



# HYDRO BAN<sup>®</sup> In Pools and Water Features

## Frequently Asked Questions

### TDS 406

#### HYDRO BAN<sup>®</sup> in exterior, in-ground or on-grade water features

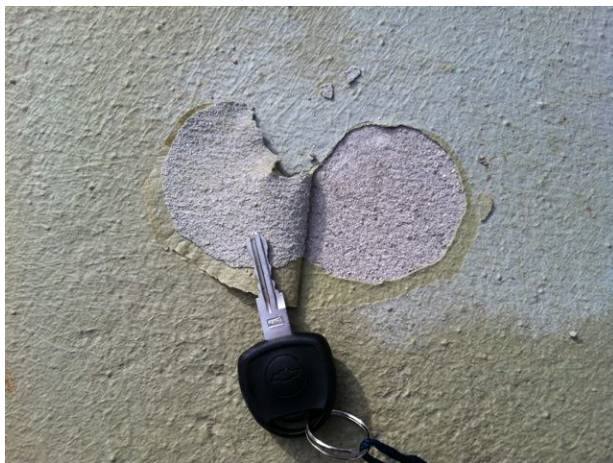
The installation of HYDRO BAN<sup>®</sup> in exterior, in ground or on-grade concrete swimming pools, fountains and water features presents challenges that are not present in typical interior applications, such as shower stalls or tub surrounds. These challenges include, but are not limited to; difficulty in keeping the surface of the pool clean for any extended period of time, the presence of moisture from a variety of sources in the concrete pool shell, and unpredictable climatic conditions. The following should help address these challenges and help achieve successful installations.

**1. How can I be certain the pool is ready to receive waterproofing?**

A pre-installation site visit, prior to commencing any tile work, will help to determine if the substrate is constructed properly and the job site conditions are satisfactory. The tile installer should inspect all surfaces to receive waterproofing and notify the architect, the construction company, general contractor or other interested parties of any defects or conditions that may prevent a satisfactory installation.

**2. Do I have to clean the pool before applying the HYDRO BAN?**

Yes! The surface of the pool shell must be clean. This step is often overlooked and can lead to problems. The first step is to remove any surface contamination left from the placement of the concrete such as form release agents, laitance (the weak, powdery cement fines which can appear on the surface of a poured, vibrated concrete wall), dust, dirt, oil, paint, concrete sealers, and curing compounds or any other material that can act as a bond inhibitor.



**3. How thick should each coat of HYDRO BAN be applied?**

HYDRO BAN is installed at a uniform wet coat thickness of 15–22 mils (0.4–0.6 mm). The consumption per coat is approximately 0.4 L/m<sup>2</sup> (0.01 gal/ft<sup>2</sup>); coverage per coat is approximately 2.5 m<sup>2</sup>/L (100 ft<sup>2</sup>/gal). Use a wet film gauge to check thickness. Applying coats which are too thick requires longer cure times prior to application of a second coat or to flood testing as directed in the HYDRO BAN data sheet (DS 663.0) and HYDRO BAN Installation Instructions (DS 663.5). Make sure each layer is completely cured prior to application of a second coat or before flood testing as directed by the HYDRO BAN data sheet (DS 663.0) and HYDRO BAN Installation Instructions (DS 663.5). Two coats at the proper thickness are required; three coats or more are not required or recommended!

**4. What if the concrete gets dirty again?**

In many instances, airborne contamination on the job site is a constant. Clean the surface using a damp sponge, with clean water, immediately prior to installing the membrane to help ensure that the concrete is clean and free of

dirt or dust. This process also lowers the surface temperature and lowers the absorption rate of the concrete to help ensure better adhesion.

**5. The concrete pool was poured a month ago, why is some of the concrete still wet?**

Exterior pool shells can be subject to moisture intrusion from various sources. Water may wick through the concrete pool floor or walls due to moisture in the ground. This may occur if the pool is located at the bottom of a hill, in an area near a body of water or where the water table is near the surface. Concrete will absorb rainwater causing moisture concerns; even if concrete appears to be dry, it may still have an extremely high moisture content which may take a long time to dry out if protected from further moisture exposure. Concrete which is always exposed to weather (e.g. rain) will never be dry.

**6. The pool looks dry. How do I tell if there is moisture in the concrete?**

The simplest way to determine if there is moisture in the concrete is to tape a sheet of plastic on the floor (ASTM D4263 “Standard Test Method for Indicating Moisture In Concrete by the Plastic Sheet Method”) and allow it to remain undisturbed for a minimum of 16 hours. If moisture accumulates under the plastic, this is a good indication that the moisture vapor emission rate (MVER) may still be too high to apply ANY waterproofing membrane. It is important to note that typical MVER tests per ASTM F1869 and F2170 cannot be effectively conducted on applications which are exterior or interior in structures which are not acclimatized (e.g. heated or air conditioned). Therefore, the ASTM D4263 test is qualitative (showing the presence of moisture) and is not quantitative (it does not show you how much moisture). Please refer to LATICRETE Technical Data Sheet 166 “LATICRETE and Moisture Vapor Emission Rate, Relative Humidity and Moisture Testing of Concrete”, LATICRETE Technical Data Sheet 183 “Drying of Concrete”, or, the LATICRETE “Tiled Swimming Pools, Fountains and Spas Technical Design Manual”, all available at [www.laticrete.com](http://www.laticrete.com) for more information.

**7. Will HYDRO BAN® control moisture or water from entering from the underside of the tile system due to negative hydrostatic pressure or excessive moisture content?**

No! HYDRO BAN is designed to contain water from the positive side (top) only. The use of this membrane is not recommended where negative hydrostatic pressure or excessive moisture vapor transmission exists. Maximum amount of moisture in the concrete mortar bed substrate should not exceed 5 lbs. /1,000 ft<sup>2</sup>/24hrs (283µg/s• m<sup>2</sup>) per ASTM F1869 or 75% relative humidity as measured with moisture probes per ASTM F2170.



**8. What happens if it rains?**

In exterior pools, rainwater can be a major source of moisture content in the concrete. Left unprotected, the concrete will absorb large quantities of water from exposure to rain which may never dry out if left unprotected. Tenting installed around and over the pool will not only provide shelter from rain but also from direct sunlight. Tenting is beneficial not only during the application of the HYDRO BAN, but during and after the installation of the adhesive and grout until they are fully cured.

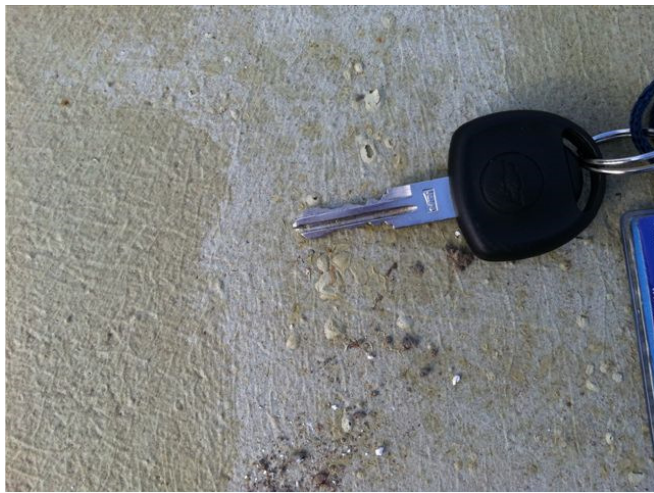
**9. What if the some areas of the HYDRO BAN stay the light, sage green color two hours or longer after it is applied?**

This is a good indication that there is either excessive moisture in the concrete or the surface temperature of the concrete is too low, both of which will affect the curing of the HYDRO BAN. Applying the HYDRO BAN in

layers which are too thick may also increase cure time and keep the membrane light in color for extended periods. Excessive moisture may also cause blistering to occur. Always allow the first coat of HYDRO BAN® to dry to a uniform olive green color before applying the second coat. Never apply more than two coats of HYDRO BAN. Refer to HYDRO BAN Installation Instructions (DS 663.5) for more information.

**10. How long can HYDRO BAN be left exposed prior to covering with tile, stone or other suitable wearing surface?**

HYDRO BAN must be covered by tile, stone, suitable hard wearing surface, or a skim coat of a latex fortified thin-set mortar within 30 days of its application. Excessive exposure to UV light will damage the HYDRO BAN which can lead to cracking and/or delamination of the membrane. Applications of HYDRO BAN on floors must be protected from excessive foot traffic to prevent damage caused by wear, dirt and exposure to construction debris. Areas damaged by exposure to damaging elements must be repaired and allowed to fully cure (as stated in Question 3) prior to installation of tile or stone, or, flood testing.



**11. How soon can I flood test HYDRO BAN?**

Prior to flood testing, allow the second coat of HYDRO BAN to dry to a uniform olive green color and then allow two hours cure at 21°C (70°F) or higher. For colder temperatures (between 10°-21°C or 50°-69°F) allow the second coat of HYDRO BAN to dry to a uniform olive green color and wait 24 hours prior to flood testing. Refer to LATICRETE Technical Data Sheet 169, “Flood Testing Procedures” for more information on this topic. Remember, HYDRO BAN must be completely dry, throughout each layer, before the countdown to flood testing can begin.

**12. Can I apply a plaster finish over HYDRO BAN?**

No. Typical industry pool plasters (e.g. marcite, marbleite, etc...) can present compatibility issues when installed over any LATICRETE® latex based waterproofing membrane. As these plasters cure, tensile forces are transferred to the membrane / substrate interface which can cause the membrane to lose bond. LATICRETE Waterproofing Membranes are not recommended for these applications. The use of cementitious waterproofing membranes, where compatibility with pool plasters is approved by the membrane manufacturer, is a possible option for these applications.

Technical Data Sheets are subject to change without notice. For latest revision, check our website at [www.laticrete.com](http://www.laticrete.com)  
TDS 406.doc R 29 August 2013



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