



The Guide to

Bathrooms Waterproofing



Bathrooms are exposed to the significant levels of moisture. The bathroom waterproofing is essential to avoid leakages and damages to structural parts. It prevents moisture damage in the substrate. However, poorly installed waterproofing can cause same problems as no waterproofing at all. In this guide, we will discuss some myths connected with the bathroom waterproofing. To avoid future problems and costs, it is essential to choose the appropriate products and seal the bathroom properly. Is sealing the base enough to protect the bathroom and what are the wet and damp areas? How to complete the set of products necessary to seal the bathroom and when do we have to use insulating mats?

We can advise treating a bathroom as a wet room to ensure the water sealing is 100% effective. The wet room is the fully tanked room with the full barrier to water. It means that water will not penetrate outside the wet room and the water vapour that condenses on walls and floors will not cause any damage. The tanked room provides a fully watertight seal beneath floors and walls what allows to install the walk in shower or similar.

Building Regulations - Bathroom and Wet Rooms It is not required to obtain the building regulations approval for renovating a bathroom or converting it into a wet room. However, if there

WHICH AREAS NEEDS WATERPROOFING?

It should be done in all wet areas in the building, for instance:

BATHROOMS WET ROOMS SHOWER STALLS



are any significant changes to the building structure e.g. extension with a wet room or new drainage, it is necessary to consult a building regulations controller before installation.

Ventilation - Due to the presence of heat and moisture bathrooms and wet rooms need to be properly ventilated to ensure proper airflow and energy efficiency, what is specified in Part F of the Building Regulations Act 2010. Continuous ventilation systems are more recommended than intermittent fans.

Drainage - The installation and maintenance of wet room drains is covered in Part H of the Building Regulations Act 2010, and key provisions include:

- All foul water drainage systems should have a large enough capacity to carry the expected water flow from the shower at any point.
- The size and gradients of the pipes should be adjusted to meet this capacity.
- All points of discharge into the system should be fitted with a water seal trap or approved alternative.
- Minimum trap sizes and seal depths applies.

Electrics - There are strict guidelines on the installation of electrics in bathrooms and wet rooms, and most electrical work must comply with Part P of the Building Regulations Act 2010. This section states that no mains voltage may be fitted in a wet room, including electric shaving sockets, light switches, standard sockets. All lights should be enclosed and mounted on the ceiling, with a pull cord switch installed or wall mounted light switches should be installed outside of the wet room. Electric and gas heaters must be fixed at a safe distance from the shower area.

For a full list of the Building Regulations Approved Documents and how to apply for approval, visit Planning Portal.

Why waterproof the bathroom?

Eliminate leaks - water penetrates and with any damages, or unsealed areas it will quickly find a route out. That will cause dampness, leakages

Prevents damp and mould - in unsealed bathroom water can penetrate the wood, plasterboard or brick and cause dampness. Waterproofing of substrate can prevent the build up of condensation and prevent damp from occurring.

Insulation - waterproof system can act as an insulation especially in case when bathroom formed external walls

More design options - wet rooms, open plan shower, wall hung toilets; wall hung basins

Bathroom Waterproofing Step by Step

1. Install the green plasterboards or make sure the walls are structurally sound.
2. Apply primer - before application of the primer remove any nails, screws, fill gaps, sand the surface if required. Ensure walls and floor are smooth, and there is no dust. Apply the coat of the primer starting from a floor, through walls and ensure the even coverage.
3. Apply 1st coat of liquid rubber membrane - start an application from corners, through floor and walls. Ensure the full coverage.
4. Use sealing tape- seal any joints between floorboards, walls, floor, etc. Allow surface to dry approximately 2-3 hours. Seal drainage pipe with tape. Ensure there are no air bubbles in the membrane, roller it until smooth.
5. Apply 2nd coat of liquid membrane- Follow with the same application on the walls. Applications of coats should always be in dif-

ferent directions to allow for even coverage.

6. Ensure surface is properly dried before tiling.



WET AREAS IN A KITCHEN



AROUND DRAINS AND TAPS



LAUNDRIES



WATERPROOFING MYTHS - TRUE OR FALSE

It doesn't matter whether I will choose the system of a given manufacturer or different products from various manufacturers. **FALSE!**

The system by one manufacturer is composed in such a way, so all products form complete solution dedicated to the particular area, e.g. a bathroom, a terrace, a swimming pool or basement. Replacing the products within systems is possible. However, attention should be paid to their parameters since the matching of products is crucial to durability, completion time and reliability. Moreover choosing a complete system often allows for a guarantee by the manufacturer, as installers are adequately trained and certified to work with the specific products.

The liquid rubber membrane is enough for bathroom waterproofing. **FALSE!**

Though proper sealing preparation is the basis, one has to remember that the liquid rubber membrane on its own is not enough. Indeed, we start the waterproofing with applying the chosen product into pre-primed corners and all wall and floors joints, but these areas should also be protected with, e.g. sealing tape or an additional coat of sealing compound.

Underfloor heating (UFH) in bathrooms doesn't have an adverse impact on waterproofing. **TRUE!**

There are no obstacles to doing the UFH installation during a repair or when designing a new bathroom. Proper workmanship and quality products will guarantee the warmth of floor in a bathroom. It is worth to remember:

- Taking into account health & safety, electric heating should not be installed in areas that are directly exposed to water e.g. shower floors. For wet rooms, the water under floor heating is a better choice.
- When choosing the adhesive mortar, it is important to pay attention to its heat resistance parameters and deformability features.
- When choosing the grout, it is necessary to get the reinforced grout.

The joints require additional sealing. **TRUE!**

Any joints exposed to the activity of water always need additional sealing. These are crucial elements, which not adequately protected, may lead to damage - flooding a neighbour or damages to walls

and floor. Moreover, the protection of pipe culverts under the ceramic units is highly recommended.

It is not recommended to use liquid rubber membrane on a wooden substrate. Instead, it is better to use sealing mats (waterproofing membrane). **TRUE!**

Without proper protection guaranteed by waterproofing products and base preparations, wood in wet rooms will cause damage. Wood, as opposed to concrete, is an elastic raw material that is subject to variable changes when exposed to the moisture. It is, therefore, important to select the proper products and adequately prepare the wooden substrate. Such products should reduce the possible wood expansion or even nullify the tensions between e.g. tiles and wood. Products should be durable, resistant to moisture, dampness and activity of microorganisms (essential in the case of a wooden base).

WATERPROOFING PRODUCTS

Below is the selection of products for the best results in bathroom waterproofing. If you need any help selecting a suitable substrate, you can obtain the advice in one of IBB depots. All below specified products are available in IBB depots or www.ibb.uk

IZONIL - Izonil Waterproof and Breathable Plaster provides a totally waterproof barrier, without the need for a membrane. Applied direct to walls it seals and prevents the ingress of water either side of the plaster while remaining vapour and air-permeable, allowing trapped moisture to evaporate. It does not contain harmful or flammable ingredients and so is environmentally friendly.

Izonil Waterproof and Breathable Plaster is a high quality, cement/lime based, fibre reinforced, rendering and plastering mortar for masonry that meets the requirements of BS EN 998-1. Manufactured to strictly controlled specifications, it is supplied as a ready mixed powder that requires only the addition of water on site.

Can be used on any conventional masonry such as brick, stone, blockwork and concrete from 15 to 30mm thickness. NOT suitable for application onto plasterboards! Izonil Plaster is a fine grade mortar

and so offers a 'one coat' solution providing undercoat and professional finish coat.

Benefits:

- Continuous laboratory testing for composition and quality
- 10 year guarantee on water resistance
- No need for membrane or any other additional layers
- Vapour-permeable, allowing trapped moisture to evaporate
- Easy to use- no special tools, skills or training are required
- More cost-effective than any other multi-layered solutions
- Applicable as above-grade or sub-grade insulation
- No bituminous or toxic ingredients



MOISTURE RESISTANT PLASTERBOARD (GREEN) - Enhanced plasterboard with water repellent additives in the core. Recommended for use in intermittent moisture applications where additional performance is required such as in kitchen and bathroom walls and ceiling installations. It is also suitable for use in external soffits that are in sheltered positions.

CEMENT BOARD - A cement board is a combination of cement and reinforcing fibers fabricated in thin sheets that can be used as a substrate when attached to the plywood for tiles, kitchen units etc. Moreover, it can be used as a substrate for external plaster and renders. The cement board is not waterproof, but it is highly resistant to absorbing moisture and has excellent drying properties. It weighs more than the plasterboard sheet.

Sealing Mats - WYKAMOL Slimline WATERPROOFING MEMBRANE - Slimline Mesh Interior Waterproofing System.

Cavity drain membranes, drainage and accessories for remedial interior isolation of damp above-ground or basement walls and floors and direction of surface water.

- Suitable for applied plaster finish or plasterboard on adhesive dabs.
- Water entering through walls is contained behind membranes and directed to drainage at base of wall.
- Suitable to provide Type C drained protection to Grade 3 or Grade 4 environment for residential or commercial use, in conjunction with adequate heating and ventilation.
- Requires sump and pump or equivalent passive water disposal system. (Sumps and pumps specified separately).



ATLAS WODER S - ATLAS WODER S - water-resistant cement mortar protects substrates against pressurised water – can constitute the internal and external sealing layer of walls and floors, swimming pools and other water reservoirs.

Creates water-resistant layer – light, medium, or heavy insulation type (depending on the thickness of the applied layer).

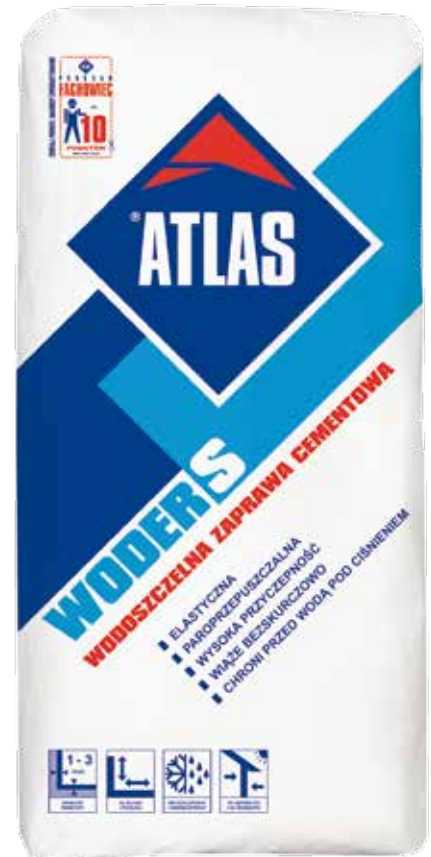
Protects substrates exposed to precipitation and ground water – balconies, terraces, façades, cellar walls, foundations, stairs, plinths (e.g. before tiles fixing or applying decorative render ATLAS DEKO M type).

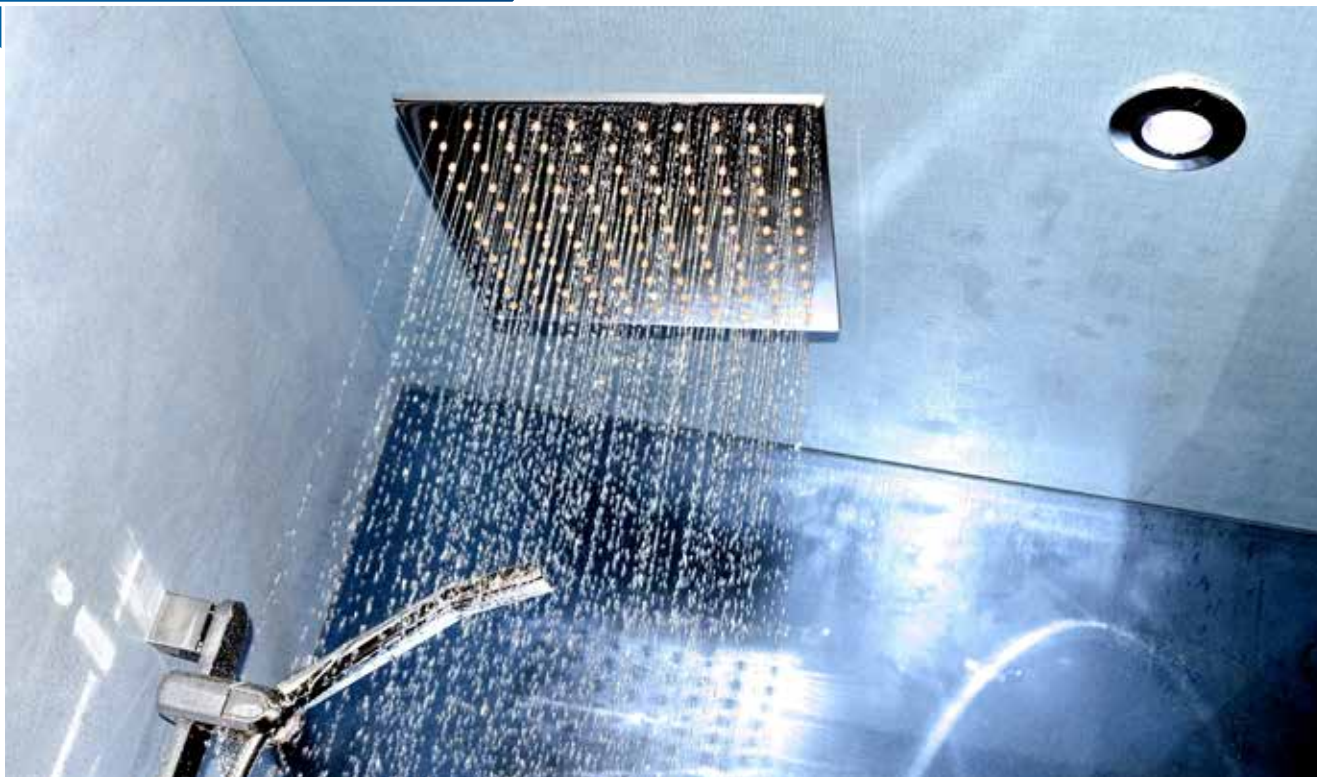
The main characteristics

- flexible, steam permeable
- protects against pressurised water
- allows sealing tapes embedding
- high adhesion, sets without contraction
- sets without contraction
- for mineral substrates

The main parameters

- layer thickness: 1 - 3 mm
- consumption: 2 kg / 1 m for 1.5 mm thickness
- resistant to water pressure of 5 bars
- adhesion: min. 1.2 MPa





ATLAS WODER DUO - two-component waterproofing. Forms waterproofing and damp proofing – light, medium or heavy type (depending on the thickness of the applied layer).

Seals against water:

- under pressure of 50 m water column (5 bars) – in water reservoirs, pools (resistant to chlorinated water)
- pressureless – flowing freely as the result of rain, surface washing, in showers, in wash rooms or in the form of surface damp, etc.

The main characteristics

- for light, medium and heavy type waterproofing
- flexible, obturates scratches and cracks
- reinforced with fibres
- perfect under tiles on terraces, in bathrooms and kitchens

- for pools, fire water tanks, water reservoirs

The main parameters

- layer thickness: 2-3 mm
- consumption: approx. 3.0 kg / m² / 2 mm
- resistance to pressurized water (50 m): min. 0.5 MPa

AVAL KL 51 - water-tight flexible foil

Description

Creates lightweight type insulation – seals places where water flows without pressure (free flow).

The main element of AVAL sealing system – in



combination with AVAL KT 17 (ATLAS UNI-GRUNT), the tape and other sealing elements.

Protects substrates against moisture inside buildings – renders and screeds in wet premises (bathrooms, baths, showers, kitchens and washing rooms), especially in wet areas of those premises – around shower cabins, wash basins, bathtubs, sinks, etc.

Protects substrates exposed to precipitation – balconies, terraces, etc.

The main characteristics

- protects substrates against humidity
- highly flexible
- for balconies and terraces
- for bathrooms, kitchens and cellars
- element of the sealing system

The main parameters

- layer thickness: 1 - 5 mm
- consumption: ca. 2 kg / m²
- directly under tiles
- adhesion: 1.3 MPa

Read about Waterproof membranes and Tanking system in IBB Builder issue 2/2016 - http://issuu.com/ibbbuilder/docs/ibb_builder_02_2016_issuu?e=22887640/33178066.

The information contained in this guide is for guidance only and should be used in conjunction with installation instructions provided with specific products.