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A Better World

Installing LATICRETE Waterproofing Membranes Over Rough Surfaces.

TDS-1001

Prior to the installation of a HYDRO BAN or HYDRO BARRIER Waterproofing Membrane System, out of tolerance surfaces can be dimensionally corrected, finished and made smooth with a LATICRETE parge, skim, render coat, mortar/screed bed or self levelling underlayments. Surfaces should be finished to a tight wood float or light steel trowel finish. The use of LATICRETE latex mortars, dry polymer mortars and self levelling underlayments will allow the dimensional correction and flattening of surfaces from a featheredge to any desired thickness. Do not use gypsum or asphalt based levelling products.

Refer to HYDRO BAN ([DS-1036](#)) and HYDRO BARRIER ([DS-1291](#)) for Dry Film Thickness (DFT) requirements. The dry film thickness range is required for the membrane to perform as a part of an installation system under ceramic or stone tile. The background/substrate surface smoothness/flatness, planarity of finish or its regularity is an important factor in achieving this design thickness. The smoother the surface, the easier it will be to apply the membrane and the easier it will be to achieve a consistent film thickness. Concrete or cementitious surfaces must have an International Concrete Repair Institute (ICRI) Concrete surface profile of CSP 1 to 3 as outlined by ICRI Guidelines No. 03732. The maximum allowable deviation in the substrate - for tile with all edges less than 380mm, must not exceed 6mm in 3m from the desired plane and 1.5mm in 300mm when measured from the high spot. Tiles with a side greater than 380mm, must not exceed 3mm in 3m from the desired plane and 1.5mm in 600mm when measured from the high spot. Surfaces shall be smooth without voids, protrusions or other interruptions in the flat plane.

Rough, pitted/voided, sharp, irregular or undulating surfaces make it difficult to apply the membrane to maintain its required even thickness:

1. Rough surfaces make it difficult to apply and maintain even membrane thickness.
2. Pitted/voided surfaces are hard to clean, trap water and air which can leave the membrane unsupported in part, causes blisters/bubbles and promotes pinholes.
3. Sharp or irregular edges are hard to coat with the required thickness, leaving generally thinner membrane applications prone to puncture or tearing on proud and vulnerable parts of the work. Sharp corners on salient wall/wall junctions, step nosings and the like should be rounded to facilitate the correct thickness of membrane.
4. The peaks and troughs of undulating surfaces over small distances keep rollers from making proper contact with the lower part of the substrate to allow even distribution of the membrane.

Differences in the application, and subsequently dry film thickness outside the recommended range caused by surface irregularities, amongst other things, more than likely will result in:

1. Variations in the elongation characteristics of the membrane.
2. A variance or extension of curing time of parts of the installation that can leave the membrane vulnerable and subject to damage. Depending on its exposure, risks include; flood testing, rain, substrate moisture or contractor activities.
3. Possible shrink cracking in thicker sections, including corner junctions.
4. A waste of material. Coverage rates can be severely affected especially at corner junctions.
5. More difficult applications.

The above and other like substrate surface conditions need to be rectified prior to the membrane application to provide the opportunity to maintain the designed thickness and facilitate ease of installation.

Given the LATICRETE Waterproofing Membrane Systems are designed for use under tiling, it is important the surface level, regularity, flatness, smoothness, pitch or plane is suitable for both application of the membrane and the tile as required by the relevant codes and standards. However it should be noted that tighter tolerances may be required by designers or the physical properties of the intended finish. For instance a 1000mm x 1000mm porcelain tile may require higher tolerances in surface planarity than the membrane, so in this case the surface should be prepared for the large format tile.

When preparing the substrate for surface planarity, flatness and dimensional tolerances, consider all the individual elements of the system, not just the membrane.

See [TDS - 1003](#) for HYDRO BAN Installation Instructions for Australia.

See [TDS - 1025](#) for HYDRO BARRIER Installation Instructions for Australia.

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