Most structural damage in buildings is caused by water and moisture: water may cause efflorescence and salt damage, it promotes microbial attack by fungi, moss, lichens, etc., and it reduces the insulating capacity of a facade. But while there are many different kinds of damage, there is one simple remedy: preventive protection against moisture by means of hydrophobic impregnation.

SILRES® BS 3003 and SILRES® BS 4004 emulsions are high-quality, general-purpose water repellents for mineral surfaces. When used for hydrophobic impregnation of building exteriors, they reduce maintenance and repair costs. Impregnation makes the surface easier to clean, enhances the value of the property, and potentially reduces heating costs. Impregnation with SILRES® BS products combines excellent technical performance with easy application.

Highly Durable Protection
SILRES® BS 3003 and SILRES® BS 4004 are water-dilutable, solvent-free emulsions based on a mixture of silane and siloxane. Using capillary action to penetrate the pores of the mineral building material, SILRES® BS 3003 and SILRES® BS 4004 react with the pore walls, siliconizing the pores and preventing water from wetting them — but do not affect water-vapor permeability.

The active ingredients in SILRES® BS products are organically modified silanes and low-molecular-weight siloxanes. These molecules carry reactive alkoxy groups. The release of alcohol forms permanent bonds with the silicate building material.
**Benefits SILRES® BS Emulsions**

- Long-lasting protection
- Substrate stays breathable
- Beading effect
- Extensive penetration
- Resistance to UV light
- No surface discoloration
- No health risk
- Environmental compatibility
- Save energy

SILRES® BS 4004 and SILRES® BS 3003 significantly reduce water uptake on a number of different substrates.

**Application Areas**

SILRES® BS emulsions such as SILRES® BS 3003 and SILRES® BS 4004 are suitable for both artificial mineral substrates and natural stone:

- Brick
- Clinker
- Roofing tile
- Expanded clay
- Sand-lime brick
- Mineral plaster
- Mortar
- Sandstone
- Tuff

**Application Method**

SILRES® BS emulsions can be applied with a brush, paint roller, spray or low pressure flooding (1–3 bar). Depending on the porosity of the surface, dilute the emulsion with tap water and apply two or three layers wet on wet. An active substance content of >6–10% is recommended.