

## **PRODUCT INFORMATION**

### **DENSACRETE LITHIUM PREMIUM**

Page 1 of 4

**Manufacturer's Code:** RPLDP

**Updated:** 01/01/2021

**Product Name:** DENSACRETE LITHIUM PREMIUM

**Description:** DENSACRETE LITHIUM PREMIUM is an oil and water resistant concrete densification sealer based on lithium silicate technology. DENSACRETE LITHIUM PREMIUM is a non-film forming penetrating sealer that can deeply penetrate, block concrete capillaries and fast react with concrete to form a hard, dust-proof and colour enhanced concrete finish. Apart from concrete densification sealing, DENSACRETE LITHIUM PREMIUM imparts oil and water resistance to the concrete, effectively making it a water and oil-proof concrete finish. Furthermore, a smooth or gloss finish can be achieved by concrete polishing. DENSACRETE LITHIUM PREMIUM will not leave visible residues or efflorescence after the treatment

**Recommended Uses:** DENSACRETE LITHIUM PREMIUM is used as an oil and water resistant concrete densification sealer for treating concrete including residential driveways or garage floors, commercial car parks, and factory or warehouse flooring. Applications include treating new and old concrete slabs for strengthening, dust-proofing, and creating oil and water resistance. DENSACRETE LITHIUM PREMIUM provides good resistance against water and oil absorption and reduces oil staining. The sealer may also be used for treating other masonry substrates including sealing natural stone, clay bricks and ceramic tiles. However, a test should be conducted prior to application to determine the suitability of the product for the purpose.

The key features of DENSACRETE LITHIUM PREMIUM include:

- Effectively resists water and oil penetration and reduces oil staining
- Deeply penetrates and fast reacts with concrete to ensure durable protection
- Leaves no visible residues or efflorescence after treatment
- Enhances concrete colour without changing the surface characteristics
- Ready-to-use or dilute with water before use
- Environmentally friendly water-based technology with nil VOC

**Use Instructions:** Surface Preparation

Prior to application, the concrete surface should be completely cleaned of any surface contaminants that may impede the penetration of DENSACRETE LITHIUM PREMIUM. The surface should be allowed to dry before application.

New concrete should be properly cured. Curing compounds, release agents, and coatings/membranes should be completely removed and cleaned from the surface and allowed to dry before applying DENSACRETE LITHIUM PREMIUM. In the case of acid treated concrete, the concrete should be completely neutralised and rinsed with water, and allowed to dry before the application.

For polished concrete, the surface is firstly removed by grinding up to 200 grit or any desired finish to expose the capillaries or aggregates before applying DENSACRETE LITHIUM PREMIUM. This will ensure maximum absorption of the sealer to achieve optimum concrete densification and oil and water resistance by the application of DENSACRETE LITHIUM PREMIUM.

Application (Shake well before use)

DENSACRETE LITHIUM PREMIUM should be mixed well before use. The sealer may be applied with a low pressure hand sprayer, brush or broom. The product should be evenly flooded onto the surface. Pooling should be avoided. In order to achieve maximum absorption, ensure the sealer is present on the surface as a mirror-like wet film for up to 30 minutes. If the first coat is quickly absorbed by the surface, the second coat is applied immediately while the surface is still wet (wet-on-wet method). For porous and permeable concrete, this wet-on-wet application may be repeated until the surface is saturated with no further absorption of the sealer being achieved. Remove excess sealer from the surface if it hasn't been absorbed by the surface within 30 minutes. Any excess sealer on the surface may dry to unwanted residues that may become difficult to remove after the product is cured.

It may help to achieve better penetration by pre-diluting the sealer at 1:1 with clean water before use. However, this may mean that more wet-on-wet applications are required to achieve the desired result.

A final application is required after the previous application has been cured for 24 hours. It is recommended that no further polishing is undertaken after the final application. Polishing or buffering at this stage may reduce the oil and water resistant effect imparted by DENSACRETE LITHIUM PREMIUM. Further application of the sealer may be applied if advanced oil and water resistance is required for the treated concrete.

If an alternative desired polished concrete finish is required, then other TECH-DRY oil and water repellent sealers may be applied as a finish sealer after the final polish. Please contact Tech-Dry on (03) 9699 8202 for further information.

Consumption Rate

The application rate of DENSACRETE LITHIUM PREMIUM varies depending upon the porosity of concrete. Dense or new concrete will have a low absorption rate, whereas porous and permeable or old concrete will absorb more sealer. The consumption rate varies from 5 - 20/m<sup>2</sup> per litre per coat or could be out of this range significantly.

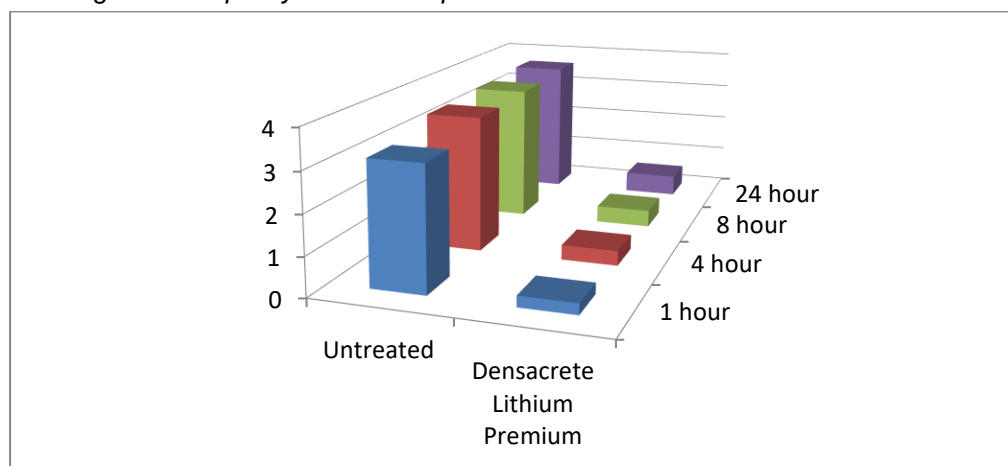
After application and curing

Curing starts immediately after application. But it may take 24 hours or more to achieve better curing. Avoid heavy traffic for up to 24 hours. The optimum densification and oil and water-resistance are expected after 7 days of curing or more.

**Performance Test:**

The following samples are used for comparison. A polished concrete sample finished with 50 grit resin pad treated with DENSACRETE LITHIUM PREMIUM. A second polished concrete sample treated with the normal lithium densifier - DENSACRETE LITHIUM, and thirdly an untreated sample as control. The treated concrete samples are cured for 7 days before tests are conducted. Figure 1 shows the capillary water absorption of the concrete treated with DENSACRETE LITHIUM PREMIUM. The results indicate the water absorption of the treated concrete is significantly reduced compared to that of the untreated concrete.

*Figure 1. Capillary water absorptions of the treated concrete & the control*



The oil resistant test results are shown in Figure 2, 3 & 4. In this test, engine oil, olive oil & heavy engine oil are each placed as oil droplets on to the treated surface. The oil droplets are kept on the surface for 24 hours. The oil repellent effect (beading effect) is checked at the start and at the end of the test. Oil stains on the surface are examined after the oils are removed from the surface with a paper towel at the end of 24 hour test period. The results in Figure 2, 3 & 4 clearly indicate the surface treated with DENSACRETE LITHIUM PREMIUM shows excellent resistance to oil penetration and oil staining.

*Figure 2. Oil beadings (engine oil, olive oil & heavy engine oil) at the start of test*

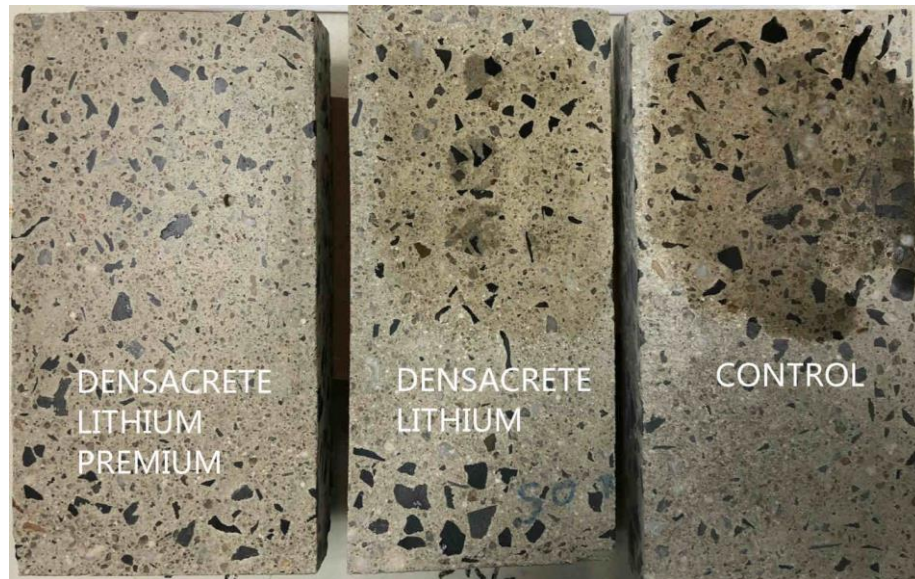


*Figure 3. Oil beadings (engine oil, olive oil & heavy engine oil) after 24 hours*





Figure 4. Oil stains (engine oil, olive oil & heavy engine oil) after 24 hours



<b>Typical Data:</b>	Appearance:	Colourless clear liquid
	Density:	1.0-1.1 g/ml
	pH value:	10-11
	Solubility in water:	Soluble in water

**Important Note:** DENSACRETE LITHIUM PREMIUM penetrates and blocks the concrete pores and capillaries, and hardens the surface while making the surface oil and water resistant. However, the degree of surface hardening and oil or water resistance depends upon many factors which are out of the manufacturer's control. It is highly recommended that a pilot test be conducted prior to application to determine the suitability of this product for the purpose. If in doubt, please contact Tech-Dry on (03) 9699 8202.

**Handling & Storage:** DENSACRETE LITHIUM PREMIUM is an alkaline solution. Skin or eye contact should be avoided by wearing proper protection. The risk of vapour inhalation of the sealer is low, however, an air-purifying respirator should be worn if there is a risk of exposure to high vapour concentrations. Wash hands after handling. The sealer should be kept in the sealed original container under 25°C. The product should be used within use-by-date. The sealer should be used up as soon as the original container is opened.

**Keep this product away from aluminium surfaces. Keep out of reach of children.**

**Packaging:** DENSACRETE LITHIUM PREMIUM is available in 20 litre plastic containers. Other size package is available on request.

**Disclaimer:**

The information given in this data sheet is based on many years of experience and is correct to the best of our knowledge. As the storage, handling and application of this material is beyond our control; we can only be responsible for the quality of our product at the time of dispatch. We reserve the right to alter certain product parameters within the spectrum of properties in order to keep abreast of technical advances. It is the responsibility of the end user to determine the suitability of this material for any particular application.