

LITHIUM SILICATE BASED LIQUID FLOOD DENSIFIER, HARDENER & CURING COMPOUND

Description

TOPHARD LS is a special Lithium based silicate solution that penetrates deep inside the concrete capillaries chemically reacting with the free lime forming a permanent insoluble bond with the concrete, which increase density, hardness and strength of the top layer of a substrate while retaining its breathability. It is an ideal treatment for machine troweled, burnished, or polished concrete surfaces. Once the sealer chemically reacts with the surface, the TOPHARD LS improves the abrasion resistance and durability of a surface, provides long term protection against wear and traffic, reduces dusting not caused by actual surface defects, and lowers the overall maintenance of a surface. It can also serve as a concrete polishing aid by producing better initial surface hardness that reduces polishing time and yields a smoother and denser burnished or polished surface. Sealer is environmentally friendly, VOC compliant, non-flammable, and has odorless formula for safe indoor use. TOPHARD LS has a clear to turbid appearance. Upon proper application, the substrate will have little, or no, noticeable change in appearance when dry. However, a polished appearance can normally be imparted to burnished or polished surfaces by applying with scrubber or polisher and then buffing with a resin pad..

Uses

- Increasing hardening
- Continuously rising abrasion resistance
- Intensified sheen and colour
- Inhibits crack formation
- Weather resistant
- Inhibits frost damage
- Water vapour permeable
- VOC free
- No surface protection necessary.
- Suitable for Production areas, Storage areas Cool rooms, Warehouses, Food industry
- Car parks, Aircraft hangars

Advantages

- Premixed and ready to use liquid
- Improved abrasion resistance compared to untreated concrete
- Dust proofer for concrete floor
- Improves cleanability,
- Non-yellowing
- Colourless
- Good penetration
- Gives no disturbing order during the application
- Will not scratch or peel
- Given permanent hardness to the applied surface.

Typical Properties

Aspect	: Clear to turbid liquid
Relative density	: 1.19 ± 0.02
pH	: Min. 6
Chloride content	: Nil(as per BS 5075)

Direction of use

Surface preparation

Substrates to be sealed must be a minimum of 28 days old and/ or be fully cured, which should be clean and porous enough to allow penetration into the substrate. Surfaces should be clean and free of surface laitance, dust, dirt, debris, mildew, oil, grease, previous sealers, curing agents, paint or other surface coatings, and other contaminants. If acid or other cleaning compound is used for cleaning or etching the surface, neutralize the surface completely before application of TOPHARD LS. Under certain conditions, a precipitate may be deposited as the sodium solution dries. Substrates with a high acidic level will react with the sodium solution and can cause some neutralization of the material before it is absorbed into the surface leaving a white precipitate. This white precipitate does not affect sealer performance and generally dissipates over time or remove with water and stiff broom or floor buffer. A test should be made to determine that none of these conditions exist..

Application

Always test porosity prior to application, especially on very dense surfaces. Surface should be dry for proper penetration of the sealer. Should not apply to damp or wet surfaces. Product is a one-part system and requires no special mixing. Stir material thoroughly before and during application. Do not apply below 5°C or above 40°C during the application or drying period. Apply uniformly with a low pressure sprayer or by other means. When applying material, work in small, manageable areas at a time in order to maintain a wet edge. Product should be applied to the point of rejection and be fully absorbed within 10 minutes without puddles. Use a broom, roller, or microfiber pad to evenly distribute product as well as disperse any puddles as excessive application may result in white residue (especially on darker or colored surfaces) which

will not affect sealer performance and generally dissipates over time or by power washing. White residue may also form if surface has high acidic content. To reduce likelihood of white residue on surface, rinse the surface thoroughly with water 2 hours after final application of sealer and then sweep up to remove any residual materials. Generally, only one application is required. If additional coats are desired and more product can be absorbed, wait approximately 1-2 hours between coats. For a more polished appearance on burnished or polished surfaces, apply using a floor scrubber (black pad) or high-speed polisher and then buff with a resin pad after 12 hours. Clean application materials with warm water

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Limitation

TOPHARD LS is designed to work only on cured machine troweled and smooth concrete surfaces and is not intended for asphalt. This product may damage vegetation or may etch glass, vinyl, aluminum, plastic, and metal. Avoid contact with eyes and skin. Sealer may be damaged if frozen prior to use. Not intended to seal cracks. Will not remediate structurally unsound surfaces with defects such as chronic dusting or chalking. The use of high alkaline or acidic cleaners on the treated surface is not recommended and can be damaging. A small test must be conducted prior to application. Based upon this test, the purchaser shall determine for themselves the suitability of this product for the intended use.

Technical Support

FIRSTCHOICE SPECIALITY CHEMICALS PRIVATE LIMITED provides technical advisory services for on-site assistance and guidance on mix design and applications.

Coverage

8-10 M2/Kg for machine troweled and smooth surfaces for single coat.

Note: Coverage rates are approximate and for estimating purposes only. Application rate based upon porosity and absorption. Always test absorption prior to application.

Packaging

TOPHARD LS is supplied in 20 kg, 275 kg drums or in bulk on request.

Storage and Shelf life

Store properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5°C and +30°C. Keep away from direct sunlight. Protect from moisture, water and rain.

Shelf life is 12 months when stored as above.

If stored in conditions of high humidity and/or temperature, the shelf life will be reduced. For specific storage advice please consult FCSC representative.

Safety Precautions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. Do not reuse containers for storage of consumable item. For further information refer to the material safety data sheet.

Fire

TOPHARD LS is non-flammable.

Note

All Technical Data Sheets are updated on regular basis; it is the user's responsibility, to obtain the most recent issue.

Field services where provided, does not constitute supervisory responsibility, for additional information contact our local FIRSTCHOICE SPECIALITY CHEMICALS PRIVATE LIMITED representative.

Disclaimer

Whilst any information contained herein is true, accurate and represents our best knowledge and experience, no warranty is given or implied with any recommendations made by us, our representatives or distributors, as the conditions of use and the competence of any labour involved in the application are beyond our control.