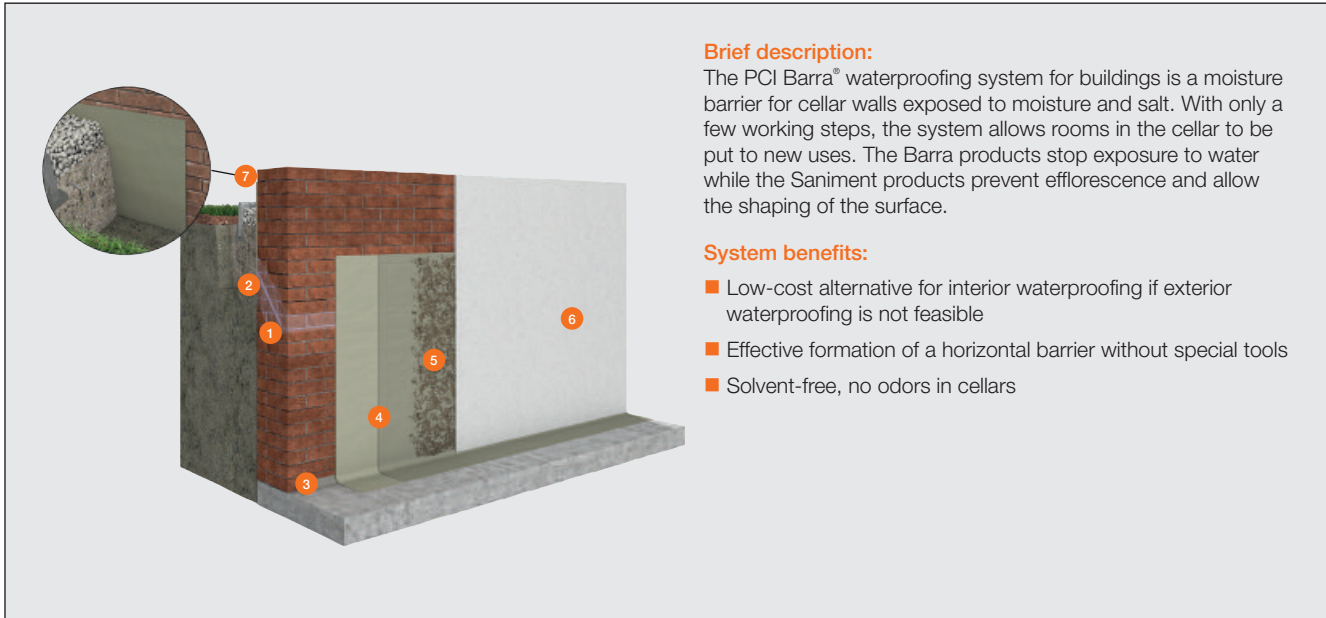


# System for Waterproofing of Buildings PCI Barra®

System for the interior waterproofing of an exterior basement wall in accordance with WTA requirements



**Brief description:**

The PCI Barra® waterproofing system for buildings is a moisture barrier for cellar walls exposed to moisture and salt. With only a few working steps, the system allows rooms in the cellar to be put to new uses. The Barra products stop exposure to water while the Saniment products prevent efflorescence and allow the shaping of the surface.

**System benefits:**

- Low-cost alternative for interior waterproofing if exterior waterproofing is not feasible
- Effective formation of a horizontal barrier without special tools
- Solvent-free, no odors in cellars

Worksteps	Products
Horizontal barrier	<b>1 PCI Barra® Creme</b> Silane injection Solvent-free waterproofing cream for horizontal barriers or <b>PCI Barra® Gisol</b> Horizontal damp-proof course against rising damp
Optionally cement suspension	<b>2 PCI Barra® Inject</b> Filling mortar for drill holes, cavities and cracks in brickwork
Waterproofing / concave moulding	<b>3 PCI Polyfix® plus</b> Quick setting cement mortar for quick repairs in above and below ground situations
Waterproofing slurry against moisture from the back	<b>4 PCI Barraseal®</b> Mineral waterproofing slurry for basements, reservoirs and wastewater areas
Stipple coat	<b>5 PCI Saniment® HA</b> Stipple coat for low absorbent, smooth surfaces
Refurbishing mortar	<b>6 PCI Saniment® 2 in 1</b> Refurbishing mortar for substrates exposed to moisture and salt, single layer
Waterproofing of foundation wall (exterior)	<b>7 PCI Barraseal® Turbo</b> Flexible mineral waterproofing slurry for external basement walls, foundations and concrete elements

## Interior waterproofing of basement walls

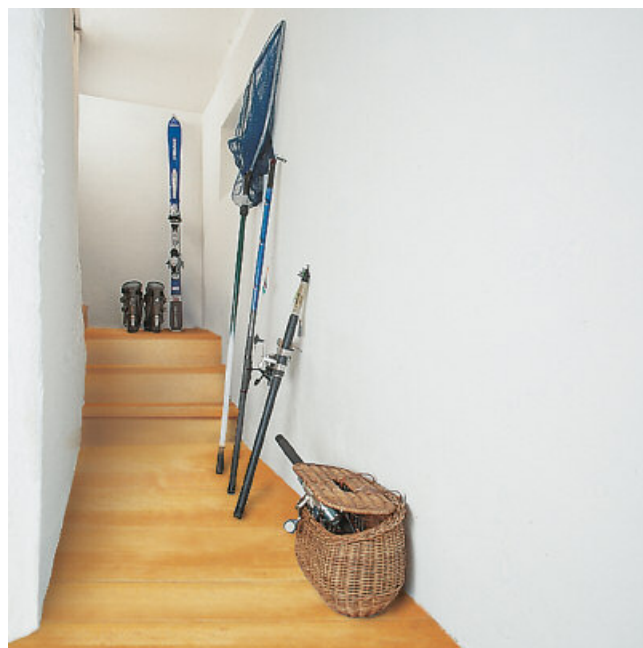
In general, it is always preferable to apply exterior waterproofing to walls in accordance with the new waterproofing standard DIN 18533. With waterproofing of this type, the outside basement wall remains permanently dry and its thermal storage capacity is not reduced. In addition, soluble salts which may damage the structure are not introduced to the basement wall. Nevertheless, it may be necessary to provide interior waterproofing or to apply

refurbishment mortar for economic reasons.

This way, basements can be put to higher-quality use than without refurbishment. PCI products are tested in accordance with WTA requirements, are easy to use and are highly functional. This means that waterproofing and refurbishment mortar application in accordance with WTA requirements can be completed with only a few working steps.



Cellar with moisture and salt damage prior to refurbishment



Cellar after refurbishment

## Action to protect masonry from rising damp

### Horizontal damp-proof course

A horizontal damp-proof course is required to prevent moisture from rising through masonry as a result of capillary action. In other words, the masonry above the damp-proof course is dry. Horizontal damp-proof courses made using PCI Barra® Creme have the advantage that the product can spread gradually through the masonry via the holes which have been drilled. This approach is effective even up to 95% moisture in the masonry as the active ingredient is mixed with moisture in the masonry and then activated by the alkaline surroundings.

Alternatively, a liquid horizontal damp-proof course may be created using PCI Barra® Gisol. This product may be injected into masonry with moisture levels up to 65% from injection containers. Liquid injection may be beneficial in the case of masonry with tight pore structures. In the case of porous structures, we recommend that cavities should be filled with PCI Barra® Inject cementitious suspension before the product is injected.

## Application procedure

### Injection:

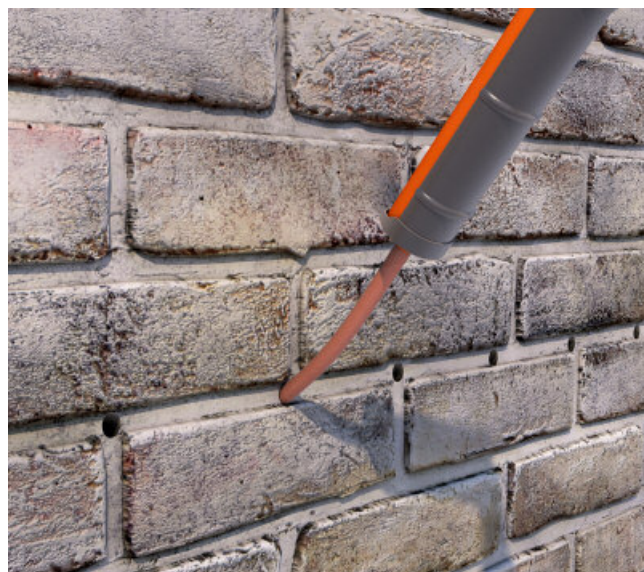
PCI Barra® Creme must be injected via holes that have been drilled in the masonry.

Screw the adapter supplied with the product onto the thread of the cartridge, push the tube into place and insert it up to the end of the hole. If you need a tube longer than 30 cm, you can connect two tubes using the adapter tip.

Press PCI Barra® Creme slowly out of the cartridge, pulling the injection tube slowly out of the hole as you do so until the hole is completely filled. To prevent condensation in the injection holes, the holes must then be sealed using PCI Barra® Inject cementitious suspension.



1. Drill holes and blow out any dust.



2. Inject PCI Barra® Creme, working from the inside to the outside.



3. PCI Barra® Creme horizontal barrier following film formation.

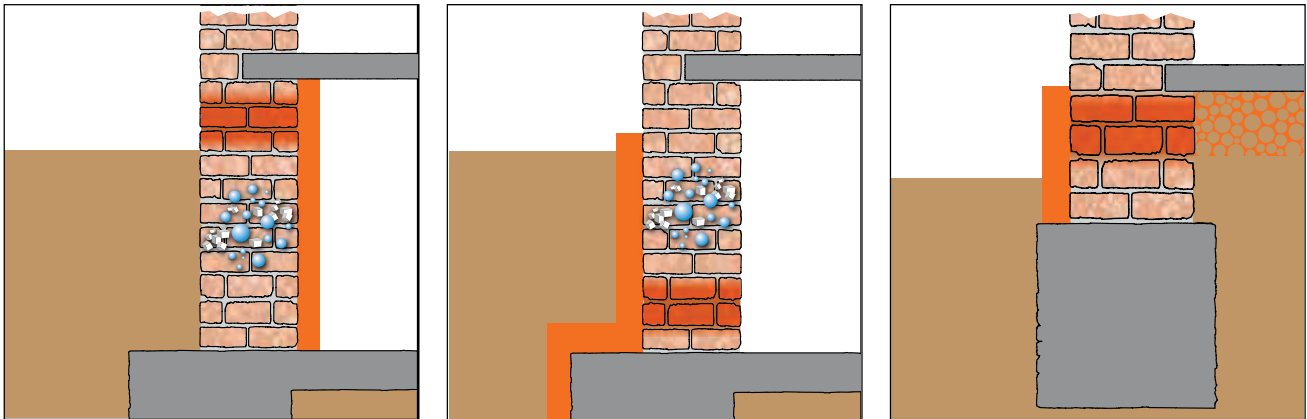


4. Sealing holes with PCI Barra® Inject cementitious suspension.

## Positioning of horizontal damp-proof courses for protection against rising damp

Horizontal damp-proof courses are used to prevent moisture from rising through the masonry as a result of capillary action. In the case of a building with a cellar, the position of the damp-proof course depends on the type of waterproofing selected. If vertical waterproofing is applied to the outside of the wall to prevent the penetration of moisture, the horizontal damp-proof course must be positioned at the level of the

cellar floor. In the case of waterproofing applied from the inside, the damp-proof course must be positioned above the area in contact with the soil but below the ceiling of the cellar. In the case of buildings without cellars, the damp-proof course must be positioned just above ground level. Damp-proof courses may be applied either from the inside or from the outside.



## Action to prevent rising damp in masonry

### Optional interior waterproofing

Often, old basement walls are protected against moisture and only barriers to prevent rising damp are missing. If moisture is also expected from the vertical outside wall of the cellar, it is recommended to provide waterproofing. For this purpose, PCI Barraseal® mineral waterproofing slurry must be applied to an area of the inside basement wall from below the damp-proof course to at least 20 cm above the damp-proof course. This prevents moisture accumulation in the masonry and in plaster systems on the wall. In addition, the diffusion of water vapor into the cellar is reduced.

PCI Barraseal® offers outstanding adhesion to old substrates and can be applied using a brush or trowel. The material can withstand negative water and vapor pressure.



Interior waterproofing using PCI Barraseal®

## Subsequent refurbishment

### Refurbishment mortar

PCI Saniment® 2 in 1 refurbishment mortar is applied to basement walls and as a supporting measure in the case of interior basement waterproofing. The refurbishment mortar absorbs salts which may damage the structure from the masonry and forms an attractive surface that is free from damage. In addition, the product allows the masonry above the damp-proof course to dry and ensures better regulation of the moisture content in the interior atmosphere.

PCI Saniment® 2 in 1 may be applied to the waterproofing slurry or in one layer in the case of masonry with a low salt content. The refurbishment mortar has a high salt storage capacity and very good water-repellent properties. In addition, PCI Saniment® 2 in 1 combines the functions of coarse and fine render. It is therefore possible to create a surface with a homogeneous felt-like structure in only one step and to complete the refurbishment process following the application of interior waterproofing using PCI Barra products.



Application of one layer of PCI Saniment® 2 in 1 to the inside of a basement wall

## Waterproofing of exterior foundation walls

The planning of exterior foundation walls is especially difficult if the precise level of backfilling has not been defined. In this case, waterproofing material which can also be applied above ground level without any problems and allows multi-purpose use is necessary. PCI Barraseal® Turbo flexible reactive waterproofing membrane is UV- and weather-resistant and is available in a grey color adapted to foundation walls. The product can be applied using a trowel or wallpapering brush above and below ground level and the trench can then be backfilled.

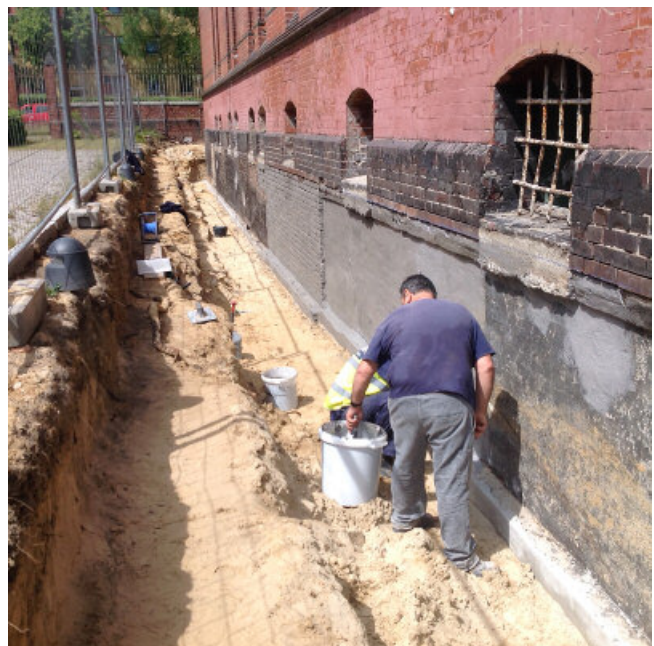
The product can be painted over and covered by plaster without any problems. PCI Barraseal® Turbo is a highly reactive product. It therefore also ensures adhesion to moist substrates and old waterproofing layers.

### PCI Barraseal® Turbo is a highly reactive product

The reactive waterproofing membrane can therefore also be applied to moist substrates. The time required for hardening depends on the temperature. As this is a reactive product, it also ensures adhesion to old waterproofing layers.



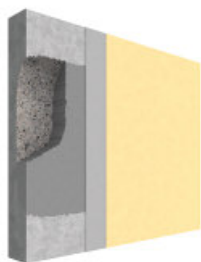
Exterior waterproofing of a foundation wall using PCI Barraseal® Turbo, which can be applied using a brush or trowel.



Following the injection of PCI Barra® Creme from the outside, the wall is waterproofed up to above ground level using PCI Barraseal® Turbo.

## Overview of Construction Systems

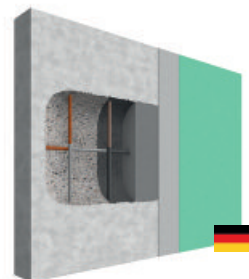
System for Concrete and  
Masonry Refurbishment



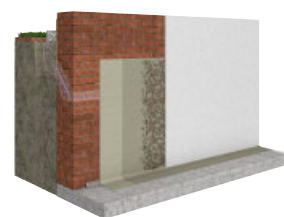
System for Concrete  
Repair



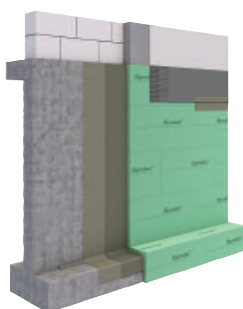
System for Structural  
Repair (PCC)



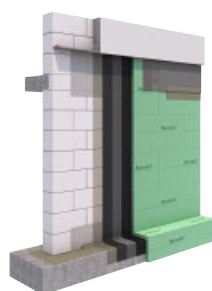
System Barra



System Barraseal Turbo



System Pecimor



System BT 21



System for Double-Leaf  
Brickwork



[www.pci-augsburg.de](http://www.pci-augsburg.de)

The specifications in the valid technical data sheets are to be followed for the use of the PCI products mentioned.

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Any subsequent publication supersedes this edition; the latest edition is always available on the Internet under [www.pci-augsburg.de](http://www.pci-augsburg.de)



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managementsystem