**NOTES:**

The purpose of this product Tech-Dry specification is to provide specification information where concrete is to be treated with a penetrating densifier that is required to have water resistant properties and that is non-film forming and enables a dust free, tough and durable finish; that is set out as ‘additional clauses’ to be incorporated into a Project Specific building specification, such as CONCRETE and CONCRETE FINISHES.

**??** in the margin indicates text to opt-in or opt-out in the specification as applicable.

**RECOMMENDED USES:**

**Tech-Dry CONCRETE DENSIFIER is used as a penetrating densifier, hardener and dust-proofer for concrete flooring including residential floors and garages, commercial car parks, restaurants, retail or warehouse floors. The applications also include treating polished concrete floors and sealing old concrete for strengthening, dust proofing and waterproofing. CONCRETE DENSIFIER may also be used for sealing other masonry substrates including natural stone pavers, clay bricks or ceramic tiles. However, a test should be conducted prior to application to determine the suitability of this product for the purpose.**

The key features of CONCRETE DENSIFIER include:

- Penetrates into the concrete beneath the surface ensuring durable protection

- Strengthening and dust-proofing concrete surfaces

- Maintains appearance and slip resistance of the original concrete surface

- Reduces water absorption and surface staining

- Environmentally friendly formulation and easy clean up with water

- Ready-to-use low viscosity formula enables good penetration and easy application

**DISCLAIMER:**

The information given in this specification is based on many years of experience by Tech-Dry and is correct to the best of our knowledge. As the storage, handling and application of this material is beyond the manufacturers control, the manufacturer only takes responsibility 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.

**\*\* These notes highlighted in red do not need to be incorporated into the specification and are added as guide only to the preparation of the Specification.**

**CONTACT:**

TECH-DRY BUILDING PROTECTION SYSTEMS PTY LTD

ACN 005 307 684, ABN 62 922 836 289

177-179 Coventry Street, South Melbourne, Victoria 3205, Australia

Telephone: 61 3 9699 8202 (all hours)

Facsimile: 61 3 9696 3362

Website: [www.techdry.com.au](http://www.techdry.com.au)

Email: info@techdry.com.au

|  |
| --- |
| **DOCUMENT STATUS** |
| Issue: | Date: | Issue type: | Checked by: |
| 01 | 1st October 2018 | Publishing | Tech-Dry (DK) |
|  |  |  |  |
|  |  |  |  |

# CONCRETE DENSIFIER/SEALER

## DENSIFIER MATERIAL

###  Description:

 Manufacturer’s Code: **RPCD**

 General: TECH-DRY “Concrete Densifier” is a hybrid concrete densification sealer containing potassium and lithium silicates. The sealer is formulated to penetrate into the concrete surface and block the concrete capillaries by the formation of calcium silicate hydrate. The calcium silicate hydrate binds within the concrete matrix and hardens the concrete surface resulting in a hard, dense, dust free, traffic resistant, water resistant and colour enhancing surface finish. Furthermore, unlike traditional sodium silicate densifiers, “Concrete Densifier” does not leave visible residues or efflorescence after treatment.

?? Polished concrete finishes: A smooth or gloss finish to the concrete surface may be achieved by concrete polishing as specified elsewhere.

###  Typical material data:

 Appearance: Colourless clear liquid

 Density: 1.0 – 1.1g/ml

 pH value: 10 – 11

 Solubility in water: Soluble in water

## CONCRETE SURFACE PREPARATION

###  Cleaning and preparation of concrete:

 Requirement: Prior to application of the “Concrete Densifier”, the concrete surface should be completely cleaned of any surface contaminants that may impede the penetration of “Concrete Densifier” and allowed to dry before application.

?? New concrete: Allow new concrete to cure for 28 days prior to application. Curing compounds, release agents, or coatings/membranes should be removed from the concrete surface, cleaned and allowed to dry before applying “Concrete Densifier”. In the case of acid treated concrete, the concrete surface should be completely neutralised and thoroughly rinsed with water, then allowed to dry prior to application.

?? Polished concrete: In preparation for polished concrete the surface of the concrete slab is firstly removed by grinding to a minimum 200 grit or desired surface finish to expose the aggregate before applying the “Concrete Densifier”. This will ensure maximum absorption of the sealer and make it easy to further polish to finer grades due to the densification achieved by the application of the “Concrete Densifier”.

## APPLICATION OF THE CONCRETE DENSIFIER TREATMENT

###  Handling and storage:

 Description: “Concrete Densifier” is an alkaline solution. Skin or eye contact should be avoided by wearing proper protection. The risk of vapour inhalation of this product 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 must not be used after the “Best Before” date. The sealer should be used up as soon as possible after the original container is opened.

 Protection: Keep out of reach of children.

 Packaging: “Concrete Densifier” is available in 20 litre plastic drums. Other sized plastic containers are available upon request.

###  Consumption Rate:

 Requirement: The application rate of “Concrete Densifier” varies depending on the porosity of the concrete and climatic conditions. Dense, smooth or new concrete may have a low absorption rate, whereas porous and old concrete may absorb significantly more sealer. The consumption rate varies from 5-25/m2 per litre per coat; or it could be out of this range significantly.

###  Application methodology:

?? Protection: Adjacent surfaces and finishes such as glass and aluminium should be protected from overspray or splashing of “Concrete Densifier”. Any contact with glass or aluminium should be immediately washed down with potable water.

 Mixing: The material container shall be well shaken immediately prior to use to ensure that all components are properly mixed.

 Applying the material to concrete surfaces: The “Concrete Densifier” should be applied with either a low-pressure hand sprayer, mop or soft bristle brush/broom. The sealer should be evenly flooded onto the surface and puddling should be avoided. Ensure the material is present on the surface as a mirror-like wet liquid film for up to 5-10 minutes to ensure maximum absorption. A second coat should be applied immediately if the first coat is quickly absorbed by the surface while the surface it is still wet; i.e. a wet-in-wet method. Avoid applying the sealer if the surface has dried. Remove any excess sealer from the surface after 10 minutes as the excess sealer may dry and cause unwanted residue on the surface, which may only be removed by mechanical scrubbing.

?? Waterproofing: In the case of water-proofing applications, the above application may be repeated several times to ensure complete blocking of the pores/capillaries.

 Thinning: It may help to achieve better penetration by the pre-dilution of the sealer at 1:1 with clean potable water before application. More wet-in-wet applications may be required to ensure enough sealer is applied. A test of the diluted material should be conducted before application.

###  Post application:

 Protection of concrete: Curing starts immediately, with full curing achieved after 24 hours or longer. It is recommended by the manufacturer that areas treated should not be subjected to any traffic for at least 24 hours after the last coat of the product is applied to the concrete surface.

 After application: Clean equipment by washing in potable water.

??

## POLISHING DENSIFIED CONCRETE

###  Polishing where indicated:

 Requirement: The area of concrete where indicated to be polished should be polished or buffed after the surface treated with “Concrete Densifier” has dried and cured. “Concrete Densifier” must be reapplied after every polishing. For additional water or stain resistant treatment, TECH-DRY Oil and Stain Resistant Sealers may be used. Please contact Tech-Dry on (03) 9699 8202 for further information.