

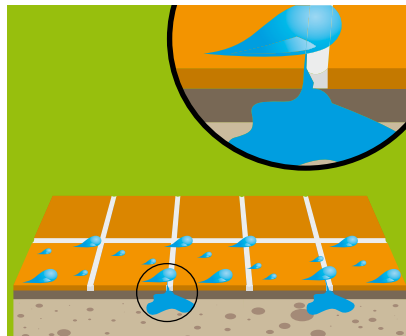


WATER PROOFING

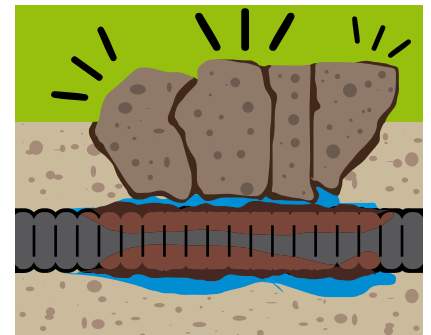
NECESSITY OF WATER PROOFING

Before tiling in areas, where will be exposed to water effect such as wet areas, outdoor terraces and pools, the substrate should be coated with appropriate water proofing materials (resistant to positive water pressure).

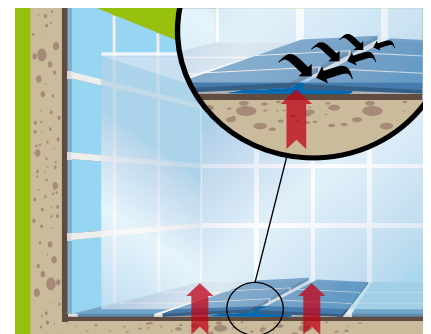
- The water may permeate through the pores or voids on the covering and joints into the adhesive and substrate. The water permeated by the substrate may encourage moisture and mould growth. The trapped water may seep through the substrate to lower floors in buildings and cause further problems.



- If trapped water in the substrate runs to the concrete building structure and contacts with reinforcement elements, it will cause corrosion of the elements. Corrosion will cause volume expansion in the concrete and reinforcement causing internal stresses and cracks, thus resulting with a vulnerable building structure.



- In case of outdoor pool and terraces; the water seeped under the covering may freeze in cold weathers. This will cause volume expansion and tension under the covering. Tension may cause disbonding, cracking or deformations of the covering.



WATER PROOFING APPLICATION (AGAINST POSITIVE WATER PRESSURE)

Most of the water proofing materials particular to tiling are applied by smearing the material on the substrate.

- For application in wet areas and small terraces semi-elastic water proofing materials will provide required performance, where in pools and large terraces full-elastic materials are required.

Vertical and horizontal corners may work in different axis under loading of the structure. These forces will generate shear forces along cold joints. These joints form the critical points with crack possibility.

- Even though a water proofing material is required to be flexible, its flexibility may not be sufficient to absorb the movements arising at the cold joints (internal corners) of the applied area. Reinforcement with flexible tape or alkali resistant reinforcement mesh should be performed in order to prevent any water leakages at cold joints.

- If the area subject to water-proofing will be exposed to continual water pressure (such as pools or water tanks) reinforcement of the water proofing coating is recommended strictly. Reinforcement should be done with appropriate reinforcement materials (such as alkali resistant reinforcement mesh). Reinforcement is embedded in the first coat of water proofing, when the coat is still wet, as recommended by the reinforcement manufacturer. Upon drying of the reinforced first coat, second coat should be applied as described above.

Water proofing material is applied over the surface using a stiff brush or a paint roller. 2 coats of application is recommended. It should be applied over the surface spreading out evenly and ensuring full overlap between each brush or roller application. The second coat should be applied as soon as the first coat has dried (reached initial set). Apply the second coat in right angles to the first coat application direction to ensure a pinhole free application (in practical, application is recommended in such that first coat in horizontal and second coat in vertical directions).

- Before applying water proofing on the substrate, surface adhesion should be improved with appropriate primers, particularly for high porosity substrates.

- On terraces, wet areas and similar areas there should be an incline of 3% on the floor along the direction of drain.

- Coats of water proofing must fully cover the surface with pinhole and joint free application. In case of incomplete coating, the surface will have voids possibly causing leakage.

- Insulation details of structures on the covering (such as pool lighting armatures, discharge pipes, drains and faucets) should be figured out with appropriate water proofing solutions.

