

Product overview

Product description

ALKA Lithium Densifier is a water-based lithium silicate concentrate for suitable concrete. The penetrating treatment supports surface hardening and dust reduction within a polishing or finishing process. It works within the concrete surface rather than creating the standalone film of a resin coating.

Key advantages

- Penetrating treatment supports a harder, less dusty concrete surface.
- Can be integrated into an approved concrete polishing sequence.
- Does not rely on a separate decorative coating film.
- Concentrated supply permits the specified dilution for the application.

Recommended uses

- Densification of suitable new or existing concrete.
- Concrete polishing and maintenance programmes.
- Warehouse or commercial slabs where a treated concrete finish is specified.
- Dust-reduction treatment after assessment of concrete condition and absorption.

Product and system selection

Use this overview with the technical data, preparation, application and limitations in the following pages. Confirm the complete build with ALKA for the actual substrate and service conditions.

Product & system selection

Water-based lithium silicate concrete densifier concentrate

Penetrating treatment of suitable concrete to support surface hardening and dust reduction within an approved polishing or finishing process.

Where this product fits

SYSTEM POSITION — CONCEPT ONLY	SELECTION / CONTROL
Finished concrete surface	No coating-film thickness specified
Penetrated treatment zone	Absorption and reaction depend on the concrete
Concrete substrate	Prepared and able to absorb treatment

Specify the complete application

DECISION	SELECTION TO RECORD
Substrate	Exact substrate, condition, moisture and existing coating.
Duty	Traffic, weather, water, chemicals, temperature and cleaning as relevant.
Finish / interface	Required colour, sheen, texture and compatible adjacent layers.
Acceptance	Nominate the inspection, test method and release conditions before work.

Limits of use

This is a penetrating treatment: coating WFT/DFT and film-building yield do not apply.

Technical data

Typical data and application conditions are listed below. Contact ALKA Technical Support for fields requiring confirmation before specification or use.

PROPERTY	VALUE / CONDITION
Chemistry	Water-based lithium silicate concentrate
Density	1.20 ± 0.10 kg/L at 25°C
Solids	25% in source; test basis to confirm
Pack	25 kg
Dilution	1 part product : 2 parts clean water by volume in PDF; confirm current label
Application conditions	5–35°C; source RH limit approximately 80%
Source coverage	10–25 m ² /L; diluted/undiluted basis to be confirmed
Wet contact	Approximately 30 minutes in source; maintain controlled wetting without residue
Drying	2–4 hours; accessible after a few hours in source; confirm conditions
Reaction development	Source full development >30 days at 25°C; not a film-cure specification
Storage / shelf life	12 months unopened at 5–30°C; protect from freezing

Interpreting the data

Values depend on the stated temperature, humidity, film build, test method and substrate. Typical laboratory figures are not automatic project acceptance criteria. Changes to colour, thinner, aggregate, mix proportion or layer build can change performance.

Units and test basis

Keep mass and volume mixing ratios distinct. State whether solids are by mass or volume and whether thickness is WFT (wet film), DFT (dry film) or total system build. Coverage is theoretical unless an actual site yield is stated.

Substrate & work preparation

PREPARATION STAGE	REQUIRED APPROACH
Absorption	Check porosity and existing curing compounds, sealers or coatings. Treatment must reach the concrete surface; remove barriers to penetration.
Concrete condition	Repair defects and assess weak or severely contaminated material. A densifier does not rebuild defective concrete or close moving cracks.
Process trial	Agree grinding/polishing sequence, dilution, contact time and residue removal on a representative area.
Adjacent surfaces	Protect glass, metal and finished surfaces from alkaline splashes. Plan controlled cleaning and residue collection.
Acceptance	Define the desired dust reduction or finishing outcome and the method/timing of assessment; avoid unsupported strength multipliers.

Establish the application release point

The applicator and responsible technical reviewer should accept the substrate, repairs, environmental conditions, material identity and system schedule before work starts. Record the moisture method and readings, substrate/air temperatures, humidity and condensation assessment where relevant.

Materials and equipment

Check labels, component pairing, batch numbers, expiry and storage history. Provide suitable mixing, application and inspection equipment, clean containers and calibrated measuring tools. Keep contaminated tools and residues away from fresh material.

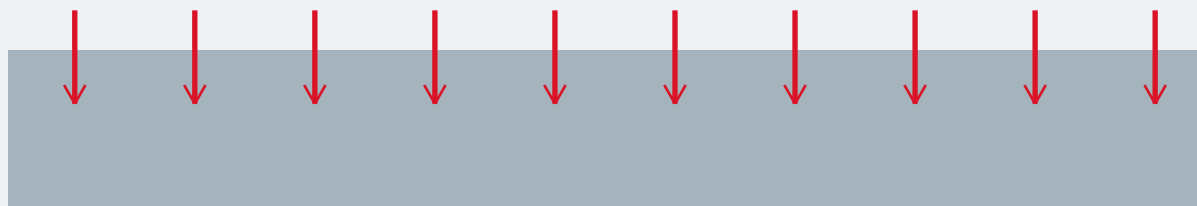
Representative trial

Where condition or compatibility is uncertain, trial the complete proposed preparation and coating sequence. Agree the sample location, cure time, appearance and adhesion assessment before extending the work.

Mixing & application

STEP	PRODUCT-SPECIFIC PROCEDURE
01	Check that the concrete can absorb treatment. Remove curing compounds, sealers, contamination and surface residue that would block penetration; approve a trial area.
02	Dilute by volume using the confirmed 1:2 product-to-water instruction. Mix uniformly and label diluted batches; do not confuse kilogram pack size with litres of concentrate.
03	Apply evenly and work the liquid across the slab to maintain the specified contact. Redistribute puddles and remove excess according to the approved method before deposits dry.
04	Protect glass, aluminium and adjacent finishes from alkaline splashes. Coordinate grinding/polishing stages and final cleaning; verify the finish is dry and safe before access.

PENETRATING TREATMENT / CONCEPT SECTION



Absorption varies; no coating-film thickness or penetration depth is implied

Concept drawing only; no dimensions, tested build, product compatibility or engineering approval are implied. Follow the approved project details.

Continuity and stopping points

Plan work to natural breaks and maintain a consistent application method. Do not stretch material beyond the approved coverage. Check intermediate surfaces before covering them; remove contamination and rectify defects using an approved repair procedure.

Out-of-window or interrupted work

When the permitted interval is exceeded, or rain, dust, condensation or site damage affects the surface, assess the condition before continuing. Use the validated cleaning, abrasion, re-priming or repair method; an apparently dry surface is not proof of intercoat adhesion.

Quantity, cure & sequencing

Set the accepted consumption and coat count before ordering. Measure actual area, include surface-profile demand, repairs and losses, and round reactive material to complete matched kits.

WORKED EXAMPLE — ESTIMATE ONLY	CALCULATION
Source dilution	1 volume concentrate + 2 volumes water
25 kg at 1.20 kg/L	20.83 L concentrate; approximately 62.5 L diluted solution
Illustrative rate	15 m ² /L diluted solution, subject to absorption trial
100 m ² example	6.67 L diluted solution; approximately 2.22 L concentrate
Film build	Not applicable to this penetrating treatment

Basis of the example

Assumes 15 m²/L of diluted solution for estimating only; actual absorption and accepted dilution govern. The assumed area, coat count and 10% allowance are estimating choices, not independently validated ALKA specifications.

Source timing / release references

STAGE	TIME / CONDITION
Reaction development	Source full development >30 days at 25°C; not a film-cure specification

Plan treatment and finishing

Absorption, temperature and the polishing sequence affect uptake and drying. Maintain the approved wet-contact period and remove surplus before deposits form. Record actual diluted-solution use and do not equate surface gloss with treatment performance.

Release for access

Confirm the surface is dry, clean and free of slippery residue before access. Assess densification after the agreed reaction-development period. This penetrating treatment has no coating-film cure or standalone waterproofing release.

Inspection, safety & handover

HOLD POINT	RECORD / VERIFY
Before work	Accepted substrate and details; material/version; approved colour/build; environmental conditions and trial result.
During application	Component/tint batches; proportions; mixing and placement times; measured area, quantity and thickness; coat count and interruptions.
Before next layer	Surface condition; permitted interval; defects and repairs; primer/receiving-layer compatibility.
Before service	Cure conditions and elapsed time; final inspections; approved test results; repairs completed and rechecked.

Product-specific checks

- Record dilution by volume, treated area and solution use.
- Inspect dry residue and surface uniformity.
- Assess performance after the agreed development period.

Investigate defects before covering them

Softness or delayed drying calls for a review of identity, proportioning, conditions and thickness. Bubbles or pinholes call for a review of moisture, porosity, air entrainment and application rate. Loss of adhesion requires locating the failure plane and correcting preparation or interface problems. Isolate affected areas; do not conceal uncured or unsound material.

Safe handling and cleaning

Read the current SDS for the actual product and every component, thinner and cleaner. Use the specified ventilation, personal protection and site controls. Spray, abrasive preparation and confined-space work need competent planning. Do not assume water-based, low odour, cured appearance or high solids means non-hazardous.

Use only the product-approved cleaner before material cures; keep cleaning solvent separate from coating thinner. Collect residues and protect drains. Cured material normally needs an appropriate mechanical removal method; avoid damaging the sound substrate.

Maintenance and handover

Use a compatible cleaning regime and inspect dusting, residue and local wear. Do not interpret surface gloss as proof of treatment depth or measured hardness. Additional application should follow a trial, not automatic repeated saturation.

Retain the installed system, batch and application records, inspection results, repair details and agreed cleaning/reopening instructions. The approved TDS and current SDS should be available to the applicator and owner.