

PRODUCT DATA SHEET

Sikafloor® CureHard-24

SODIUM SILICATE / WATER BASED TRANSPARENT SURFACE HARDENER, DUST PROOFER, DENSIFIER AND IMPREGNATING SEALER FOR CONCRETE

DESCRIPTION

Sikafloor® CureHard-24 is a one part, clear sodium silicate based liquid to harden and provide an impregnating seal fresh or hardened concrete.

USES

Sikafloor® CureHard-24 suitably experienced and trained specialist contractors.

- Horizontal old or new concrete surfaces, where a hard surface with light to moderate abrasion resistance is required e.g. warehouses, industrial plants, stores, shopping malls, parking structures, service stations, hangars etc.
- as an impregnating sealer on concrete slabs where no specific curing efficiency or standards are required
- Suitable for interior or exterior applications as an impregnating sealer.
- As a desifter in the process of grinding and polishing concrete.
- Dust-proofing of prefabricated concrete elements.
- 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)

CHARACTERISTICS / ADVANTAGES

- Ready to use
- Easy to apply
- Improved chemical and abrasion resistance compared to untreated concrete
- Reduced dusting of concrete floors
- Very low VOC
- Non-yellowing
- Good penetration - designed to penetrate, not provide a surface seal
- Solvent free
- Colourless and odourless

APPROVALS / CERTIFICATES

Impregnation for surface protection of concrete according to EN 1504-2:2004, ingress protection and physical resistance, Declaration of Performance 02 08 03 04 004 0 000001 1180, certified by notified factory production control certification body 1020, certificate of conformity of the factory production control 020025682, and provided with the CE marking.

PRODUCT INFORMATION

Composition	Sodium silicate water dilution
Packaging	5L,20 L poly cube - 200 L drum
Appearance / Colour	Clear liquid
Shelf life	24 months from date of production
Storage conditions	The product must be stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5 °C and +30 °C. Protect from frost.
Density	~1.2 kg/l (at +20 °C)

Solid content by weight ~24 %

TECHNICAL INFORMATION

Abrasion Resistance	50 mg or 81.5 % increase in abrasion resistance compared to untreated sample (C(0,70) concrete according to EN 1766) (Taber Abraser, H-22 Wheel, 1000 g / 1000 cycles)	(EN 5740-1)
Resistance to Impact	60 Nm (class III: ≥ 20 Nm) Sample (MC(0,40) concrete according to EN 1766)	(EN 6272-1)
Tensile Adhesion Strength	4.8 N/mm ² Sample (MC(0,70) concrete according to EN 1766)	(EN 1542)
Penetration Depth	5.5 mm Sample (MC(0,70) concrete according to EN 1766)	(EN 1504-2)
Water Absorption	$w = 0.03 \text{ kg/m}^2 \times h^{0.5}$ (on a substrate $w > 1 \text{ kg/m}^2 \text{ h}^{0.5}$)	(EN 1062-3)

SYSTEMS

System Structure	General sealer: 1–2 coats Hardener / Sealer: 1–2 coats
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APPLICATION INFORMATION

Consumption	Approx 0.15–0.25 l/m ² /coat (4–7 m ² /l/coat). as a densifier Approx 8–10m ² as a general sealer/impregnator This figure is theoretical and does not include for any additional material required due to surface porosity, surface profile, variations in level and wastage etc.										
Ambient Air Temperature	+5 °C min. / +35 °C max.										
Relative Air Humidity	100 % max.										
Substrate Temperature	+5 °C min. / +35°C max.										
Substrate Moisture Content	Can be applied on a surface dry substrate.										
Waiting Time / Overcoating	Where 2 coats are required, to ensure maximum densification, the second coat can be installed 2–4 hours following the first. Allow previous coats to become tack free before applying additional coats. <table><thead><tr><th>Temperature</th><th>Time</th></tr></thead><tbody><tr><td>+5 °C</td><td>~ 3.5 hours</td></tr><tr><td>+10 °C</td><td>~ 3 hours</td></tr><tr><td>+20 °C</td><td>~ 2 hours</td></tr><tr><td>+25 °C</td><td>~ 1.5 hours</td></tr></tbody></table> Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity	Temperature	Time	+5 °C	~ 3.5 hours	+10 °C	~ 3 hours	+20 °C	~ 2 hours	+25 °C	~ 1.5 hours
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Drying time	The surface is touch-dry after 2 hours at +20 °C. Maximum sealing and hardening effect achieved after ~7 days at +20 °C.										
Applied Product Ready for Use	<table><thead><tr><th>Substrate temperature</th><th>Fully serviceable</th></tr></thead><tbody><tr><td>+10°C</td><td>~ 6 hours</td></tr><tr><td>+20°C</td><td>~ 5 hours</td></tr><tr><td>+30°C</td><td>~ 4 hours</td></tr></tbody></table>	Substrate temperature	Fully serviceable	+10°C	~ 6 hours	+20°C	~ 5 hours	+30°C	~ 4 hours		
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Note: Times are approximate and will be affected by changing ambient and substrate conditions.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

Hardened / old 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.

If in doubt apply a test area first.

Note that Sikafloor® CureHard-24 used as a general sealer will not penetrate burnished or fully polished concrete and is not suitable for this application.

For best results with new concrete floors wait for 7–14 days after placement or until after cement has sufficiently hydrated prior to treatment with Sikafloor® CureHard-24.

SUBSTRATE PREPARATION

Hardened / old concrete

The substrate must be prepared by suitable cleaning method such as high pressure water cleaning or by ride-on cleaning machines. Allow drying prior to application. All dust, dirt, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush and / or vacuum.

APPLICATION

Hardened Concrete Full hardening - densifying process

Apply in a continuous film using a high volume low pressure spray unit.

To ensure maximum penetration, scrub material into the surface with a soft bristle broom or floor-scrubbing machine (min. 30 minutes), until the material begins to gel and becomes slippery. Wet the material slightly with a water spray and rework it into the surface for another 10 to 20 minutes. After this process, rinse the floor and remove any excess material using a squeegee, wet vacuum or mop.

On porous, rough-textured or broom-finished surfaces, a second coat may be required.

For large surfaces and higher placing rates, mechanical equipment such as ride-on cleaning machines can be also used to place, brush in and remove the excess material from the surface.

Thanks to proceeding chemical reaction the rate of water-tightness increases gradually, whereas maximum sealing and hardening effect occurs earliest after 7 days. Gloss of the surface gradually increases during 30 to 90 days depending upon cleaning frequency.

As a densifier in grind/polish system

Apply Product by spray or squeegee to the surface at the 80 grit stage of grinding. Two applications are recommended. If product is applied at the polishing stage uneven colour may result. Do not use Sikafloor® CureHard-24 as a final sealer on polished, finished floors as a sealer - it will not penetrate and will result

in an unsatisfactory outcome that will have to be stripped off.

As a general sealer

Apply with manual spray equipment or roller at a rate of approx 8-10m² per litre depending on the porosity of the substrate. Apply evenly without any excess product or pooling on the surface. Two coats recommended. Do not allow excess product to remain on the surface - whitening or stickiness of the excess product may occur and leave discolouration. Do not apply as a general sealer on fully burnished/closed/dense concrete surfaces as it will be unable to penetrate.

CLEANING OF EQUIPMENT

Clean all tools and application equipment with water immediately after use.

Hardened / cured material can only be mechanically removed.

MAINTENANCE

To maintain the appearance of the floor after application, Sikafloor® CureHard-24 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.

IMPORTANT CONSIDERATIONS

- Do not use sprayers which have previously been used for spraying silicones or release agents (oils).
- In hot weather (above +25 °C) store Sikafloor® CureHard-24 in a cool place prior to use.
- At low temperatures (below +10 °C) the product may thicken and be difficult to spray.
- Do not mix different formulations of Sika® or other curing membranes.
- Ensure spraying equipment is cleaned thoroughly prior to use and any residues of previous membranes are removed.
- Sikafloor® CureHard-24 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.
- Do not use on substrates treated previously with curing agents, membrane forming sealers or asphalt until these layers have been removed completely.
- Gelification time may be increased at low temperatures (below +10 °C), high humidity (from 80 % to 100 %) or wind free conditions.
- In hot weather conditions (above +25 °C), gelling may occur before material has penetrated sufficiently. In such case, apply additional Sikafloor® CureHard-24 to keep the surface wet for the recommended 30 minutes.

- When applying, leave no dry spots in order to have homogenous performance. Touch up where necessary.
- For both old and new concrete, thoroughly wash and remove residue or excess material. This is important as it is difficult to do so if allowed to dry and may result in unsightly white stains or stickiness and discoloration. This residue solution is non-toxic and can be emptied into a sanitary sewer.
- As a **general sealer**, Sikafloor® CureHard-24 application is designed to fully penetrate and impregnate - ensure no excess product remains on the surface post application - A trial area is recommended to ensure ability to penetrate the concrete surface.
- Performance enhancement of the substrates will vary greatly depending on the age, cement content, humidity content, porosity and penetration of the product into the substrate.
- Sikafloor® CureHard-24 will not compensate for poor substrates with low cement content. It is not intended for substrates which are lightweight or extremely porous or have worn (aggregate exposed) surfaces.
- Sikafloor® CureHard-24 will not hide serious staining or excessive wear.

BASIS OF PRODUCT DATA

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

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

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.

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.

Sika Australia Pty Limited

ABN 12 001 342 329

aus.sika.com

Tel: 1300 22 33 48



Product Data Sheet

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