

Densifier - Potassium-based Datasheet

July 2021

Page 1 of 3

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

Suitable Surfaces

Cemcrete's **Densifier - Potassium-based** suitable for concrete surfaces, 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 unreacted free lime before application of **Densifier - Potassium-based**. New concrete surfaces should be dry, clean and at least 7 days old. Not recommended for application to wet concrete.

Advantages

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

Limitations

Floors treated with **Densifier - Potassium-based** 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 - Potassium-based** is not a film forming product and cannot be used as a curing compound. Even though **Densifier - Potassium-based** reduces water penetration it does not offer water or oil repellence. Spills should be cleaned up promptly.

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

Sample Area

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 on the rest of the job.

Mixing

Shake or roll drum to thoroughly mix contents before opening.

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.

Densifier - Potassium-based Datasheet

July 2021

Page 2 of 3

Precautions

- Do not use on latex or epoxy polymer modified concrete.
- 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 - Potassium-based** 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.
- Can etch glass if not properly protected or if not properly removed during cleaning operations.
- Do not apply in conditions above 30°C or below 10°C.
- Do not apply on frozen substrates or when temperatures are near freezing
- Do not apply if rain might occur during the next 24 hours

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 - Potassium-based** 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 any 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.

Application

Apply **Potassium 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 Terrazzo, Exposed Aggregate & Countertop Mix

Apply **Densifier - Potassium-based** twice to a dry surface after the 200 and 400 grit stages using a quality low pressure sprayer or by hand with a roller or microfiber 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 - Potassium-based**. After 20 minutes mop up the excess **Densifier - Potassium-based** and allow to dry overnight. Then proceed with the respective polishing grits right up to 800 grit (floors) or 3000 grit (countertops) as required.

When dry, buff with a 430mm diamond impregnated (brown no. 3) polishing pad.

Polish the substrate with a polish which incorporates bee or Carnauba wax. Then buff the substrate using the white buffing pad.

For Application of Cemcrete's Exposed Aggregate, apply the densifier after 7 days from application. Spray the densifier to a point of saturation but don't allow to pool. If there is pooling remove excess with a sponge. Allow to dry to a 5% moisture level, then seal.

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

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.

Densifier - Potassium-based Datasheet

July 2021

Page 3 of 3

Coverage

The coverage rate of **Densifier - Potassium-based** 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

Surfaces treated with **Densifier - Potassium-based** require very little maintenance. Make sure to use a pH neutral cleaner and use the appropriate scrubbing pads so the surface is not damaged.

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 - Potassium-based** 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.

Storage

Cemcrete's **Densifier - Potassium-based** 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.

Packaging

Available in 1L & 5L drums. 25L package available on request only.

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.

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.

Johannesburg Head Office

8 Telford Street
Industria
011 474 2415

Johannesburg Showroom

227 Jan Smuts Avenue
Parktown North
011 447 3149

Centurion Showroom & Warehouse

15 Coachmen's Park
26 Jakaranda Street, Centurion
012 653 6808

Cape Town Showroom & Warehouse

Eagle Park, cnr Bosmansdam &
Omuramba Roads, Montague Gardens
021 555 1034