



Installation of Tile or Stone Over Concrete with Crystalline Waterproofing TDS 142

Recently we have seen an increase in the amount of tile and stone installed over concrete or concrete masonry units that have been treated with a crystalline waterproofing. These waterproofing materials are designed to fill the concrete pores and capillaries with crystals that form when the treated concrete is exposed to moisture. In design and principle, they do a very good job of significantly lowering the permeability of the concrete, reducing shrinkage, crack healing (i.e. potentially sealing hairline cracks), improving freeze/thaw resistance and improving concrete durability. These facts mean that crystalline waterproofing materials are a boon to the concrete industry.

Crystalline waterproofing can be used in three ways: 1) it can be applied to the surface of new or existing concrete as slurry, 2) dry shake application onto fresh concrete and incorporated into the concrete during the finishing process, or 3) mixed into the concrete as an admixture.

It should be noted that crystalline waterproofing products may or may not be compatible with a tile or stone installation directly applied to the treated concrete. It is important to refer to the manufacturer of the crystalline waterproofing for more information on this topic, and to follow their guidelines for surface preparation or other treatments/procedures to make the surface ready for a tiled installation system.

Treatment of concrete with crystalline waterproofing may have an effect on the adhesion properties of the cementitious tile setting materials, plaster or an ANSI A118.10 compliant waterproofing membrane. It would be recommended to conduct in-situ tests on the waterproofed surfaces to determine if additional surface preparation is necessary to ensure adhesion. This preparation can include mechanical abrasion, bead-blasting, high pressure water blasting, or shot-blasting.

There are 3 methods for the installation of tile or stone over crystalline waterproofed concrete:

- 1) Use of Tile Council of North America (TCNA) Handbook method P602. Confirm with the crystalline waterproofing manufacturer that their product can be used as the primary waterproofing membrane in TCNA Method P602 and that a bonded mortar bed can be properly adhered to their product and will function in this method;
- 2) Direct bond of the tile or stone to the crystalline treated concrete using 254 Platinum 254 Platinum Plus or MULTIMAX™ LITE, following the crystalline waterproofing manufacturer's surface preparation guidelines;
- 3) When a waterproofing membrane is specified directly onto the crystalline treated concrete, please refer to the crystalline waterproofing product manufacturer for recommendations and surface preparation.

HYDRO BAN® XP, HYDRO BAN® and 9235 Waterproofing Membrane are cold liquid, latex-based waterproofing membranes which are manufactured to be used as a component of the LATICRETE® System. HYDRO BAN XP, HYDRO BAN and 9235 Waterproofing Membrane also act as anti-fracture membranes which can accommodate up to 1/8" (3mm) of lateral movement. HYDRO BAN Cementitious Waterproofing is a cement based waterproofing which meets ANSI A118.12 crack suppression requirements when installed with the LATICRETE waterproofing/Anti-Fracture Fabric. Crystalline waterproofing is a component of the concrete and will not accommodate any type of movement or provide any anti-fracture capabilities. Tile can be installed onto HYDRO BAN XP, HYDRO BAN or 9235 Waterproofing Membrane in as little as 1 - 4 hours at 70°F (21°C) after installation using 254 Platinum, 254 Platinum Plus or MULTIMAX LITE. It should also be noted that concrete treated with crystalline waterproofing admixture requires similar cure time as concrete which has not been protected with crystalline waterproofing.

LATICRETE can provide you with superior installation materials, single source responsibility, knowledge gained from over 60 years of quality installations around the world, and the LATICRETE 25 Year Tile & Stone System Warranty ([DS 025.0](#)) when using a full LATICRETE System. Visit <https://laticrete.com> for information on warranties.

Technical Data Sheets are subject to change without notice. For latest revision, check our website at <https://laticrete.com>
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