

KEIM



KEIM POROSAN<sup>®</sup>

RESTORATION RENDER SYSTEM (WTA<sup>®</sup>-CERTIFIED)

# Problem



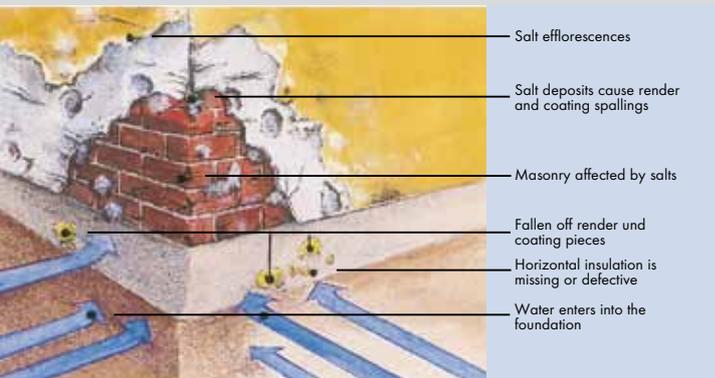
Moist and salt-loaded masonry is characterized by many kinds of damage:

**Moist and salt-loaded masonry causes various kinds of defects**

- Moist spots
- Salt efflorescences
- Render and coating spallings

These damages cause real problems especially on historic buildings, old structures, in cellars and on the foundation areas.

# Cause



Moisture enters through the foundation into the masonry which soaks it up like a sponge. The water rises in the walls because of the capillary effect. With the rising moisture water-soluble, harmful salts like nitrates, chlorides and sulfates reach the structure. The water evaporates and the salts recrystallize. The crystallization pressure then causes render und coating spalling.

**Spallings of render and coating by crystallization pressure**

# Solution



KEIM Porosan restoration render systems, according to WTA® standard (WTA® = International association for science and technology of building maintenance and monument preservation) excel by their optimal pore volume. The rising dampness in the walls reaches the render where it evaporates. The salts are stored in the big pores and thus the render is not destroyed. The render surface remains dry and free from efflorescences.

**KEIM Porosan - optimal pore volume and therefore storing of the salts**

# Safe restoration with KEIM Porosan-System

**KEIM Porosan - good drying features thanks to high water vapour permeability**

The KEIM Porosan restoration render systems according to WTA® (International association for science and technology of building maintenance and monument preservation) standard convince by their characteristics: High water vapour permeability enables the good drying behaviour. Frost-resistant aggregates, a tension-free setting and the water-repellent formulation ensure durability, even on less strong mason-

ry. KEIM Porosan restoration render systems have a long life span even on substrates on which common renders fail quickly. A colourful finish with the highly vapour permeable KEIM mineral paint systems results in a perfectly coordinated, long-lasting and proven coated render system.

## Application

**1.** Removal of the old, moist render up to at least 80 cm above the visible damage limit. **(Picture A)**

**2.** Seriously damaged bricks are replaced, surface losses are refilled. KEIM Porosan-Trass-Zementputz is used as full cover socle render below ground level forming a vertical structure sealing in combination with KEIM Porosan-Dichtungsschlämme (grout). **(B)**

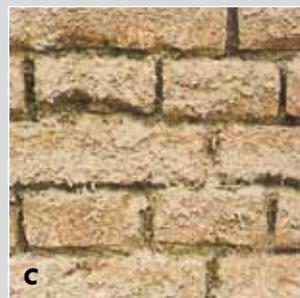
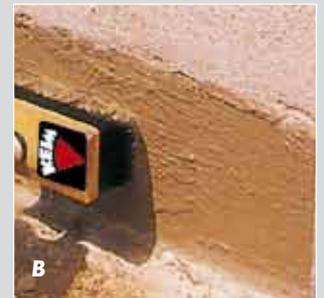
**3.** KEIM Porosan-Trass-Zementputz is applied half-covering as roughcast key coat to provide a safe bonding between a poorly or non-absorbent brickwork and the restoration render. **(C)**

**4.** Irregularities and indentations are equalized with KEIM Porosan-Ausgleichsputz-NP or restoration render. **(D)**

**5.** KEIM Porosan-HF-Sanierputz is applied up to a total layer thickness of at least 2 cm with 2 layers of each at least 1 cm layer thickness (in case of high salt content at least 2x 15 mm restoration render). After the second layer the texture is matched to the remaining existing render. It is possible to apply an additional top coat render layer of max. 5 mm for equalizing texture. **(E)**

**6.** The colour finish is performed with the highly breathable KEIM coating systems. **(F)**

**7.** The technical data sheets and the valid WTA®-technical bulletin "Restoration render systems" must be observed.





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