

Densifier (Potassium-Based) Datasheet

February 2026

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Cemcrete's **Densifier (Potassium-Based)** is a unique water-based liquid designed to strengthen and harden concrete surfaces making them more resistance to wear, chemicals and dusting.

Technical Data

Type	Potassium Silicate Densifier
Colour	Transparent
Application temperature (ambient)	10°C to 30°C
Substrate temperature	5°C to 30°C
pH scale	Alkaline
UV resistance	Unaffected by UV
Protection during application	Use sun and wind barriers
Safety	Refer to MSDS

Purpose

Cemcrete's **Densifier** chemically reacts with concrete substrates to strengthen and harden the surface by increasing the surface density, thereby improving abrasion resistance, minimizing dusting and extending the service life of concrete without forming a surface film or altering the natural appearance.

Benefits

- Water-based and non-flammable
- Low VOC
- Ideal for all ordinary portland cement-based concrete and coatings
- Strengthens and increases the life of concrete surfaces
- Non-film forming
- Suitable for interior and exterior applications
- Ready to use from the container

Uses

- Strengthening and hardening interior and exterior concrete floors, exposed aggregate and terrazzo.
- Reducing concrete dusting and improving abrasion resistance in high-traffic areas.
- As part of polished concrete systems to improve surface integrity during mechanical grinding and polishing.
- Enhancing durability of concrete in commercial, retail, warehouse, light industrial, residential and institutional projects.
- Pre-treatment before sealing or coating to improve adhesion and long-term performance.

Note: **Densifier** is not a topical sealer; it penetrates and reacts within the concrete rather than creating a surface film.

Specifying

Apply **Densifier** to clean, dry and properly prepared concrete surfaces free of curing compounds, sealers, laitance, oils or contaminants (maximum moisture content: <5%, humidity-dependent). Apply evenly using a low-pressure spray, soft broom or microfibre mop, ensuring full surface saturation without pooling. Allow the product to penetrate for approximately 20 minutes, working it into the surface as required. Remove any excess material before it dries to avoid residue. Allow to cure overnight before opening to traffic or proceeding with further treatments or polishing. Full densification develops over time as the product reacts within the concrete.

Cemcrete provides a comprehensive technical service based on over 4 decades of experience in the field of surface applications and cement technology. Cemcrete believes, to the best of its knowledge, that the information contained herein is true and accurate at the date of issuance and is subject to change without prior notice. For further clarification of these instructions, contact Cemcrete.

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Limitations

- Do not use on latex or epoxy polymer modified concrete.
- Will not work on non-OPC (ordinary portland cement) based concrete or coatings.
- Product is not suitable for use on surfaces previously treated with waxes, resins, curing compounds or chemicals that may neutralize the product or prevent penetration.
- **Densifier** is highly alkaline; users should protect all glass and aluminium surfaces from exposure. If exposure occurs, immediately flush with water. Failure to do so may result in permanent surface discolouration.
- Application over acid stained concrete requires the surface be neutralized, thoroughly rinsed and allowed to adequately dry prior to application.
- Application to water saturated concrete floor surfaces or during periods of high humidity may prolong the dry time and susceptibility to water staining.
- **Densifier** can etch glass if the glass is not properly protected, or if the **Densifier** is not correctly removed during cleaning operations.
- Do not apply on frozen substrates or when temperatures are near freezing.
- Do not apply if rain might occur during the 24 hours following application.

Floors treated with **Densifier** remain porous and should not be cleaned or exposed to cleaning chemicals containing ammonia or acid or any substance that may harm the surface. **Densifier** is not a film forming product and cannot be used as a curing compound. Even though **Densifier** reduces water penetration it does not offer water or oil repellency. Spills should be cleaned up promptly.

NB NOTE: The **Densifier** is a low viscosity (water-like) substance and must be spread rapidly and with care to avoid pooling which can result in unwanted marks.

Suitable Surfaces

Cemcrete's **Densifier** is suitable for cement-based finishes such as concrete floors, exposed aggregate finishes, terrazzo, polished concrete and Cemcrete's Countertop Mix. Where floors are over three years old, the surface should be diamond ground to remove carbonation and expose the unreacted free lime, before the application of the **Densifier**. New concrete surfaces should be dry, clean and at least 7 days old. Not recommended for application to wet concrete. For use with other Cemcrete coatings please contact our technical consultants for more information.

Weather

- Do not apply if temperatures are below 10°C or exceeds 30°C.
- Do not apply to exterior surfaces if any form of precipitation (including rain, dew, snow, or condensation, etc) is expected within 12 hours of application.

Surface Preparation

A concrete moisture test should be carried out prior to application. The moisture content should be less than 5%. Penetration of the **Densifier** into the surface is critical to product performance. Do not apply in direct sunlight. Best results are obtained when **Densifier** is applied in the shade or at oblique sun angles (early morning or early evening). Protect all surrounding areas (especially glass and metal) from exposure by using plastic sheeting or other suitable protection.

Surface to be treated **MUST** be clean and free of all traces of loose material, dirt, mildew, oil, grease, old coatings, curing compounds, releases agents, laitence, dust and other contaminants.

When polishing, all new and old concrete surfaces should be prepared by mechanical grinding. Check if all traces of oil and other contaminants have been completely removed. Sprinkle a few drops of water over the surface, if all water is quickly absorbed, the surface is sufficiently oil and grease free. If water beads on the surface, even in certain areas only, further preparation / grinding must be carried out.

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Masking

For best results, all windows, doors and adjacent surfaces (especially glass or aluminium), should be masked using painter's tape and brown paper to prevent soiling these surfaces during application. All masking material must be removed at the end of the day to avoid fraying the edges of the application, and to prevent plasticizer migration or sticky residue from the tape. Care should be taken when removing the tape to ensure no product is pulled away with it.

Mixing

Shake or roll drum to thoroughly mix contents before opening.

Application

Apply **Densifier** using a quality pump up sprayer or by hand with a mop. Follow up with a mop or push broom and work into the surface. Allow 10 minutes for product to penetrate and react. Do not allow the product to pool and dry on the surface as it may leave unwanted marks that can only be removed by diamond grinding.

Application to Cemcrete's Terrazzo

Apply **Densifier** to a dry surface after the pinhole repair and 100 grit polish stages are complete, using a quality low pressure sprayer or by hand with a roller or microfibre mop. Keep the surface wet for 15 to 20 minutes for the product to penetrate and react. If the surface dries out before this time, apply more **Densifier**. After 20 minutes mop up the excess **Densifier** and immediately rinse the surface with a damp mop to remove residual **Densifier**. Allow to dry overnight. Proceed with the 200 grit stage. Check the moisture content with a moisture meter prior to sealing. Moisture must be 5% or less (depending on the surrounding humidity) prior to sealing.

Note: The application of Cemcrete's **Densifier** during the diamond polishing process will improve durability and finish.

Application to Cemcrete's Countertop Mix

Apply **Densifier** to a dry surface after the pinhole repair and 100 grit polish stages are complete, using a quality low pressure sprayer or by hand with a roller or microfibre mop. Keep the surface wet for 15 to 20 minutes for the product to penetrate and react. If the surface dries out before this time, apply more **Densifier**. After 20 minutes mop up the excess **Densifier** and immediately rinse the surface with a damp mop to remove residual **Densifier**. Allow to dry overnight. Proceed with the 200 grit stage. Check moisture content with a moisture meter prior to sealing. Moisture must be 5% or less (depending on the surrounding humidity) prior to sealing.

Note: The application of Cemcrete's **Densifier** during the diamond polishing process will improve durability and finish.

Application to Cemcrete's Exposed Aggregate

For application onto Cemcrete's Exposed Aggregate, apply **Densifier** 7 days after the Exposed Aggregate application. Spray the **Densifier** to a point of saturation; do not allow to dry. Keep the surface wet for 15 to 20 minutes for the product to penetrate and react. If the surface dries out before this time, apply more **Densifier**. After 20 minutes rinse away the excess **Densifier**. Check the moisture content with a moisture meter prior to sealing. Moisture must be 5% or less (depending on the surrounding humidity) prior to sealing.

Curing

Initial set takes approximately 20 minutes after application. Final cure is achieved overnight. Avoid foot or equipment traffic until the surface is fully cured and dry.

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Specimen Finish

Before application and polishing, a mock up area is necessary to ensure the final product conforms to the specifications including appearance, slip resistance and overall performance. This mock-up area must be of adequate size to be representative, must be done on the same floor, by the same contractor and using the same equipment that will be used to complete the project.

Coverage

The coverage rate of **Densifier** will greatly depend on the porosity of the concrete and the diamond grinding stage at which it is applied. Average coverage is 10m²/1L.

Maintenance

Make sure to use a pH neutral cleaner and use the appropriate scrubbing pads so the surface is not damaged.

Cleaning

Clean all application equipment with lacquer thinners or solvent based cleaners.

Packaging

Available in 1L & 5L drums. 20L container available on request only.

Storage

Cemcrete's **Densifier** can be stored under dry conditions on pallets and unopened for a period of 9 months after date of invoice. Protect from freezing. Product which is suspected of freezing should not be used.

Safety

Eye, skin and digestive tract irritant. Use only with adequate ventilation. Do not take internally. Keep out of the reach of children. Contains silicic acid and potassium. It is recommended that one wears suitable eye, skin and hair protection during and after application. If **Densifier** comes into contact with skin or hair remove your clothing and shower with clean water. If it comes into contact with one's eyes rinse with plenty clean water and then seek medical attention.

Manufacturer's Warranty

Cemcrete warrants that the products manufactured by it shall be free from material defects and will be consistent with its normal high quality. Should any of the products be proven defective, the liability to Cemcrete shall be limited to replacement of the product ex-factory. Cemcrete makes no warranty as to merchantability or fitness for a particular purpose and this warranty is in lieu of all other warranties expressed or implied. The user shall determine the suitability of the product for his intended use and assume all risks and liability in connection therewith.

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