

TECHNICAL BULLETIN

GREEN SLAB CONCRETE, CONSTRUCTION MOISTURE SUPPRESSION SYSTEM USING DUNLOP DAMP-PROOF

INTRODUCTION & SCOPE

In situations where a new concrete slab has been laid, the residual water in the concrete, called 'construction moisture' can create problems for subsequent floor coverings. This loss of residual moisture is such that the concrete achieves an acceptable degree of moisture content after air drying at an approximate rate of one month per 25mm thickness per side exposed, so anywhere from three to six months may elapse before the concrete is dry enough for *levelling cements, waterproofing membranes, and impervious floor coverings such as resilient floor finishes* to be laid.

This bulletin describes a moisture suppression systems for green slabs based around DUNLOP DAMP-PROOF.

LIMITATIONS

These recommendations are directed at trade style applications. For domestic situations it is This system is only applicable to concrete that:

- Is surface-hard prior to the installation of the moisture barrier.
- Has reducing moisture content when measured over several days¹.
- Has moisture levels less than 90% RH when measured to AS1884-2012 clause A3.1.2 using ASTM F2170².

Is not subject to permanent moisture such as rising damp, and is not below grade.

SYSTEM

The floor must be mechanically prepared to remove any laitance, curing compounds or other residues left over from the concrete pour. The concrete surface must be porous and not steel trowel or burnished finish.

- a. A coat of DUNLOP DAMP-PROOF is applied to the concrete at a rate of 2-2.5m²/litre.
- b. The coated surface is allowed to stand for a minimum of 12-16 hours. Note that high humidity and moisture can delay the drying of this material.
- c. A smoothing cement coat is then applied over the surface to a minimum thickness of 3mm. The choice of smoothing cement is dependent on the final flooring surface. For resilient flooring, floating timber, carpet, cork and linoleum use DUNLOP ARDIT FLOOR LEVELLER and ceramic tiles DUNLOP MULTIPURPOSE FLOOR LEVELLER.

Notes

¹ - It should be noted that in very fresh concrete it may be difficult to determine if the moisture is falling into the required range, in which case the full two coat system is recommended.

² - The alternative moisture method in AS1884-2012 under clause A3.1.3, which is based on ASTM F2420 is no longer valid. ASTM have withdrawn this method.

Always refer to the product data sheets for specific usage details.

The information contained herein is to the best of our knowledge true and accurate.

No warranty is implied or given as to its completeness or accuracy in describing the performance or suitability of the product application.

Users are asked to check that the literature in their possession is the latest issue.

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GLOSSARY

Construction moisture— Is the moisture that remains in concrete from when it is poured. This is the excess 'residual' water is required to pour and form the concrete and has to evaporate out of the slab over time.

Impervious floor coverings—This refers to materials specifically such as sheet vinyl and rubber, but also vinyl strip tiles (LVT) vinyl composite tiles (VCT) and PVC backed carpet tiles. These materials do not breathe and trap moisture under them.

Resilient floor finish—The industry generic name for vinyl flooring, linoleum (senso lato), rubber flooring and to a lesser degree cork.

Smoothing cement—a liquid cement based product that is poured over a substrate to make it smooth and flat. These are also called floor levellers, self levellers and the standard term underlayment.

Waterproofing membranes—This has a specific meaning in AS3740, but in this sense refers to a flexible moisture suppression system that is applied onto the surface to stop moisture from above the floor entering it.