

nanoShield Concrete Penetrative Surface Sealer



NanoShield CONCRETE is a new concept in the protection of high quality concrete, masonry construction, pavers and concrete roof tiles. The product is able to add properties to the bulk material, often rendering the use of surface sealers unnecessary.

All concrete contains capillaries and micro cracks. This allows water to pass through its structure through capillary absorption. Even dense concrete suffers from this problem of water absorption and permeability. This is the reason why unprotected concrete darkens noticeably in the presences of water.

This inherent nature to absorb moisture also means that soluble contaminates can also be deposited within the concrete structure. Over time, dirt and other contaminants will permanently stain and mar the aesthetics of building assets. Salts, if and when they reach the reinforcing steel within can be highly destructive.

Concrete that has absorbed a significant amount of water also takes a long time to dry-out. This damp concrete then becomes the breeding ground for moss and algae. The inherent nature of concrete to absorb moisture and soluble contaminants from its surrounding environment results in moss, algae and salt attacks (e.g. concrete spalling or cancer).

Absorbent concrete also promotes efflorescence, the ugly white and grey streaks due to minerals and other contaminants leaching from the surface. Coloured concrete begins to look washed out and tired quickly. In extreme climates this will also lead to premature damage due to frost/thawing cycles.

NanoShield Concrete Penetrative Surface Sealer is made by a patent protected cutting edge technology. This results in a consistent and small active ingredient size that can easily penetrate the smallest capillary. The product soaks into the concrete and lines the walls of the capillaries, creating a breathable robust moisture barrier.

This product can also be diluted and applied onto old and new concrete surfaces. Brushed or sprayed on, this product can penetrate surfaces by up to 3 to 4 mm, preventing water and contaminants from etching onto the surface or reaching the reinforcing steel.

Treated surfaces also dry quickly, not allowing the moisture to feed algae and mildew growth. Diluted up to 8 parts, 1 litre of NanoShield CONCRETE can cover up to 50 sq m of surface, providing an extremely effective yet economical long term protection of concrete, paving, walls and other porous surfaces.

Advantages:

- Water based and low VOC. Environmentally friendly and green. Low occupational health hazards
- Penetrates even the smallest pore and capillary structure of concrete and stone.
- Water is repelled (not by surface beading) but by not being absorbed into the concrete. This allows quick drying of surfaces and less wear and tear to the protected surfaces.
- Water and soluble pollutants and salts are not absorbed into the protected surfaces.
- No secondary efflorescence and reinforcing is protected from corrosion.
- Excellent freeze/thaw cycle protection due to extremely low water absorption.
- Concentrated packaging saves on transport costs and handling.
- Outstanding wear resistance and durability. Product penetrates 3-4mm into the concrete.
- UV light also cannot damage the product. Invisible – does not alter the appearance of the coated surface.



Picture above shows treated surface on the left absorbs very little water compared to the untreated surface on the right.



The untreated pavers on the left in the picture above shows mold growth and dirt stains. the right picture shows the same pavers 12 months after treatment.



The left side of the concrete shown in the picture above was treated with NanoShield Concrete. It was left outdoor over a period of 8 months. There is no moss on the untreated side as water is not absorbed into the concrete. The untreated side has absorbed significant amount of moisture, allowing for moss and mold to thrive.



Water droplet on treated surface after 24
hours