC (less than 1 g/l).

### KEIM Ecosil ME enhanced with Titanium Dioxide photocatalytic crystals, $\text{TiO}_2$

In 2002, KEIM enhanced the extraordinary benefits of its silicate coating technology with the introduction of  $\text{TiO}_2$ . Titanium dioxide crystals are semiconductors with the unique ability to purify and disinfect surfaces by heterogeneous photocatalysis (the acceleration of a chemical reaction on a reactive surface using light energy).

Light falling onto the surface of the Ecosil ME surface causes the  $\text{TiO}_2$  crystals to become electrically conductive. The beneficial amorphous microporous structure of Ecosil ME is exceptionally advantageous for destroying air pollutants and pathogens coming into contact with the surface. When they touch, there occurs a "break" which decomposes the offender's molecular structure into harmless, lesser elements either by oxidation or reduction. The surface is again "recharged" by light energy whereupon the cycle may repeat.

The  $\text{TiO}_2$  crystals work continuously in the presence of light; never are they degraded or exhausted.

How effective is  $\text{TiO}_2$  photocatalysis? Photocatalytic oxidation/reduction breaks down many kinds of organic pollutants including nitrogen oxides, carbons, formaldehyde, sulphur dioxide, particulates and volatile organic compounds into simpler components of water and  $\text{CO}_2$ . It destroys bacteria and viruses, allergens, pathogens, and odors (tobacco, urine, feces).

Ecosil ME helps maintain a healthy indoor environment with the lasting beauty of KEIM.

### ASTM E-84-05 Fire and Smoke Test Results

KEIM Ecosil ME: flame spread = 0, smoke developed index = 0

KEIM Ecosil ME combined with KEIM Sealer: flame spread = 0, smoke developed index = 0

## KEIM preparation and renovation products

### KEIM Dolomit Spachtel



A ready-to-use mineral-based interior white marble plaster. Excellent for general purpose plastering and as filling or joint compound. Using finely ground white Dolomite marble (grain size from zero to 0.3mm), smooth micro-edge feathering of joints, repairs, or surface equalization is possible. Compatible with all KEIM coatings. Low VOC (less than 30 g/l).

### KEIM Contact Plus



A silicate-based primer/bridging coating containing sand (0-0.5mm grains) and mineral fiber fillers for bridging over existing synthetic resin-bound paint layers. Used to fill hairline cracks up to 0.5mm or equalization and renovation of surfaces for a uniform appearance, opaque white. Very low VOC (less than 1 g/l).

### KEIM Sealer



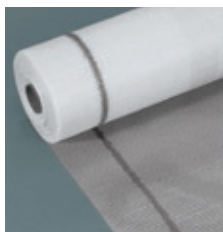
Polyurethane-based, solvent free, indoor-outdoor UV resistant transparent sealer. Dries flat matte, one shade darker than underlying color. Completely waterproof. Apply as wear layer on horizontal surfaces to prevent water intrusion. Due to slippery nature when wet, most soils wash away with rain. KEIM Sealer is an effective waterproof coating protection and soil barrier. Very low VOC (less than 9 g/l).

### KEIM Stain Blocker



Water based highly-pigmented white coating with excellent vapor permeability. Will block water marks, mold, mildew, even petroleum-based stains. Low VOC (less than 22 g/l).

### KEIM Fiber Mesh



A glass fiber lattice mat for reinforcing rendered surfaces. Embed into KEIM renders when applying on CMU or similar block, brick, or existing renders and stuccos.

### KEIM Universal Putz Standard Render



A cementitious renovation and thin wall render made of hydraulic lime and white cement binder with quartz sand (0-1.3mm grains) and mineral fiber fillers. KEIM Universalputz Render accommodates thermal expansion cycles preventing surface crazing and cracking. The white surface may be finished from rough-hewn to coarsely smooth with infinite texturing possibilities. No VOC.

### KEIM Universal Putz Fine Render



Same as Universalputz Standard except the quartz sand grains are between 0 to 0.6mm in size. Surface may be finished from sandy to smooth, closely resembling the appearance of white lime plaster. No VOC.

### KEIM Bio Stripper



A paint stripper for removing elastomeric latex, acrylic, or resin film-forming coatings. Water-emulsive mixture of solvents, free of fluorinated, chlorinated, and aromatic hydrocarbons. Biodegradable.



### Need more information

Email us at:  
**keim-info@keim.com**

Download product spec sheet  
PDF files at:  
**www.keim.com**

Call us at:  
**866-906-5346 (In USA)**  
**704-588-4811 (Outside USA)**



since 1878

## how to apply KEIM Ecosil ME

**Ecosil ME is of the KEIM family of mineral silicate based coatings.** Developed for interior public spaces where the maintenance challenges of air pollutants, grease, grime, and pathogens exist in combination with the demand for a durable self-cleaning coating or paint that can remain beautiful for decades. Complementary products provide a complete system for new construction, renovation and restoration.

Ecosil ME may be applied onto any mineral substrate including gypsum board, fiberglass-faced or paperless gypsum panels, KEIM mineral renders, plasters, and magnesium oxide MgO board. It may be applied over existing emulsion paint layers.

**Apply by brush, roller or professional spray equipment keeping a wet edge from corner to corner.** Clean up with water. Areas may be occupied immediately after application.

**See technical data sheets for comprehensive application information.**

Applicable MasterFormat™ Sections:

**Division 09 - Finishes**  
**Division 07 - Fire and Smoke Protection**

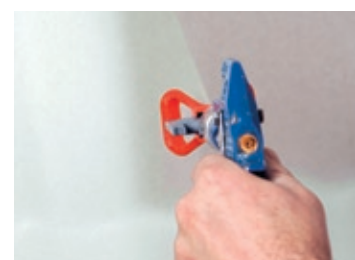
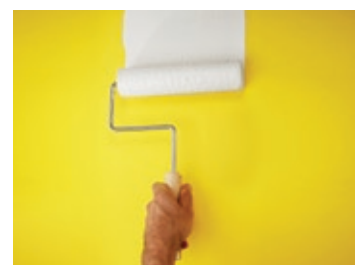
**09 90 00 Painting and Coating**  
09 91 23 Interior Painting

**09 94 00 Decorative Finishing**  
09 94 13 Textured Finishing

**09 96 00 High-Performance Coatings**  
09 96 13 Abrasion-Resistant Coatings  
09 96 33 High-Temperature-Resistant Coatings  
09 96 35 Chemical-Resistant Coatings  
09 96 43 Fire-Retardant Coatings  
09 96 66 Aggregate Wall Coatings

**09 97 00 Special Coatings**  
09 97 23 Concrete and Masonry Coatings  
09 97 26 Cementitious Coatings  
09 97 26.13 Interior Cementitious Coatings  
09 23 82 Fireproof Gypsum Plastering  
09 96 43 Fire-Retardant Coatings

**07 80 00 Fire and Smoke Protection**  
07 81 00 Applied Fireproofing  
07 81 13 Cement Aggregate Fireproofing  
07 81 16 Cementitious Fireproofing



member



The Construction  
Specifications Institute

Association for  
Preservation  
Technology

National Trust for Historic Preservation

KEIM is certified for establishing and applying an ISO 9001:2000 Quality Management System and an ISO 14001:2004 Environmental Management System.

the original silicate coating since 1878

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