Protectosil® for formulators

Basic introduction

Protectosil®

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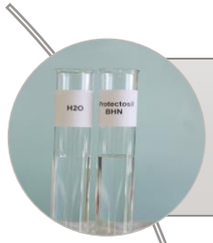
Leading Beyond Chemistry

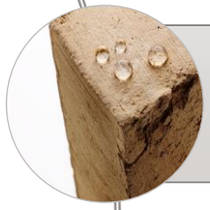
Content

Protectosil® offers high quality raw materials for your formulation

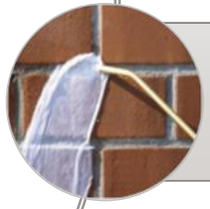
Protectosil® products come in different forms…



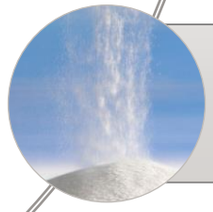
Pure silane systems



Solvent based systems



Water based emulsions & pastes



Powders

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Content

- Description
- **Basic product recommendation**
- Guide formulations
- Performance data

Product recommendation
Product range for formulators

	Protectosil® grade	Chemical structure			Effect			Substrate		Formulation		
		Monomer	Oligomer	Siliconate	Hydrophobation		Easy-to -clean/ Oleo-phobation	Type of substrate		Type of formulation		Active ingredient
					w/o beading effect	w/ beading effect		dense	porous	water	solvent	
water based emulsions	**WS 340**	✓	✓		✓			✓	✓	✓		40 %
	WS 602		✓		✓				✓	✓		50 %
	WS 610		✓			✓			✓	✓		50 %
	WS 670	✓	✓		✓			✓	✓	✓		40 %
water based	**WS 808**			✓		✓			✓	✓		55 %
	SC Concentrate		✓				✓	✓	✓	✓		Concentrate
pure silane systems	**100N**	✓			✓			✓			✓	100 %
	100NK	✓				✓		✓			✓	100 %
	200	✓			✓			✓	✓		✓	100 %
	266		✓		✓				✓		✓	100 %
	60 SK		✓			✓			✓		✓	100 %
	800	✓			✓			✓			✓	100 %

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Exemplary guide formulations

Water based

Guide formulation

Component	%
Protectosil® WS 670	33 - 50
Soft* and clear town water	Add to 100
Biocide	0,15

Pure silane system

Guide formulation

Component	%
Protectosil® 100N	20 - 60
Anhydrous ethanol	Add to 100

Easy-to-clean system

Guide formulation

Component	%
Protectosil® SC CONCENTRATE	10 - 50
Soft* and clear town water	Add to 100
Biocide	0,15

*water that contains low concentrations of ions and in particular is low in ions of calcium and magnesium

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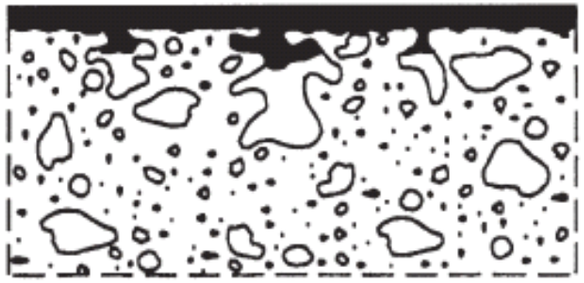
Sharp distinction between coatings and Protectosil®

Coating

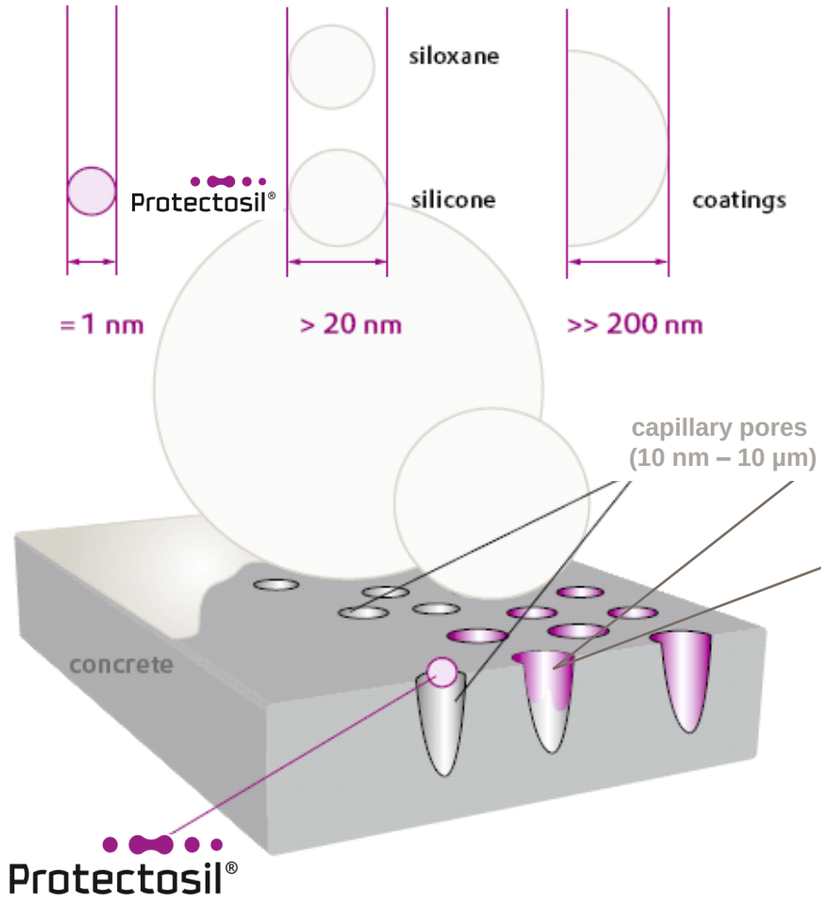


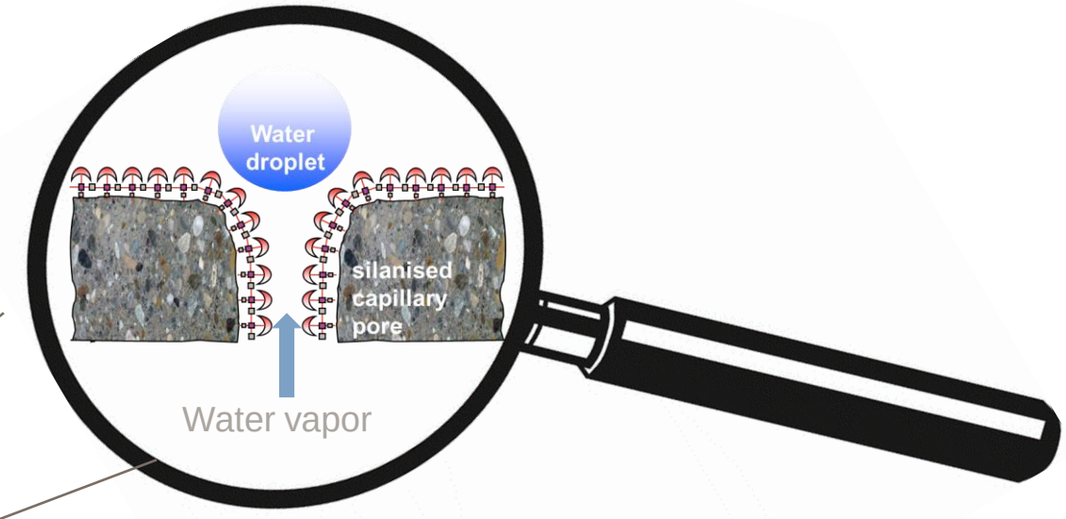
- \+ initial protection against water
- – low water vapor permeability
- – UV degradable
- – subject to scratching, cracking, and abrasion
- – optical changes of the surface

Protectosil®

- \+ long lasting protection against water
- \+ excellent water vapor permeability
- \+ UV stable
- \+ microcracks still protected
- \+ resistant to abrasion
- \+ invisible

Small silane molecules penetrate deep into the substrate and provide effective protection against the ingress of water





- form stable chemical bonds with mineral substrates
- penetrate deeply even in dense substrates
- provide UV-stable protection

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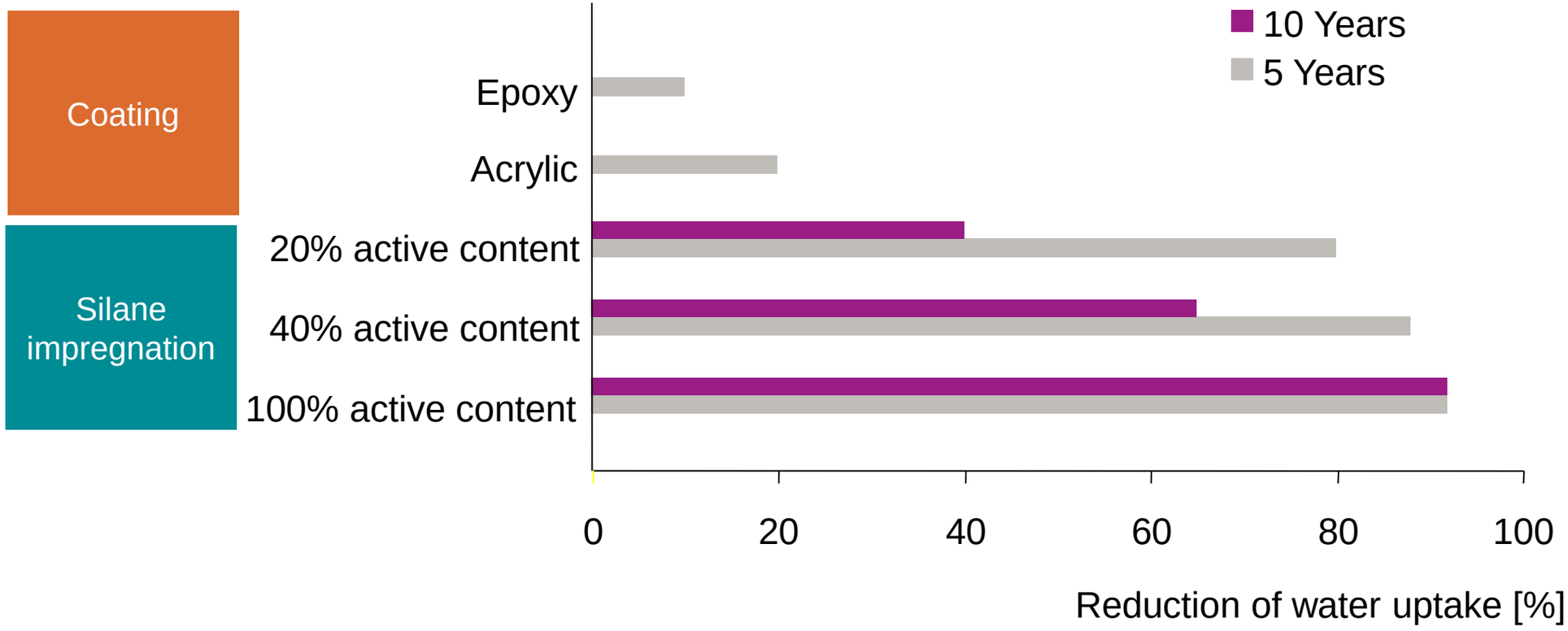
Silanes offer unique long-term effectiveness compared to coatings

Long-term performance by silane active content vs. coating



Evaluation of Damproofing Performance and Effective Penetration Depth of Silane Sealers in Concrete, Paul D. Carter, ATU, American Concrete Institute, November 1993" – Alberta test protocol

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Talk to our experts to receive your individualized product recommendation

We are happy to support you

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Exemplary penetration depth comparison by active content and chemical structure on dense substrates

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100% monomer **20 % monomer** **10% oligomer**

Note that siloxane provides „water beading“ because it is penetrating less

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