Product Data Sheet
CTI Densifier LS

Uses	This proprietary Lithium Silicate has the ability to penetrate deeply into the concrete to react with the calcium salts within and form insoluble silicate hydrate. This new Nano - Lithium Silicate concrete densifier and hardener penetrates deep into the concrete, reacting with the soluble calcium compounds to create a breathable protective barrier while at the same time strengthening the floor surface
Features	Sodium and Potassium Silicates leave soluble compounds that can contribute to crazing as they absorb water and swell, particularly the Sodium Silicate is water sensitive and will break down leaving the surface unbound and subject to erosion. As cement hydrates it produces calcium silicate hydrate and as concrete hardens water reacts with cement to form calcium hydroxide plus silica which react to form CSH – the material that bonds the cement with the aggregate. The hydration process produces more calcium hydroxide than is used up in the chemical reaction resulting in excess calcium hydroxide (also called free lime). Over the longterm excess free lime is a primary cause of micro pitting in the concrete surface. **Densifier LS** provides a remedy by introducing additional silicate which reacts with the excess free lime to form more C-S-H which means denser harder concrete surfaces This chemical reaction takes place in the capillaries left by water that migrated out during the curing process. The filling of the capillaries provides an additional degree of impermeability but the concrete retains its ability to breathe allowing water vapour to escape. Lithium ions are stable as such and do not absorb moisture and swell. Being a nano particle it has a small ion with low viscosity giving deep penetration.

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	As soon as it is dry to the touch it can be used and forms optimum water repellence and hardness in 7 days . • New Zealand made • Easy to apply • Non flammable – Non toxic – No odour • Apply to new or used concrete • Is not a film former • Reduces salt penetration • The reaction is more complete and faster than sodium silicate.Harder surfaces • The coverage rate is normally greater than with sodium or potassium silicate hardeners.
Advantages	• The Nano-Particle size of Densifier **LS** is not water sensitive and reacts quickly with the salts allowing the surface to harden and be polished in a much shorter period of time than other products. • Can be used in a wide variety of applications including food preparation and handling areas • Reduced time on site and faster job completion.The floor can also be put into service very quickly. • Long life, reduced maintenance costs • Stain/water resistant • Dust proof makes easy cleaning • High abrasion resistance • Protects against efflorescence and the leaching of lime • Faster reaction times saving on labour time • Faster access to polishing or buffing
Product Description	The impregnation densifies and hardens the surface wear layer. The result is still breathable and will not flake or peel – efflorescence is eliminated and surface dusting is prevented.
Packaging	20litre sealable tin
Testing	• Environmental Choice Approval 0715138
Application	The application can be done as soon as the floor is dry enough to walk on without ponded water. Protect plants, aluminium, glass and vehicles. Mask with suitable plastic film all affected areas. Check surface absorption by application of a light spray coat

	which should have a uniform effect overall. – this will ensure the results are desirable. Make sure the surface is free of contamination and apply with a low pressure sprayer, soft broom, squeegee or micro fibre pad. If using an acid etch rinse thoroughly and neutralise as an acidic lithium reaction could take place. Air and surface temperature is to be 4 deg C to 34 deg C. Surface must stay wet for 15 – 20 minutes - if conditions are hot apply a light mist coat of water to cool it down and reduce the premature drying of LS / densifier which will affect the penetration. After applying Densifier LS make sure that any dry areas are kept damp by further application for 15 – 20minutes to achieve a uniform gloss. **Do not** allow ponding to occur, broom or squeegee off excess liquid. After the 15 – 20 minutes wet the surface with water and use scrubbing machine or a stiff broom to remove any residue) - all residues must be removed. After 1.5 – 2.5 hours the surface can stand light foot traffic because water is still evaporating from the concrete and treatment. Buffing can be done at this stage to increase gloss. If grinding takes place or saw cuts before application of the Densifier LS ensure the surface is washed/scrubbed to remove any grinding dust or contaminants. If acid etching beforehand, neutralising the surface properly afterwards is vitally important as is vacuum removal of water and residue before applying the impregnation. To increase gloss level use up to 3000grit diamond disk or buff as required – the surface sheen increases with time and cleaning methods.
Technical Data	

Clean up	
Storage	
Additional Compatible products	CTI Synclean Cleaner
Health & Safety Information	For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety- related data.
First Aid	Swallowed – product is toxic and harmful, vomiting may lead to aspiration in the lungs – give water to drink, do not induce vomiting, seek medical attention. Eyes – Causes moderate to severe irritation and imflamation – rinse for 15 minutes with water, seek medical attention.Skin – can cause defatting and drying and therefore irritant dermatitis – rinse well with soap and water, seek medical assistance if necessary. Inhaled – harmful R20/21/22, vapours are irritating to nose and throat ceusing nausea, lack of coordination and possible loss of conciousness. Move victim to fresh air immediately, prevent loss of body heat, apply CPR and seek medical care if necessary.
Restrictions of Use	Do not clean with acids
Precautions	
Contact Details	Concrete Tool Importers Ltd 0800 727 333
Office Hours	7:00am – 5:00pm
Legal Notes	The information, and, in particular, the recommendations relating to the application and end- use of our products, are given in good faith based on our current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with our 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. We reserve 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. It may be necessary to adapt the above disclaimer to specific local laws and

	regulations.