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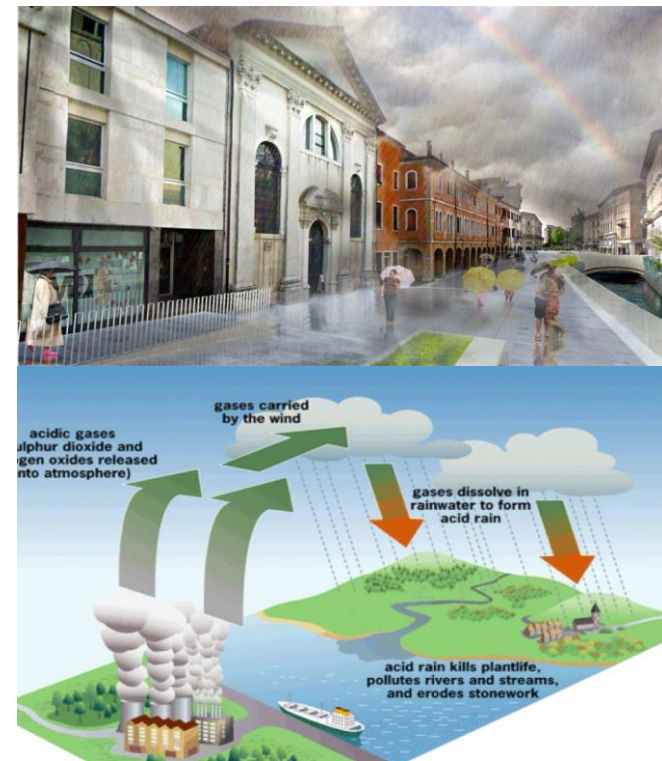
Siloen[®] Silicones for Building Protection

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Why building materials are worthy getting a protective agent

Every building material, whatever its nature, is porous and needs to be protected from weathering and its related decays



Why building materials are worthy getting a protective agent



New



Life cycle



Aged Unprotected



Rain & Rising damp



Why building materials are worthy getting a protective agent

Typical damages carried in by the water and affecting the life of a building material and aesthetic are:

- Chemical corrosion (acid rain attacking the material)
- Frost damage and freeze/thaw damage by road salts. (cracks)
- Efflorescence and salt stains
- Fungal and lichens growth
- Dirty pick up
- Rust stain (in reinforced concrete)

**Repairing is typically more expensive than preventing;
with the right protective agent, you'll make happy not only
your walls but also your wallet**

Why choose Silicone impregnating agents

Silicone Based water-repellents are the most effective protective agents for whatever building material

Thanks to their chemical nature they build strong chemical links with the mineral surfaces forming a long lasting three dimensional resin network that is repellent to the liquid water while remaining permeable to the water vapor.

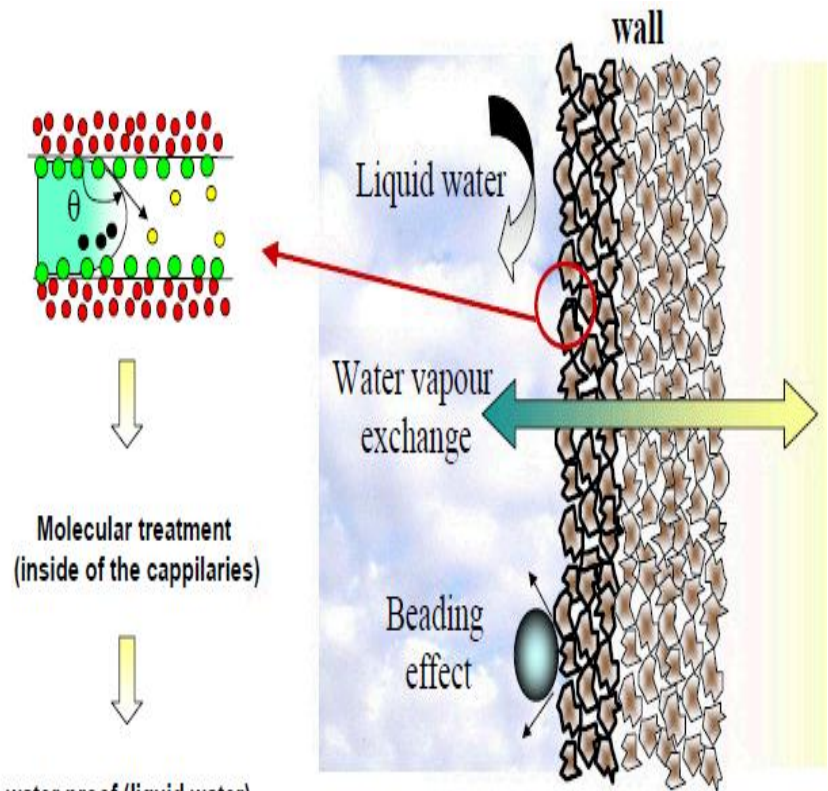
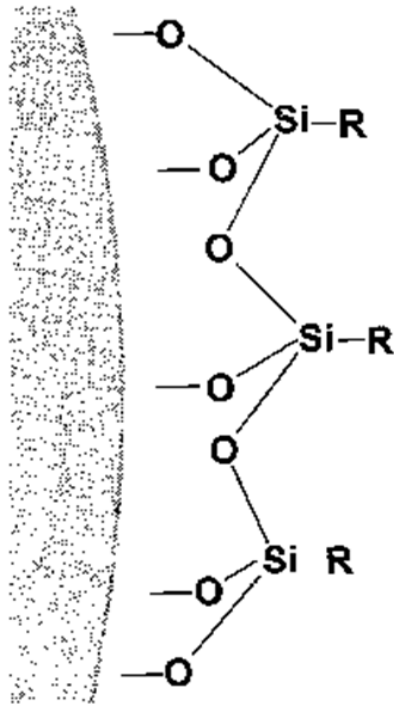
Silicone water-repellents are not film forming thus pores are not closed and material can “breathe”

Silicones are UV resistant hence assuring a long life of the protective treatment

Why choose Silicone impregnating agents

Principle of water repellency

The alkyl groups protects the substrate like umbrellas



- water proof (liquid water)
- water vapour permeability (open pores)
- No surface modification

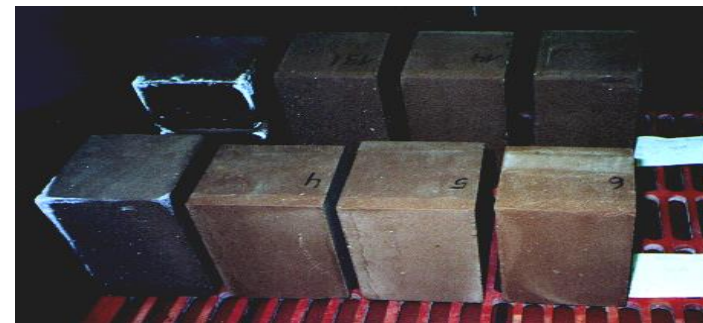
Why choose Silicone impregnating agents

Properties:

- Good water repellence
- Excellent water vapor permeability
- Good resistance to alkalis
- Good penetration depth and durability
- Unchanged appearance of the substrate
- Stop growth microroganism (left) and efflorescences (right)



untreated treated
Exposure: 3 months under tree



untreated treated
Exposure: 9 months in dry condition

BRB Siloen® Water Repellents

Commercially available product range

Product	Type	% active	Application
Siloen® SR 608	Solvent Dilutable Concentrate	100	<p>High quality general purpose water-repellent & priming agents for mineral and alkaline substrates:</p> <ul style="list-style-type: none"> • Sand-lime brick • Mineral based natural and composite stone • Aerated Concrete • Cement fiberboards • Mineral Plaster and Paints <p><u>Not suitable</u> for fresh concrete (wait almost 30 days before application)</p>

Features: Good penetration – Rapid drying no tackiness
 Dilutable with White Spirit (ex Exxol D40 type) or other low aromatic hydrocarbons
 Dilute 1:11 up to 1:15 according to substrate porosity

BRB Siloen[®] Water Repellents **New***

Product	Type	% active	Features
BRB Siloen [®] WRE	Silane blend based emulsion	50	Extremely good penetration for a long lasting protection Good beading effect Very good alkalis resistance Stable dilution even with tap water (up to 30 French degrees hardness) Not suitable for marbles

*** Replace BRB SR 853**



BRB Siloen® Water Repellents

Siloen® WRE[®] New*



Beading effect on Sand-lime stone (1 days from the treatment)

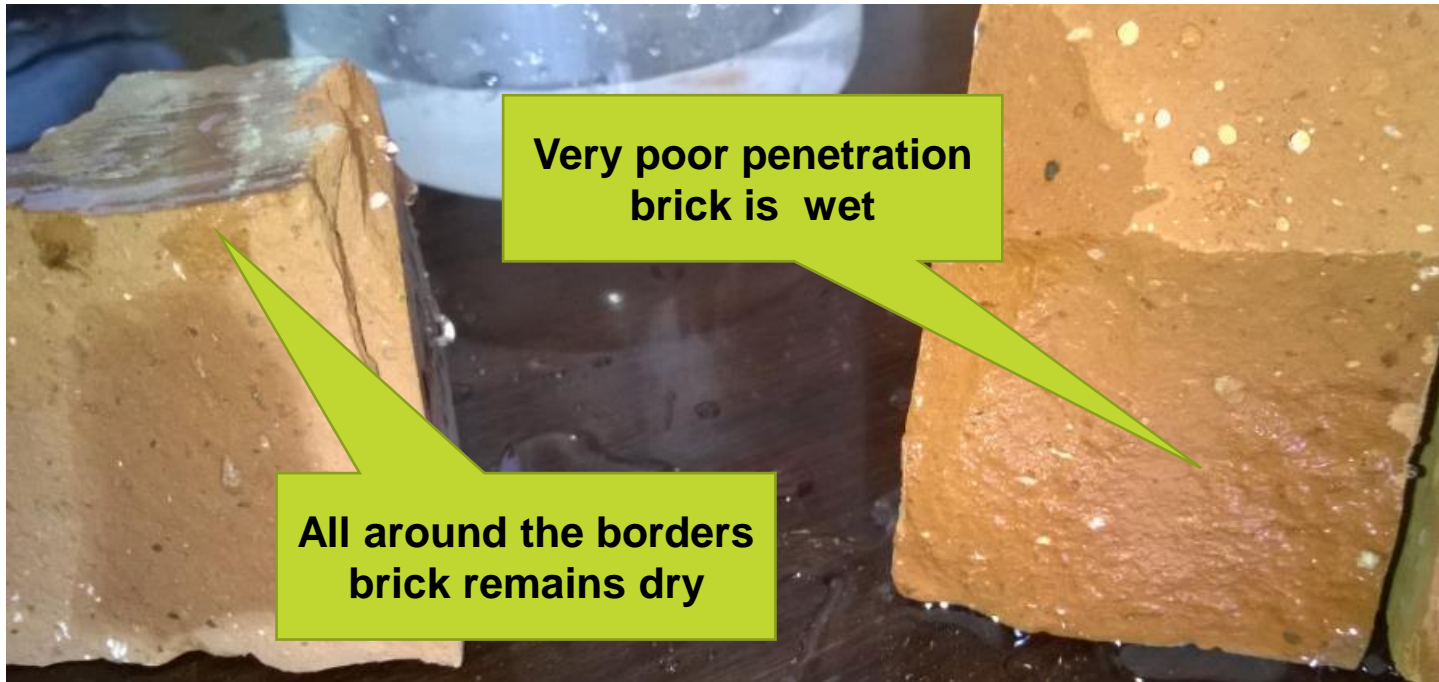
Beading effect on pure limestone and brick (1 days from the treatment)



BRB Siloen[®] Water Repellents

Siloen[®] WRE^{New*}

Depth of Penetration longer and better protection



Both bricks were treated outside by immersion with 10% active solution of WRE (left) and market available competitor (right)
Bricks were successively broken to check how deep products penetrates (water spraying onto the internal faces)

BRB Siloen® Water Repellents

Commercially available product range

Product	Type	% active	Application
Siloen® SR 403	Water Dilutable Functional PDMS Emulsion	60	<p>Improve water resistance of silicones resin based renders Enhance beading and hydrophobing effect in WBA Acrylic, Silicate, Vinyl Versatate and Siloxane paints</p> <p>Admixture for cementitious based mortars improving water resistance</p> <p>Water repellent additive in façade Acrylic/EVA primers</p>

As water repellent additive in renders and paints : 0.5 to 5% (typically 1 to 2%)

As Admixture to cement. mortars: 0.25 to 1% b.w. on dry weight of mixture

As additives in façade primers: 2 to 5% solid

Dilutable with tap water. For prolonged storage of dilution deionized water is preferable as well as additional preservative might be required.

BRB Siloen® Water Repellents

Commercially available product range

Product	Type	% active	Application
Siloen® SR 349	Potassium Methyl Siliconate	54% solid 34% active	<p>Water repellent for:</p> <ul style="list-style-type: none"> • Clay products (roof tiles, facing bricks, floor tiles, flower pots) immediately after they have been produced • Aerated concrete • Gypsum and gypsum based fiber board • Expanded fillers (perlite, vermiculite) <p>Damp Proofing barrier (old techno) Water repellent additive in silicate paint (old techno)</p> <p><u>Not recommended as façade water repellent risk of white spots (potassium carbonate)</u></p>

BRB Siloen® Water Repellents

Launch phase – Samples available

Product	Type	% active	Features
BRB Siloen® WRC4	Water Repellent Cream	40	Very good for concrete but also mineral substrate. Its high solubility make product suitable for DPC application especially in case of moderate raising damp; better flowability (compared to highly concentrated product) into the pores assuring an homogeneous protection. Recommended for DIY
BRB Siloen® WRC 8	Water Repellent Cream	80	Very good for vertical concrete protective treatment Superior penetration Damp Proofing Chemical

Sample available on demand
(3 weeks typical lead time exw The Netherland)



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Passionate about Progress