



TECHNICAL DATA SHEET

SOLDALIT® COOLIT

SOL-SILICATE ALL SURFACE MINERAL FINISH

PRODUCT DESCRIPTION

SOLDALIT® Coolit is a Sol-silicate All Surface Mineral Finish used to reduce solar heating on masonry surfaces, especially in dark color tones. SOLDALIT uses a proprietary formula combining silica-sol and potassium silicate binders, inorganic mineral pigments and fillers and an acrylate copolymer to form both chemical and mechanical bonds, even on the most difficult to paint substrates, without primer coats. This new-generation mineral silicate paint is ideal for finishing ceramic glazed tile and terra cotta, glass, non-ferrous metals, granite, marble, pebble-dash concrete and previous acrylic or latex painted surfaces. It is also ideal for all masonry surfaces exposed to severe weather conditions. Tenacious adhesion is enhanced with SOLDALIT's nanoparticle technology that allows penetration of even the densest mineral or masonry substrates and provides a mechanical anchor to most existing organic, latex, or acrylic paints that are in sound condition.

FIELD OF APPLICATION

SOLDALIT is applied typically as a 2 or 3 coat system and is recommended for new construction and renovation of sound acrylic and silicone resin-based paints, acrylic stucco, terracotta, bare masonry, all types of concrete, stone, and most other mineral substrates. It is ideal for restoration of historic structures and facades due to high vapor permeability coupled with water repellency. It may be applied over polymer modified cementitious patching compounds that are fully cured. Do not use SOLDALIT over aged alkyd or oil-based paints, varnish or lacquer. SOLDALIT is suitable for vertical facade installations and inclined surfaces. Do not use on floors.

PRODUCT PROPERTIES

SOLDALIT protects masonry surfaces from the action of weather and prevents the penetration of atmospheric pollutants. It utilizes only lightfast inorganic mineral pigments and fillers, and colors will not fade, even in harsh U.V. environments. SOLDALIT is available in a smooth or sand texture base.

- Unique mineral oxide IR Reflective pigments for lower heat gain in high UV environments
- Sol-Silicate binder system penetrates masonry and chemically bonds—won't peel or lose adhesion
- Copolymer modification provides mechanical bond to previously painted surfaces (as outlined)
- Lightfast mineral pigments—guaranteed not to fade or lose brilliance
- Apply to a variety of mineral surfaces
- Very water vapor permeable, microporous
- Completely resistant to pollution
- Provides extreme weather resistance and water repellency
- Noncombustible—won't add fuel or noxious smoke in case of fire
- Beautiful, mineral matte finish is very natural in appearance and darkens when wet from rain
- Anti-static, inert finish—won't attract or trap dirt or dust for walls that stay cleaner
- Naturally mold, algae and fungus resistant—no pesticides used

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Technical data

Density	1.6 g/cm ³
VOC (ASTM D6886)	< 1 g/liter
Organic Content	< 5%
Cured pH value	Approximately 11
Vapor Diffusion	sd (H ₂ O) = <0.01 m
Water Absorption Coefficient	W=0.20 kg/m ² h 0.5 (acc. to DIN EN 1504)
Lightfastness of color pigment (Fb-Code acc. to BFS technical bulletin No. 26)	A1 Best in class rating No color change after 4 years
Vapor Permeability (ASTM E96)	77 Perms
Flashpoint	Non-Flammable
Accelerated Weathering ASTM G154	2016 Hours Passes No change or deterioration of any type
Wind Driven Rain ASTM E514	Passes No water leakage
Mildew Resistance ASTM D3273/D3274	Passes—No fungal growth
Alkali Resistance ASTM D1308	Passes—no visible change at 24 hours
Chloride Ion Permeability	Permeability Class: Very Low
Surface Burning Characteristics ASTM E 84-08	Class A Flame Spread Index = 0; Smoke Developed Index = 0
Gloss at 85° ISO 2813	0.5 Mineral Matte Flat
All test results performed on 2 coats Soldalit applied at 300—350 sf/gallon	

Environmental Compliance

UL Greenguard Gold	YES
EPA	YES
LEED	YES
CARB	YES
SCAQMD	YES

Keim Mineral Coatings of America, Inc
 3935 Perimeter West Drive, Suite 100
 Charlotte, NC 28214
 Keim-usa.com
info@keim.com
 704-588-4811
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Cradle to Cradle Health	Gold
Cradle to Cradle	Silver

Colors:

Select colors that are unique formulated with IR Reflective Oxide Pigments—not all colors are available. Please allow 2 weeks for Coolit production.

BOX COLORED PAINT

To ensure consistency of color on large areas, all colored paint should be thoroughly mixed with a power drill and paddle for 1—3 minutes. Box paint together in larger containers and remix. Continue boxing and mixing for consistent color.

SPECIFICATIONS/SYSTEMS

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

Concrete and cementitious patches (all types)

Pretreat: Keim Heavy Duty Cleaner (if needed)

1 coat SOLDALIT diluted 10% with Soldalit Dilution

1 coat SOLDALIT Coolit as supplied

CMU Block

1 coat Contact Plus Grob Block Filler (as desired)

1 coat SOLDALIT diluted 10% with Soldalit Dilution

1 coat SOLDALIT Coolit as supplied

Masonry (brick and stone) and stucco

Pretreat extremely porous surfaces (if needed): Soldalit Dilution (mixed 1:3 with water)

1 coat SOLDALIT diluted 10% with Soldalit Dilution

1 coat SOLDALIT Coolit as supplied

Previously Painted Mineral Surfaces

1 coat SOLDALIT diluted 10% with Soldalit Dilution

1 coat SOLDALIT Coolit as supplied

Hard, Glossy Mineral Surfaces and Terracotta

Scuff sand or abrade glossy surfaces (if needed)

1 coat SOLDALIT diluted 10% with Soldalit Dilution

1 coat SOLDALIT Coolit as supplied
Added Water Repellency (on any mineral surface)

Pretreat: Silan 100 Silane Water Repellency applied in multiple coats as needed to saturate surface. **CRITICAL RECOAT: Apply first coat of Soldalit within 4—8 hours. DO NOT ALLOW SILAN 100 TO DRY COMPLETELY.**

1 coat SOLDALIT diluted 10% with Soldalit Dilution

1 coat SOLDALIT Coolit as supplied
Patched, Cracked and Irregular Mineral Surfaces

1 coat of SOLDALIT Sand Texture Base (Grob)*

diluted 10% with Soldalit Dilution

1 coat of SOLDALIT Coolit as supplied

*Texture base is designed to provide a more uniform final appearance by adding a slight sand texture and can help fill-in cracks and voids up to 1/16" wide and deep. It is several shades lighter than final color to allow for full coverage of finish. The maximum particle size is 0.5mm quartz granules.

SURFACE PREPARATION

The substrate must be sound, solid, dry, clean, and free of dust, grease, oils, salts, moss, algae, and other substances that would prevent penetration and bonding. Old oil-based coatings, loose substrate layers and loose latex or acrylic layers must be removed. Repair damaged areas as needed before painting. Clean mineral surfaces as needed with KEIM Heavy Duty or Light Duty Cleaner or KEIM Bio Cleaner.

Soft, porous, or friable mineral surfaces, where substrate porosity is variable or aged existing mineral coats may be stabilized and consolidated by pretreatment with

SOLDALIT Dilution. Mix 1 part Dilution with 3 parts fresh water and apply to porous surface to saturation. Allow surface to dry 12 hours before proceeding.

MIXING

All paint should be thoroughly mixed with an electric drill and paddle for 1—3 minutes to ensure a homogenous mixture. Colors should be boxed into larger containers and remixed to ensure color consistency.

APPLICATION

SOLDALIT Coolit may be applied by brush, roller, or airless spray.

- Brush - Use a nylon/polyester brush
- Roller - Use a ½" to ¾" nap synthetic roller cover
- Airless Spray
 - Pressure: 3000 psi, minimum
 - Tip: .035 in
 - Remove filters from gun and pump, use 30 mesh filter on siphon tube only

First coat

SOLDALIT may be diluted up to 10% with Soldalit Dilution depending on the substrate's absorbency. Allow it to dry 12 hours or overnight before recoating.

Topcoat

Apply SOLDALIT Coolit undiluted, as supplied. 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 95°F. Do not apply it in direct sunlight or on sun-heated substrates. Protect coated surfaces from direct sunlight, wind, and rain during and after application for a minimum of 12 hours.

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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	12 hours

Coverage

SUBSTRATE	COVERAGE*
Cast or Pre-Cast Concrete	275—325 SF/GAL
Fiber Cement Siding	275—325 SF/GAL
Brick and Masonry	225—275 SF/GAL
CMU Block (smooth)	100--150 SF/GAL
CMU Block (split faced or fluted)	50—75 SF/GAL
Portland Stucco	150—200 SF/GAL

*Stated values are based on our experience with a smooth finish. Surface texture, porosity, application conditions and type of equipment used will all vary consumption. Only a test application under production conditions will forecast consumption of the system accurately. **For Sand Texture Base, subtract 25 SF from values above.**

Cleaning

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

This product may permanently etch and irreversibly bond to mineral surfaces if it is splashed onto including concrete, masonry, glass, and metal. Clean spills, overspray, etc. immediately with soap and water.

Mixing with other products

To maintain the specific features of SOLDALIT and the related system products, they must not be mixed with other products or additives. DO NOT thin with water.

PACKAGING

Quart, Gallon and 4 Gallon

Keim Mineral Coatings of America, Inc
 3935 Perimeter West Drive, Suite 100
 Charlotte, NC 28214
 Keim-usa.com
info@keim.com
 704-588-4811
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STORAGE

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

DISPOSAL

Dispose of completely emptied containers in accordance with local, state and federal waste regulations. Any residues must be emptied out of containers before recycling.

HAZARDOUS SUBSTANCE CLASS

n/a

TRANSPORT HAZARD CLASS

n/a

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.

