STONE & CONCRETE IMPREGNATION CONCENTRATE

Water-based silane/siloxane penetrating sealer · German-developed formula, blended & bottled in the USA

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1 Product description

NanoProtect Stone & Concrete Impregnation Concentrate is a water-based silane/siloxane impregnation that imparts water repellency to absorbent mineral substrates. It penetrates into the pore structure instead of forming a surface film, so the treated surface remains breathable and keeps its natural appearance. It is supplied as a concentrate containing 50% active ingredients for dilution with clean water before application.

2 Recommended uses

Absorbent concrete, natural stone, pavers, brick and masonry, including driveways, patios, walkways, pool decks, steps and retaining walls. Not intended for painted, previously sealed, non-porous or asphalt surfaces. Evaluate suitability and appearance on a small, inconspicuous area before full application.

3 Product characteristics (concentrate)

Property	Reported value
Chemistry	Water-based silane/siloxane emulsion
Active ingredients	50% (concentrate as supplied)
Appearance / odor	White liquid emulsion / mild odor
pH	Approximately 8
Density	Approximately 0.95 g/cm³ at 25 °C
Viscosity	Approximately 12 mPa·s at 23 °C
VOC	Less than 5 g/L (concentrate), per June 2026 SDS – ultra-low VOC
Water compatibility	Fully miscible
Finish	Invisible, matte, non-film-forming, breathable

4 Dilution and coverage

Recommended dilution: One 33.8 US fl oz (1 L) bottle makes approximately 3 US gallons (11.36 L) of ready-to-use solution, including the concentrate. Add clean water to the final volume and mix thoroughly (approximately 1 : 10.36 concentrate : water by volume).

Optional higher dilution: The concentrate may be diluted further, for example 1 : 14 or 1 : 19 (concentrate : water by volume). Higher dilution reduces the amount of active ingredient applied and may shorten the duration of water repellency. For maximum durability, use the recommended dilution.

Typical coverage (ready-to-use solution):

Product / quantity	Single coat	Wet-on-wet (recommended)
1 US gal ready-to-use	approx. 200 sq ft	approx. 135 sq ft
1 L (33.8 fl oz) concentrate = 3 gal RTU	approx. 600 sq ft	approx. 405 sq ft
64 fl oz concentrate = 6 gal RTU	approx. 1,200 sq ft	approx. 810 sq ft

Actual consumption depends on substrate porosity, profile and application technique. Very porous or weathered surfaces absorb more. Confirm on a test area; saturate without puddling.

Long-term field observations: At the recommended dilution, field observations include 36+ months (ongoing) on horizontal outdoor surfaces and 10+ years on a vertical façade. These are site-specific observations, not a guaranteed service life.

5 Application guidance

- **Surface:** The substrate must be completely dry, sound, absorbent and free of dirt, coatings, oils and contaminants that may inhibit penetration. Do not apply to damp or wet surfaces.

- **Absorption test:** Sprinkle water on the surface. If it soaks in and darkens the surface, it is suitable. If water beads up, the surface is already sealed or not absorbent enough.
- **Application:** Apply evenly with a low-pressure pump sprayer (wide fan nozzle), roller or brush, using a wet-on-wet method: apply successive passes while the preceding pass is still wet until the substrate is visibly saturated and no longer readily absorbs product.
- **Excess:** Do not allow liquid to pool or dry on the surface. Immediately remove unabsorbed excess with a clean, absorbent cloth; excess silane/siloxane left on the surface may cure into white spots or residue.
- **Conditions:** Do not apply below 55 °F (13 °C). Protect from rain during application and for at least 24 hours afterwards.
- **Drying:** Approximately 45 minutes to 2 hours (per SDS); the surface is typically walkable after about 2 hours. Conditions may vary.
- **Re-application:** Reapply when water no longer beads on the treated surface. Clean the surface and let it dry completely before re-treating.
- **Safety:** Avoid inhaling spray mist; ensure adequate ventilation and wear eye and hand protection. Follow the current Safety Data Sheet and site-specific safety requirements.

6 Storage and handling

Condition	Guidance
Storage temperature	32–104 °F (0–40 °C); protect from freezing
Shelf life	At least 36 months in the unopened, correctly stored original container (per SDS)
After dilution	Prepare only the required quantity; use within 2 weeks (per SDS)
Disposal	Refer to the current SDS; do not discharge into drains or waterways

7 Laboratory performance

The results below were reported by the original German formulation developer from in-house laboratory evaluations conducted in 2015, using a modified procedure based on DIN EN 13580 (water absorption and resistance to alkali of hydrophobic impregnations) and DIN EN 13581 (mass loss after freeze-thaw salt stress). The developer has confirmed in writing that the active-ingredient formulation is unchanged since these evaluations. The original test reports are no longer available.

Performance parameter	Reported result
Water absorption reduction (DIN EN 13580)	99.00%
Water absorption reduction after alkaline exposure (DIN EN 13580)	97.62%
Freeze-thaw / deicing-salt mass loss (DIN EN 13581 procedure)	0.03% treated vs. 28.10% untreated

The freeze-thaw evaluation was conducted on calcium silicate masonry, intentionally selected as a highly absorbent test substrate. Results on other substrates may differ.

8 Technical limitations

Penetration depth and performance vary with substrate composition, porosity, moisture content, dilution and application conditions. The product reduces liquid-water absorption; it is not a waterproof membrane and does not bridge cracks. Always assess suitability against project specifications before use.

9 Manufacturer / technical contact

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Technical information & disclaimer

The information in this Technical Data Sheet is based on the manufacturer's current technical knowledge, product specifications, laboratory evaluations reported by the formulation developer, and practical field experience. Laboratory results were obtained under the stated test conditions. Actual performance may vary depending on substrate composition, porosity, surface preparation, dilution ratio, application method and environmental conditions. The user is responsible for determining product suitability and for following the application instructions; testing on a small, representative area is recommended. Reported service-life observations reflect field experience under specific conditions and do not constitute a guarantee of durability for every application. Shinykings Inc. makes no warranties beyond those expressly provided in its applicable product warranty or required by law. Nothing in this document limits rights or remedies that cannot legally be excluded.