

PRODUCT DATA SHEET

Sikafloor® CureHard LI

Lithium silicate liquid hardener and densifier

DESCRIPTION

Sikafloor® CureHard LI is a water-based lithium silicate blend for hardening and densifying of fresh and hardened power trowelled or polished concrete surfaces. It is less prone to the formation of persistent efflorescence in cases of over dosage compared to similar products based on sodium or potassium silicate. It improves surface performance and resists the harmful effects of traffic wear and weathering.

Once applied to a concrete surface Sikafloor® CureHard LI penetrates the concrete texture and is initiating a chemical reaction and subsequent crystallization of reaction products which result in filling of the concrete surface pores.

USES

Sikafloor® CureHard LI may only be used by experienced professionals.

- Horizontal old or new concrete surfaces, where a hard surface with light to moderate abrasion resistance is required.
- Suitable for interior or exterior applications
- Dust-proofing of prefabricated concrete elements.
- The Product may only be used by experienced professionals.

The product is used for:

- Warehouses
- Industrial buildings
- Storage areas
- Retail areas
- Car park decks
- Service facilities
- Aircraft hangars

CHARACTERISTICS / ADVANTAGES

- Improves performance, dust reduction and abrasion resistance of new or old concrete.
- Sealing and impregnation of concrete surface.
- Easy, one step application. No scrubbing. No flushing.
- Reduced appearance of efflorescence, compared to crystalline sodium or potassium based hardeners.
- No enhancement effect on the floor colour.
- Gives the concrete surface silk gloss appearance.
- High gloss of the surface after each regular cleaning.
- Breathable and UV stable. Will not yellow, discolour, peel or flake.

APPROVALS / STANDARDS

- CE marking and declaration of performance based on EN 1504-2:2004 Products and systems for the protection and repair of concrete structures — Surface protection systems for concrete — Impregnation

PRODUCT INFORMATION

Product Declaration	EN 1504- 2 : Suitable for protection against ingress (Principle 1, method 1.2 of EN 1504-9) : Suitable for physical resistance (Principle 5, method 5.2 of EN 1504-9).
Chemical Base	Lithium silicate
Packaging	25 L container, 200 L drum
Shelf Life	12 months from date of production

Storage Conditions	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to packaging. Refer to current Safety Data Sheet for information on safe handling and storage.	
Appearance / Colour	Clear liquid	
Density	(1160 ± 58) kg/m ³	(EN ISO 2811-1)
Solid content by weight	(14.5 ± 1.5) %	(EN ISO 2811-1)

TECHNICAL INFORMATION

Abrasion Resistance	290 mg (H22 / 1000 g / 1000 cycles) 78 % increase in abrasion resistance compared to untreated sample. (C(0,70) concrete according to EN 1766)	(EN ISO 5470-1)
Resistance to Impact	60 Nm (class III: ≥ 20 Nm) sample MC(0,40 concrete according to EN 1766)	(EN ISO 6272-1)
Tensile Adhesion Strength	4.4 N/mm ² sample C(0,70 concrete according to EN 1766)	(EN 1542)
Penetration Depth	6 mm sample C(0,70 concrete according to EN 1766)	(EN 1504-2)
Water Absorption	w = 0.03 kg·m ⁻² ·h ^{-0.5} (on a substrate w > 1 kg·m ⁻² ·h ^{-0.5})	(EN 1062-3)

SYSTEM INFORMATION

System Structure	Hardener / densifier 1–2 coats
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APPLICATION INFORMATION

Consumption	~0.05–0.10 L/m ² (~10–20 m ² /L) on power trowelled concrete Consumption data is theoretical and does not allow for any additional material due to surface porosity, surface profile, variations in level, wastage or any other variations. Apply product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application equipment.					
Ambient Air Temperature	<p>Hot weather conditions In hot weather (above +25 °C) store the Product in a cool place prior to use.</p> <p>Cold weather conditions In low temperatures (below +10 °C) the Product may thicken and be difficult to spray.</p> <table border="1"> <tr> <td>Maximum</td> <td>+40 °C</td> </tr> <tr> <td>Minimum</td> <td>+2 °C</td> </tr> </table>		Maximum	+40 °C	Minimum	+2 °C
Maximum	+40 °C					
Minimum	+2 °C					
Relative Air Humidity	< 100 %					
Substrate Temperature	<table border="1"> <tr> <td>Maximum</td> <td>+35 °C</td> </tr> <tr> <td>Minimum</td> <td>+5 °C</td> </tr> </table>		Maximum	+35 °C	Minimum	+5 °C
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Substrate Moisture Content	May be applied on fresh concrete after power troweling, optically matt dry surface. The Product can also be applied to fully cured and set concrete with a matt dry surface, no standing water or puddles.					

Waiting Time / Overcoating

Where two applications are required to ensure maximum densification the second application should be installed after the first one is dry. Allow previous application surface to become dry and tack free before applying additional application.

Temperature	Waiting time
+25 °C	~ 1.5 hours
+20 °C	~ 2 hours
+10 °C	~ 3 hours
+5 °C	~ 3.5 hours

Times are approximate and will be affected by changing ambient conditions, particularly temperature and relative humidity.

Drying Time	Touch-dry, at 20 °C	2 hours
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Applied Product Ready for Use	Temperature	Fully serviceable	Full sealing and hardening effect
	+30 °C	~2 hours	
	+20 °C	~3 hours	~7 days
	+10 °C	~4.5 hours	

Times are approximate and will be affected by changing ambient conditions, particularly temperature and relative humidity.

BASIS OF PRODUCT DATA

All technical data in this document are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LIMITATIONS

- Sikafloor® CureHard LI must be treated mechanically (from light to heavy shot blasting depending on the depth of the penetration) prior to the application of a coating system.
- Immediately wash over-spray from glass, aluminium or highly polished surfaces with water to avoid etching of surfaces.
- Performance enhancement of the substrates can vary greatly depending on the age, cement content, humidity content, porosity and penetration of the product into the substrate.
- Sikafloor® CureHard LI will increase abrasion resistance compared to untreated concrete of the same type, however Sikafloor® CureHard LI cannot compensate performance of a poor substrate made with low cement content. It is not recommended to apply on substrates which are lightweight, extremely porous or have worn (aggregate exposed) surfaces.
- Sikafloor® CureHard LI will not hide serious staining or excessive wear.

ECOLOGY HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

IMPORTANT

Existing membranes

Do not use on substrates treated previously with curing agents, membrane forming sealers or asphalt until these layers have been completely removed.

Apply the Product on a small area of each surface to confirm suitability, coverage rate and desired results before beginning the full application. Test with the same equipment, surface preparation and application procedures planned for general application.

EXISTING, CURED CONCRETE

Surfaces must be sound, open textured, clean, free from frost, laitance, surface water, oils, grease, coatings, all loosely adhering particles and other surface contaminants. Any residue of curing agents must be completely removed from all surfaces before application of the Product. If in doubt apply a test area first.

NEW CONCRETE

Allow new concrete to cure for a minimum of 72 hours. For the best results with new concrete floors wait for 7 days after placement or until after cement has sufficiently hydrated prior to treatment with the Product. After the curing period has elapsed, treat new concrete surfaces as described for Existing, Cured Concrete.

FRESHLY PLACED, UNCURED STEEL-TROWELLED CONCRETE

Surface must be matt dry and of sufficient strength to withstand finishing operations. Clean concrete of any dirt, residue or debris.

SUBSTRATE PREPARATION

FRESH CONCRETE:

The concrete must be prepared by power or manual floating/tamping techniques.

HARDENED / OLD CONCRETE:

The substrate must be prepared by high pressure water cleaning or by ride-on cleaning machines. Allow to dry.

Note: All dust, dirt, loose and friable material must be completely removed from all surfaces before application of the Product by brush or vacuum.

APPLICATION

IMPORTANT

Do not mix with other curing products

Do not mix various formulations of Sika® or other curing membranes. Do not use sprayers which have previously been used to spray silicones or release agents. Ensure spraying equipment is cleaned thoroughly before use and residues of previous membranes are removed.

Maintain a continuous film

When applying, do not leave dry spots in order to achieve homogenous performance. Touch up where necessary.

EXISTING, CURED CONCRETE AND NEW CONCRETE

1. Using a low pressure sprayer, apply a single application sufficient to wet the surface without producing puddles. Avoid over application.
2. Use a clean microfiber pad to spread the product evenly and ensure uniform wetting. Note: Avoid spreading once drying begins.
3. **(Optional)** Alternatively use a cleaning machine with soft pads to apply the Product.
4. Scrubbing is not necessary. If surfaces dry immediately apply more product. Surface should remain wet for 5–10 minutes.
5. Allow treated surfaces to dry.
6. Remove dried powder residue using stiff broom, power sweeper or floor scrubbing machine.
7. For strongly absorbent floors a second application is required.
8. For immediate, enhanced shine, buff or burnish the dry concrete surface in perpendicular directions by using burnisher equipped with an appropriate polishing pad. This is a dry operation.

FRESHLY PLACED, UNCURED STEEL-TROWELLED CONCRETE

1. Using a low pressure sprayer, apply a single application sufficient to wet the surface without producing puddles. Avoid over application.
2. Use a clean microfiber pad to spread the product evenly and ensure uniform wetting. Note: Avoid spreading once drying begins.
3. Scrubbing is not necessary. If surfaces dry immedi-

ately apply more product. Surface should remain wet for 5–10 minutes.

4. Allow treated surfaces to dry.
5. Immediately initiate the specified curing procedure.
6. When curing is complete, use an automatic floor scrubber equipped with cleaning pads or brushes appropriate for removal of accumulated debris and surface residues. Note: Avoid pads or brushes which may damage the finished floor.

CLEANING OF TOOLS

Clean all tools and application equipment with water immediately after use. Hardened material can only be removed mechanically.

MAINTENANCE

CLEANING

To maintain the appearance of the floor after application, the Product must have all spillages removed immediately and must be regularly cleaned using rotary brushes, mechanical scrubbers, scrubber dryers, high pressure washers, wash and vacuum techniques, etc., using suitable detergents and waxes.

The frequency and intensity of the wet cleaning will directly influence the how soon and how deep the glossy anti-dust surface develops.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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