Oxtek Solutions
Trusted Moisture Barrier

AUSTRALIAN MADE AND OWNED

X200 Densi-Proof & X220 Moisture Fix

- Cures, Densifies, Hardens and Waterproofs Concrete
- Will purge contamination if present in existing concrete
- After trade friendly - compatible with flooring & coating systems
- Colloidal Silicate - fills capillaries and voids created by the bleed water.
- Reduces Shrinkage Cracking, Efflorescence & Reo Corrosion
- System included in AS1884-2021 Floor Coverings-Resilient Sheet & Tiles – Installation Practises
- Independent testing has shown improvements in Compressive Strength, Drying Shrinkage and Abrasion Resistance.
- Environmentally Friendly & HACCP Certified - Low Odour – LOW VOC
- Warranties of up to 15 years, supported by project specification and robust QC & QA procedures

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CARPET INSTITUTE of AUSTRALIA LIMITED

Master Builders Association New South Wales

HACCP INTERNATIONAL FOOD SAFETY PROGRAMME CERTIFICATION

CONCRETE INSTITUTE of AUSTRALIA

CONCRETE CONTRACTORS ASSOCIATION

Environmentally Friendly LOW VOC

PROTECT CRETE THE NAME SAYS IT ALL

Every Component's at Risk - Excessive Moisture and PH Level

Article by Oxtek Solutions

Excessive moisture within concrete is the most common reason of flooring failures in modern day buildings. Almost all components of a floor covering installation would be deemed sensitive to excessive moisture in some shape or form.

It's not just the finished floor covering itself that will fail, moisture can impact the adhesives, primers, levelling compounds, vapour barriers, the integrity of the subfloor itself, and also the erosion of the subgrade soil to.

When components of the floor covering installation are subjected to a high level of moisture, they may expand, and when they dry, they will contract, which can lead to dimensional problems of the installed systems.

Other problems occurring from unwanted moisture:

- Discolouration of the installed floor coverings and applied coatings
- Debonding and break down of floor coverings, adhesives, primers, and patch/leveling compounds
- Mould, fungi and microbial growth
- Degradation of adjacent walls and wall coverings
- Safety Hazards resulting from an accumulation of moisture residing on working surfaces.

Combined with the threat of exposure to excess moisture, is the problem that arises from the high alkalinity of a recently placed and finished concrete subfloor surface.

Whilst this alkalinity, which naturally occurs within concrete, is required for the corrosion protection of the embedded steel reinforcement, when alkalinity is too high (greater than pH10), it can lead to the destruction of the bond between the subfloor and the applied adhesive, and its adhered floor covering.

Therefore, creating a two-pronged attack on the longevity of the floor covering installation that requires to be adequately combatted by the installers.

Recently placed concrete is extremely alkaline and caustic in its nature, with a pH level of 12-13 to be expected. Fortunately following the finishing phase of concrete placement, this highly alkaline condition

Above: Yellowed Vinyl

Above: Adhesive Failure, Screed Delamination, Levelling Compound Degradation

changes and will reduce over time. As the concrete cures and reacts with the carbon dioxide in the air, the surface pH of concrete subsequently declines.

As per AS 1884:2021 Appendix C, concrete should have a measured pH of 10 or below before the installation of a resilient floor covering or as governed by the adhesive manufacturer's guidelines. AS1884:2021 Appendix C also states that a pH test should be performed at the same location as every RH moisture test. As a result, it is it is commonplace for floor covering product manufacturers to stipulate in their specification that pH testing is required before commencement of the installation.

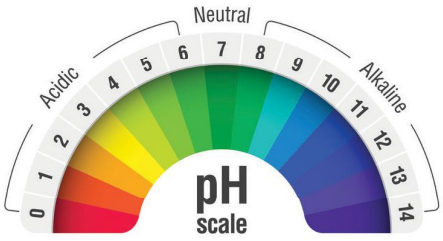
Best practice for a successful floor covering installation is certainly not to leave things to chance, but to undertake the required testing referred to above, and to proactively take the approach of applying an appropriate product that that can address the genuine threat from moisture and high surface pH Level on the installed system. This way ensuring that the risk of floor covering installation failure is significantly reduced prior to commencing with the application of associated adhesives, primers, coatings, and floor coverings.

Oxtek Solutions – Proactively Combat Subfloor Moisture and pH Levels

Oxtek Solutions have a range of penetrative colloidal silicate products that will not only address moisture concerns within the concrete, but also to stabilise the surface pH value of concrete to assist in the preparation of the subfloor for a long-term problem free flooring installation.

The pore-filling ability of the Oxtek Solutions colloidal silicate technology improves the hardened mechanical properties of concrete. By contributing to a denser, less permeable, and less porous structure. Concrete containing colloidal silicate demonstrates an increased compressive strength, decreased chloride diffusion, decreased drying shrinkage, and an increased ability to withstand chemical attack.

Options are available for treatments to be applied to both new and existing substrates and provide permanent protection of the concrete subfloor throughout its intended service life.



New Substrates - X200 Densi-Proof

X200 Densi-Proof is a single pack one application spray on system that deeply penetrates new or existing concrete, provides curing, permanent waterproofing, and protection.

The application of X200 Densi-Proof at time of the concrete pour will cure concrete to provide the hardened properties equivalent to that of water pond curing, permanently waterproofing the concrete from any direction, making the concrete impermeable

and increasing its longevity, whilst providing a penetrative moisture barrier system suitable for impervious coatings and coverings.

Adopting the use of X200 Densi-Proof at time of the concrete pour as an effective curing regime, will significantly reduce the incidence of plastic shrinkage cracking, providing a hardened, denser and dust proof concrete, compatible with subsequent flooring or coating applications. Typically, a flooring covering installation can commence 14 days post application, if X200 Densi-Proof is applied at the time of the concrete pour.

Existing Substrate – X220 Moisture Fix

X220 Moisture Fix is designed for existing concrete and has been formulated to provide the flooring installer with a cost-effective method to eliminate the risks and problems associated with subfloor moisture problems. A single pack one application, spray or pour and spread, system that deeply penetrates new or existing concrete, provides permanent waterproofing, curing and protection. It provides an effective moisture barrier for impervious floor coverings and coatings.

An application of X220 Moisture Fix allows early site access (foot traffic in 3 hour post application) and in most cases is ready to accept floor preparation and floor covering products in 24 hours.

Although topically applied, as X200 Densi-Proof and X220 Moisture Fix penetrate into the deep matrix of the concrete, they leave behind no film or residue on surface of the concrete. Therefore, having no adverse effect on the subsequent floor covering installation, whilst providing improved flexibility and efficiencies to the project concerned.

For over 24 years Oxtek Solutions products have been used to effectively prevent moisture ingress and egress, and stabilise the surface pH level of concrete subfloors, resulting in almost a quarter of a century, of problem free flooring installations for our customers and their clients.

To find out more details on Oxtek Solutions range of products and our strategies to assist in achieving problem free floor covering installations, please contact reception@oxtek.com.au or call 03 9798 7534.

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