

Technical Data Sheet

COOL BARRIER GRIP LTH



Concrete Sealer Densifiers

COOL BARRIER GRIP LTH concrete densifiers are specially formulated penetrating concrete sealers containing active lithium silicates. Typical applications include treating polished concrete floors in residential housing constructions, retail establishments, shopping center and manufacturing warehouses. They are also suitable for dust-proof or water-proof sealing of concrete masonry if applied appropriately.

Advantages

- Lithium silicates allow quick application with low risk of unwanted residues
- Accelerate the concrete polishing process therefore saving time and costs
- Penetrate into concrete and offers durable protection
- Maintain appearance and slip resistance of the original concrete finish
- Reduce water absorption and water-borne staining
- Environmentally friendly formulation
- Easy to use

The concrete sealers penetrate into the concrete surface and block the pores or capillaries by formation of calcium silicate hydrate. This calcium silicate hydrate binds within the concrete matrix and hardens the concrete surface resulting in hard, dense, dust free and traffic resistant surface finish. Smooth or gloss finishes can be easily achieved by surface polishing.

Due to the high activity of lithium silicates, COOL BARRIER GRIP LTH accelerate the concrete polishing process, thus saving time and costs. Unlike traditional sodium silicates, the CBG LTH sealers unlikely leave residues such as white effloresce salts or other unwanted residue discolorations on the treated surface.

Use Instructions: Surface Preparation

- Prior to application, the concrete surface should be completely cleaned of any surface contaminants that would impede the penetration of COOL BARRIER GRIP LTH and allowed to dry before application.
- Newly casted concrete should be allowed to cure and dry for 28 days. Curing compounds, release agents, or coatings/membranes should be removed from the surface, cleaned and allowed to dry before applying COOL BARRIER GRIP LTH. In case of acid treated concrete, the concrete surface should be completely neutralized and thoroughly rinsed with water, and allowed to dry before application.
- For polished concrete, the surface is firstly removed by grinding to a minimum 200 grit or desired surface finish to expose the aggregate before applying COOL BARRIER GRIP LTH. This will ensure maximum absorption of the sealers and make it easy to further polish to finer grades due to the densification achieved by COOL BARRIER GRIP LTH.

Application

The sealers can be applied with a low pressure hand sprayer, mop or soft bristle brush/broom. Application rate varies depending on porosity of the concrete and climatic conditions. Dense or steel trowelled newly casted concrete may have a low absorption rate, while old porous concrete may absorb significantly more densifier sealer.

The COOL BARRIER GRIP LTH should be evenly flooded onto the surface. Puddling should be avoided. Ensure the sealer is present on the surface as a mirror-like wet liquid film for 20 minutes to ensure maximum absorption. Re-apply wet-on-wet if necessary. Avoid applying the sealers if the surface starts to dry. Brush out any puddles of excess material after 20 minutes. This excess sealer, if not removed, may dry and cause unwanted residue on the surface. This residue may only be removed by using a stiff bristle brush or mechanic scrubbing once the surface has cured and dried. In case of water-proofing application, above application may be repeated several times to ensure fully blocking the pores/capillaries. Shake or stir the sealer before use.

- Minimum waiting time for the product to penetrate: 30 min
- Loss of material with Taber abrasion test ISO 5940 (mg): 35
- Capillary absorption EN 13057 ($\text{kg/m}^2 \cdot \text{h}^{0.5}$): 1.3

Polishing

The area may be polished once the surface has cured and dried. For an additional water and/or stain resistant treatment, the application of COOL BARRIER GRIP hydrophobic and oleophobic agents is highly recommended.

Consumption Rate

The consumption of COOL BARRIER GRIP LTH varies depending on the permeability of the concrete and climatic conditions. The consumption rate may vary 0.2-0.4 kg/m^2 according to the level of porosity of the concrete.

After Application

Curing starts immediately. Extensive cure may take 24 hours. Full curing may take 7 days or more. Avoid heavy traffic for the initial 24 hours. Wash all equipment in water.

Important Note: COOL BARRIER GRIP LTH penetrates and blocks the concrete pores or capillaries, and hardens the surface. However, the degree of pore blocking and surface hardening depends on many factors which are out of the manufacturer's control.

It is highly recommended that pilot testing in small areas on site be conducted by the applicator prior to application to determine the suitability of this product for the purpose.

Handling & Storage

COOL BARRIER GRIP LTH is an alkaline solution. Skin or eye contact should be avoided by wearing proper protection. The risk of vapour inhalation of this product is low, however, an air-purifying respirator should be worn if there is a risk of exposure to high vapour concentrations. Wash hands after handling. The product should be stored in closed containers in a cool dry place away from any fire and ignition sources. The sealer is best used within 6 months; however, the product has a shelf life of 12 months in the sealed original container under 25°C. The product should be used as soon as possible after the original container is opened.

**Keep this product away from aluminium surfaces.
Keep out of reach of children.**

Packaging

COOL BARRIER GRIP LTH is available in 20, 200 or 1,000 litre plastic containers.

Specifications

COOL BARRIER GRIP LTH

Clear, odourless, low viscose solution of lithium and potassium silicate and in water

Physical properties:

		611	601	
Density	=	29.0	44,5	[Baumé; 20°C]
	=	1.2500	1.4428	[g/cm ³ ; 20°C]
Viscosity*	=	100	200	[mPa*s]

* DIN-53019; Rheomat RM 180, MS 11, 258 s-1, 20 °C

Chemical properties:

		611	601	
Silicate content	=	27.5 %	42.5 %	
there of		< 0.5 %	< 0.5 %	Sodium silicate
		< 0.5 %	33.0 %	Potassium silicate
		27.5 %	9.5 %	Lithium
		< 0.1 %	< 0.1 %	Trace metals
Additives	=	0 %	0 %	
pH-value	=	11 - 13	11 - 13	

Classification:

SDR No.	Customs tariff No.	CAS No.
-	2839.9090	12627-14-4

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials in order to provide for local processing conditions over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose.

The management system has been certified according to EN ISO 9001

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