# DPS 7

## MODIFIED SILICATE-BASED DEEP PENETRATING SEALER

## DESCRIPTION

**DPS 7** is a biochemically modified silicate-based, colourless solution that provides long-term waterproofing abilities to concrete. It functions by penetrating into the pores of concrete and undergo a chemical reaction with free calcium and water to form a calcium silicate gel complex in cracks, pore or capillaries.

The gel will then create a sub-surface barrier against the ingress of water and other contaminants such as chloride ions.

The technology of **DPS 7** enables it to replace and outperform many of the existing sealers and membranes in many applications.

## MAIN FEATURES

- Penetrates normal concrete by more than 20mm.
- Will seal internal cracks up to 0.5 mm
- Hardens the penetrated concrete from 6 to 8 on the Mohr's scale of hardness. (8 is the equivalent of Granite).
- Protects concrete from deterioration by chlorides and airborne pollutants.
- Will not change the features of the concrete's aesthetic values, slip resistance etc.
- **DPS 7** will inhibit the ingress of oils, greases and acids thus reducing the maintenance costs.
- **DPS 7** is user and environmentally friendly.
- **DPS 7** sealing treatments have a life expectancy of concrete.
- **DPS 7** serves the anti-carbonation purpose in concrete.

Whilst there are many sealants available in the market, the lateral design approach employed in the manufacture of **DPS 7** has created a sealant which has a multiplicity of functions. As well as penetrating deeply into the concrete, it sets up a long term pore blocking action which creates its own hydrophobic barrier to water penetration.

At the same time, it bonds with the particles of the penetrated concrete causing a deep hardening of the penetrated area.

By the pore blocking action, it densifies the concrete without affecting the compressive strength of the concrete, thus providing long term, protection of the treated areas of the structure and serves the waterproofing purposes.

No visible change takes place to the surfaces, therefore the application of aesthetic finishes such as tiles, paint or screeds are not affected.

## COST EFFECTIVENESS

**DPS 7** application costs are well below those of reasonable quality membranes or coatings. As most membranes and coatings require a protective screed, **DPS 7** does not.

TYPE
WATER PROOFING

ADVANTAGES
CRACK BRIDGING
NON TOXIC

COVERAGE (PER COAT)
5 m²/L

COATINGS
2 coats (min)

COMPONENT
1 PART

# DPS 7

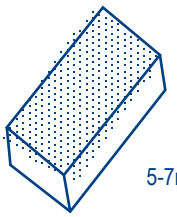
## MODIFIED SILICATE-BASED DEEP PENETRATING SEALER

### APPLICATION METHOD

**DPS 7** is applied by roller, brush or motorized sprays. It is applied on the hydrostatic side, to a damp relatively clean surface, at a rate of 5 $m^2$/L, depending on the concrete's absorbance.

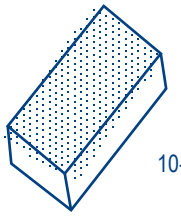
**DAY 1**

Sprayed with **DPS 7**.
When surface is dry, water thoroughly.




**DAY 2**

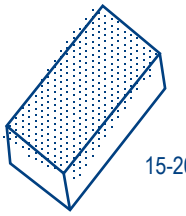
Watered thoroughly.




**DAY 3**

Watered thoroughly.

Maximum.

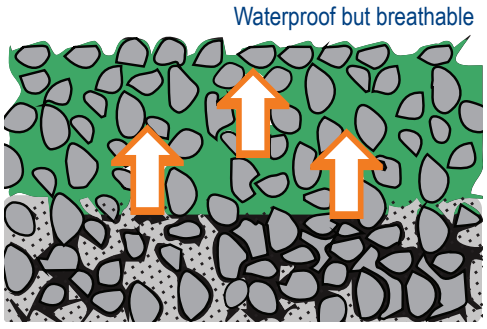



It is allowed to dry to approximately 2-4 hours. It is then watered thoroughly. It should be watered thoroughly twice more than before over the next 48 hours.
Reinforced concrete should be at least 28 days old to achieve the optimum penetration levels. All glass, aluminium and wood stained areas should be protected from overspray and watering splash.

**DPS 7** should be applied to the reinforced concrete. Applications to facades, screeds etc. is mainly for protection against deterioration.

All oil, grease, paint and failed membranes should be removed prior to application. **DPS 7** should not be applied if the air and/or surface temperatures exceed 45 °C or below 5°C.

The only site interference should be during the application of **DPS 7** and the drying period. After this, the surface may be subjected to human or vehicular traffic.



### PRODUCT PROPERTIES

- Non-Toxic
- Non-Caustic
- Boiling Point 98 °C
- Flashpoint – None
- pH 11.6 – 11.9
- Viscosity – Approx. 7 centipoise
- Density of 1.20 kg/$m^3$ at 20 °C

# DPS 7

## MODIFIED SILICATE-BASED DEEP PENETRATING SEALER

### APPLICATION AREAS

| | |
|---|---|
| ✓ Bridge Decks | ✓ Concrete Roads |
| ✓ Car Parks | ✓ Used in Spalling Repairs |
| ✓ Concrete Roofs | ✓ Patios, Planter Boxes |
| ✓ Water Holding Vessels | ✓ Sandstone |
| ✓ Building Facades | ✓ Long Term Concrete protection |
| ✓ Precast Panels (incl. Exposed aggregate or Shanghai Plaster) | ✓ Swimming Pools |

Although **DPS 7** has a wide range of uses, each structure has its own unique problems which will require the use of ancillary products to achieve a total result where the use of **DPS 7** is not advised. Such areas are leaking cold joints, failed expansion joints, and shrinkage cracks at the parapet wall and roof slab interfaces.

The application of **DPS 7** is limited to Approved Applicators and no guarantees will be given unless the application is done by one of the Approved Applicators.

On normal concrete, **DPS 7** should be successful within a 72-hour period. However, on low strength concrete, screeds or plaster, **DPS 7** may take a longer time to work due to the size of the voids within the material.

### NON STANDARD APPLICATION

The function of **DPS 7** is to react with the free calcium within the concrete. However, where there is known to be a lack of calcium, or there is a suspicion that insufficient calcium exists, then a prewash will provide an environment for success. Areas such as clay bricks, badly carbonated concrete, cracks where the calcium may have leached out are examples where the prewash would be used.

### LONG TERM STRUCTURE PROTECTION

The **DPS 7** original design concept was for the long term protection of the concrete areas of a large structure. Its ability to stop the ingress of chlorides and airborne pollutant through hairline cracks by sealing those cracks ensure the integrity of the concrete. This sealing ability and densifying of the penetrated areas are the key points in the long term protection of the structure.

### COVERAGE AREA

**DPS 7** is applied at a rate of 5 $m^2$/L per coat.

### PACKAGING

**DPS 7** surface sealer is available in 20 L pails.

Legal Notes:
'Statements made in this bulletin are for the assistance of our customers. They are based on our experience and judgment but must not be regarded as amounting to a legal warranty or as involving any liability on our part. 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 this product must test the product's suitability for the intended application and purpose. CHEMIND reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. Users may always refer to the most recent issue of our Product Data Sheet for the products concerned, copies of which will be supplied upon request.'

Made In Malaysia

### SCOPE OF REGISTRATION AND STANDARDS

Manufacture of Waterproofing materials. Compliance with ASTM technical standards and AS 3740 - 2004 Australia Standard. SIRIM certification is available for selected products upon request, subject to applicable testing and certification requirements.

CHEMIND

MANUFACTURER :
**CHEMIND INDUSTRIES SDN. BHD.** (468913-T)
NO. 8, JALAN MERANTI JAYA 16, TAMAN PERINDUSTRIAN MERANTI JAYA,
47100 PUCHONG, SELANGOR DARUL EHSAN, MALAYSIA.
TEL: 603-8066 4128 FAX: 603- 8051 3128

SIRIM

ASTM INTERNATIONAL Standards Worldwide

CHEMIND AUSTRALIAN TECHNOLOGY

REF: PDS30270426