



TECHNICAL DATA SHEET

KEIM CONCRETAL-PRO®

PRODUCT DESCRIPTION

CONCRETAL-PRO® is a ready-to-apply potassium silicate based coating for exterior and interior concrete surfaces.

CONCRETAL-PRO is water-repellent and contains lightfast inorganic pigments and mineral fillers. It is highly alkali and efflorescence resistant and can be applied to concrete surfaces with a pH of 6–13.

- Apply directly to fresh concrete (at least 7 days old)
- Shotcrete/Gunite surfaces may be painted after 3 days
- Can be applied over high pH (up to 13)
- No primer required—2 coat system
- Excellent, uniform final appearance

FIELD OF APPLICATION

CONCRETAL-PRO is uniquely formulated for use on new or bare, aged concrete substrates including concrete, CMU, Gunite, Shot-crete and Portland Stucco. Thanks to its outstanding product characteristics it is particularly long lasting and completely lightfast. It can also be used for interior concrete spaces onto mineral substrates, but is not suitable for gypsum or gypsum-containing substrates.

PRODUCT PROPERTIES

CONCRETAL-PRO is based on potassium silicate, or water-glass binding agent. It delivers excellent hiding, it is non-yellowing and contains only absolutely light-resistant inorganic color pigments. Plus, it protects concrete substrates from harsh weather and is available in a smooth or texture finish.

- Mineral matte, natural appearance
- Non film forming—penetrates and forms chemical bonds with concrete—won't peel or lose adhesion
- Incombustible and safe to use—Class A Building Material
- Anti-static—dirt won't cling and washes off naturally with rainfall
- Lightfast pigments—colors will not fade
- Highly weather-resistant
- Water-repellent
- Extremely vapor permeable—allows concrete to breathe naturally
- Hinders fungal and algal growth thanks to ideal moisture balance
- Environmentally friendly
- No solvents or pesticides added
- Ideal application consistency

TECHNICAL DATA

Specific Weight	1.3 - 1.5 g/cm ³
pH Value @ 20°C	11
Wind Driven Rain ASTM E 514	Passes
Water Vapor Permeability ASTM E 96	83 Perms
Accelerated Weathering Test ASTM G 154	Passes No change after 2016 hours
Alkali Resistance ASTM D1308	Passes
Mildew Resistance ASTM D3273/D3274	Passes
Chloride Ion Permeability	Permeability Class: Very Low
Thermal Expansion	Comparable to the concrete substrate
Gloss at 85°	2.0 Mineral Matte 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	< 1 g/liter
All test results performed on 2 coats Concretal-Pro applied at 300–350 SF/GAL and 14 day cure @ 77°F & 50% RH	

Color shades

White and limited colors of KEIM's Palette exclusiv color collection. Custom color matches available.

Environmental Compliance

EPA	YES
LEED	YES
CARB	YES
SCAQMD	YES



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TECHNICAL DATA SHEET – CONCRETAL-PRO® MINERAL SILICATE FINISH

SPECIFICATIONS/SYSTEMS

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

Cast or Pre-cast Bare Concrete

Pretreat: Keim Concrete Cleaner

1 coat CONCRETAL-PRO (diluted up to 20%)

1 coat CONCRETAL-PRO (full strength)

CMU Block

For new, extremely porous block:

1 coat CONTACT-PLUS Block Filler

1 coat CONCRETAL-PRO (diluted up to 20%)

1 coat CONCRETAL-PRO (full strength)

Waterproofing System

Pretreat: KEIM Silan 100 Silane Water Repellent

1 coat CONCRETAL-PRO (diluted up to 20%)

1 coat CONCRETAL-PRO (full strength)

Fiber Cement Board/Siding (bare)

1 coat CONCRETAL-PRO (diluted up to 20%)

1 coat CONCRETAL-PRO (full strength)

Gunite/Shot-Crete (bare)

1 coat CONCRETAL-PRO (diluted up to 20%)

1 coat CONCRETAL-PRO (full strength)

Previously Acrylic Painted Surfaces

1 coat CONTACT-PLUS Bonding Primer

1 coat CONCRETAL-PRO (diluted up to 20%)

1 coat CONCRETAL-PRO (full strength)

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

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 coatings which are not sound or which impair the vapor diffusion 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 for 12 hours.

New Portland Stucco:



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

New Concrete Surfaces:

Remove all release, form or curing oil residues with KEIM Concrete Cleaner, rinse and allow to dry. In some cases sandblasting 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. Clean, strong and sound concrete requires no pre-treatment.

Filling Concrete Imperfections:

Fill bug holes, air pockets, non-moving cracks, and other voids with CONCRETAL Fine Filler. Rough surfaces can be filled to provide a smooth surface. One or two base coats of CONCRETAL-PRO Texture Base Coat may be applied to level surfaces and to fill non-moving hairline cracks.

APPLICATION

CONCRETAL-PRO may be applied by brush, roller or airless spray.

- Brush - Use a nylon/polyester brush
- Roller - Use a 1/2" to 3/4" nap synthetic roller cover
- Airless Spray
 - Pressure: 3000 psi, minimum
 - Tip: .031 in, minimum

First coat

CONCRETAL-PRO may be diluted up to 20% with KEIM Concretal Dilution depending on the substrate's absorbency. Allow to dry 12 hours or overnight before recoating.

Top coat Apply CONCRETAL-PRO 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 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.

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*

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Substrate	Coverage*
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
Gunite/Shotcrete	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 fore-cast consumption of the system components accurately.

Cleaning

Clean spills, spatters, 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 CONCRETAL-PRO and the related system products, they must not be mixed with other products or additives nor must they be diluted with water.

Packaging

Quart, Gallon and 4 Gallon

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.

HAZARDOUS SUBSTANCE CLASS

n/a

LIMITATIONS

CONCRETAL-PRO 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.

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.keim-usa.com/Technical-Data-Sheets> for the latest in product technical information.



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