

SmartSeal
Superior Surface Protection

SMARTSEAL MASONRY PROTECTION CREAM

HYDROPHOBIC IMPREGNATION CREAM FOR BRICKWORK,
STONE AND MASONRY

SMARTSEAL MASONRY PROTECTION CREAM - HYDROPHOBIC IMPREGNATION CREAM FOR BRICKWORK, STONE AND MASONRY

- Thixotropic white Cream
- Ready to use based on Silane/Siloxane
- Water and solvent based
- Very high storage stability
- One-step application
- Excellent beading effect
- Excellent water repellency
- Excellent penetration depth and speed
- No visible change of the surface
- No tacky finish
- Reduced dirt pickup
- Reduction of salt blooming

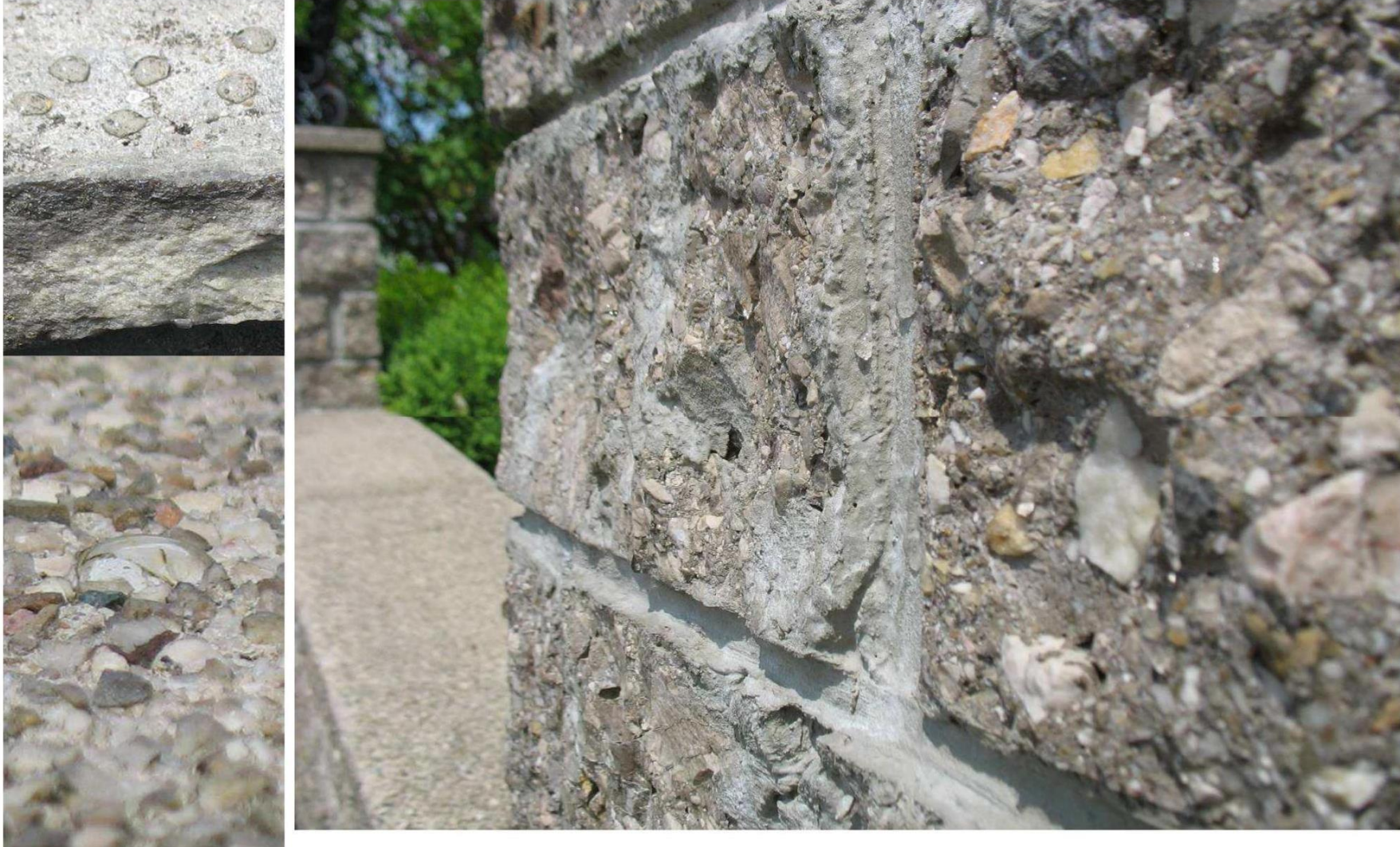
SMARTSEAL MASONRY PROTECTION CREAM



SMARTSEAL MASONRY PROTECTION CREAM – SUITABLE FOR HYDROPHOBIC IMPREGNATION AND PRIMING



SMARTSEAL MASONRY PROTECTION CREAM – EFFECTIVENESS AFTER 3 YEARS OUTDOOR WEATHERING ON A CONCRETE GARDENWALL (WEATHER SIDE)



SMARTSEAL MASONRY PROTECTION CREAM – APPLICATION

– FOR BRICKWORK, STONE AND MASONRY SUBSTRATES

- Ready to use product for the use as a Hydrophobic Impregnator and Primer
- One step application saves time and money
- Application by sprayer, roller or brush
- No trickling or dripping off – easy coverage of e.g. windows
- 5-10/m² per litre dependent on the porosity of the substrate
- Enhanced contact time enables an outstanding penetration depth
- Substrates should be dry and dust free at the surface
- Outside Temperature: 5 – 25°C, better 10 – 20°C
- Application 24h after facade had direct water contact from raining
- Test area before starting general application to ensure desired results and coverage rates

SMARTSEAL MASONRY PROTECTION CREAM – APPLICATION

– FOR BRICKWORK, STONE AND MASONRY

Suitable for silicate based mineral substrates (pH < 12) like:

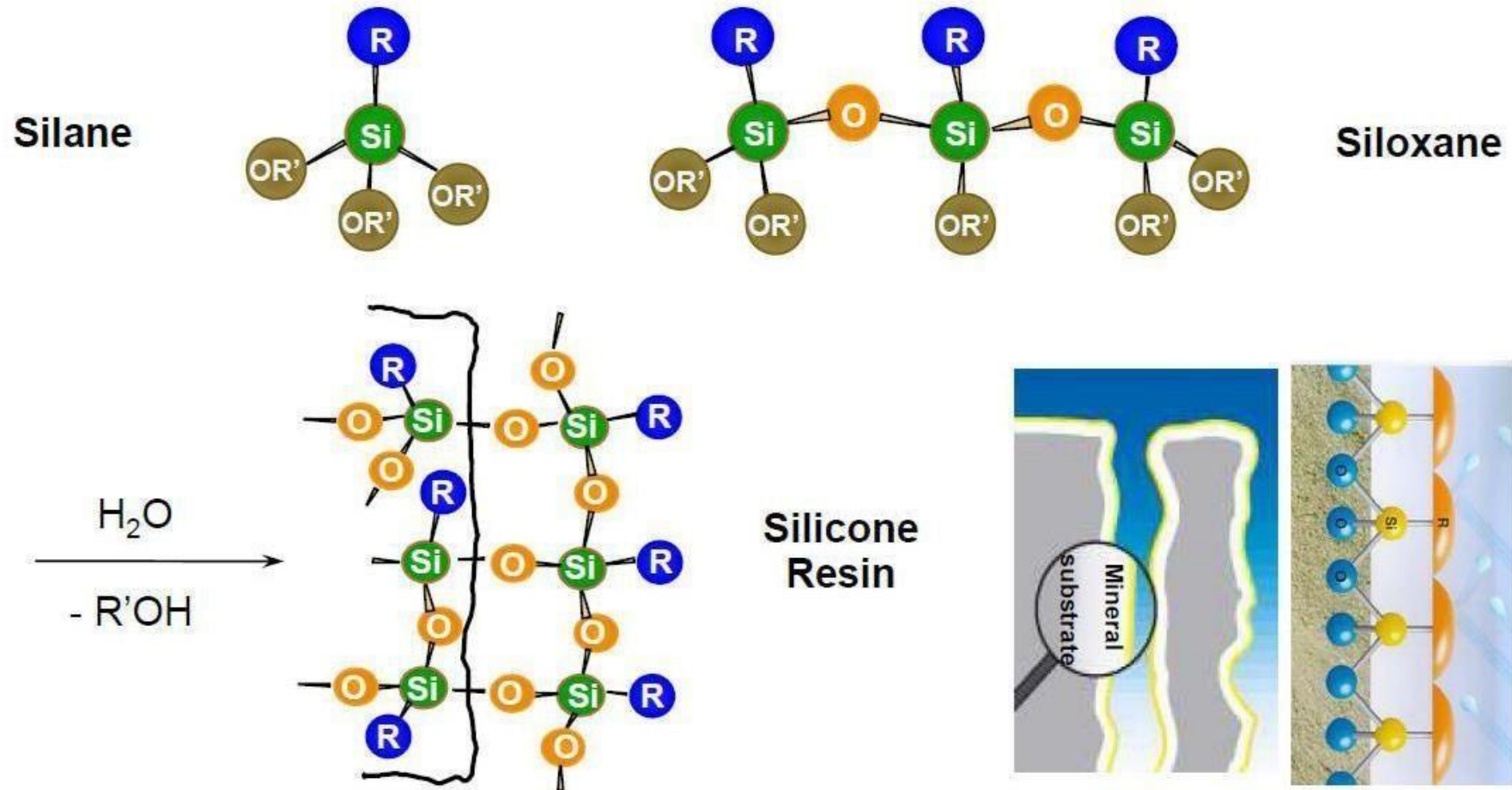
Artificial mineral materials

- Brick, clinker, roofing tile, expanded clay
- Stone and Masonry
- Mineral plaster
- Mortar

Natural stones

- Sandstone
- Tuff
- Limestone

SILANES – SILOXANES – SILICONE RESINS

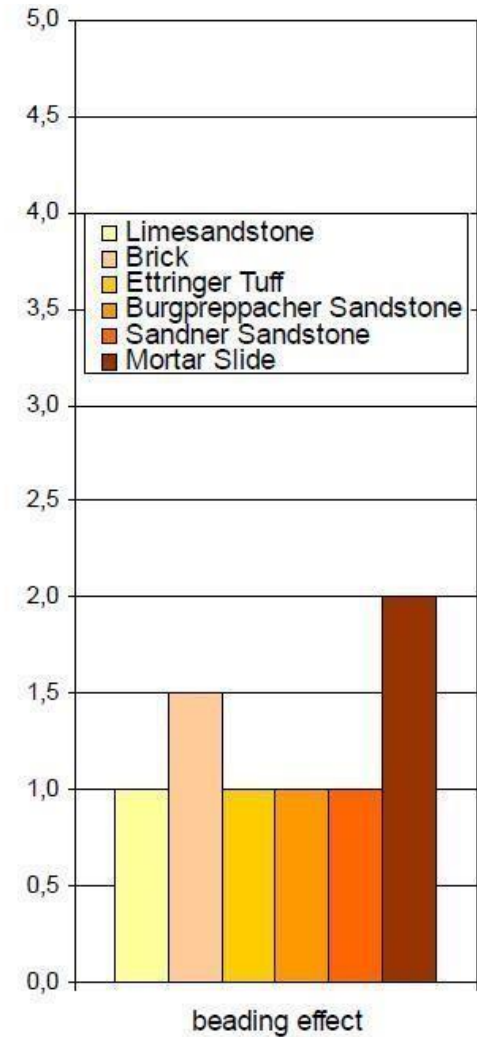
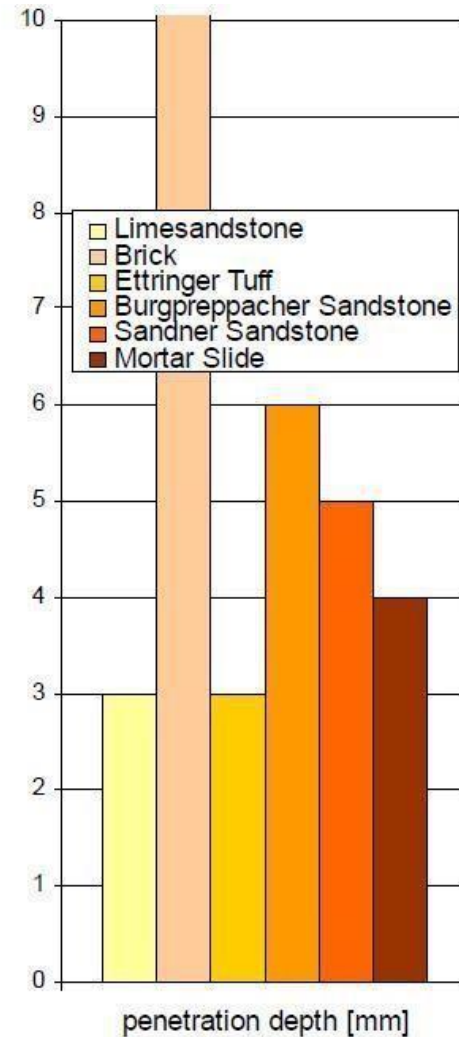
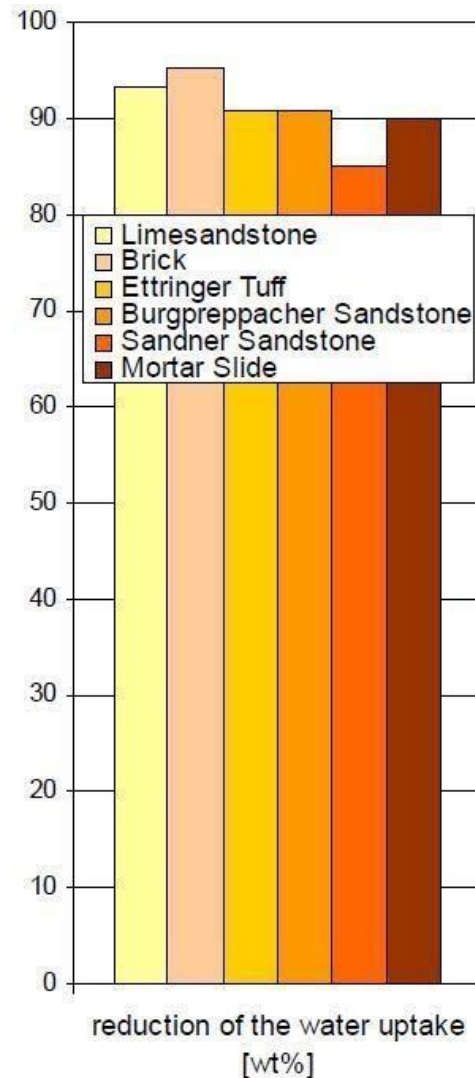


Silanes and Siloxanes (= oligomeric Silanes) form a hydrophobic silicone resin network.

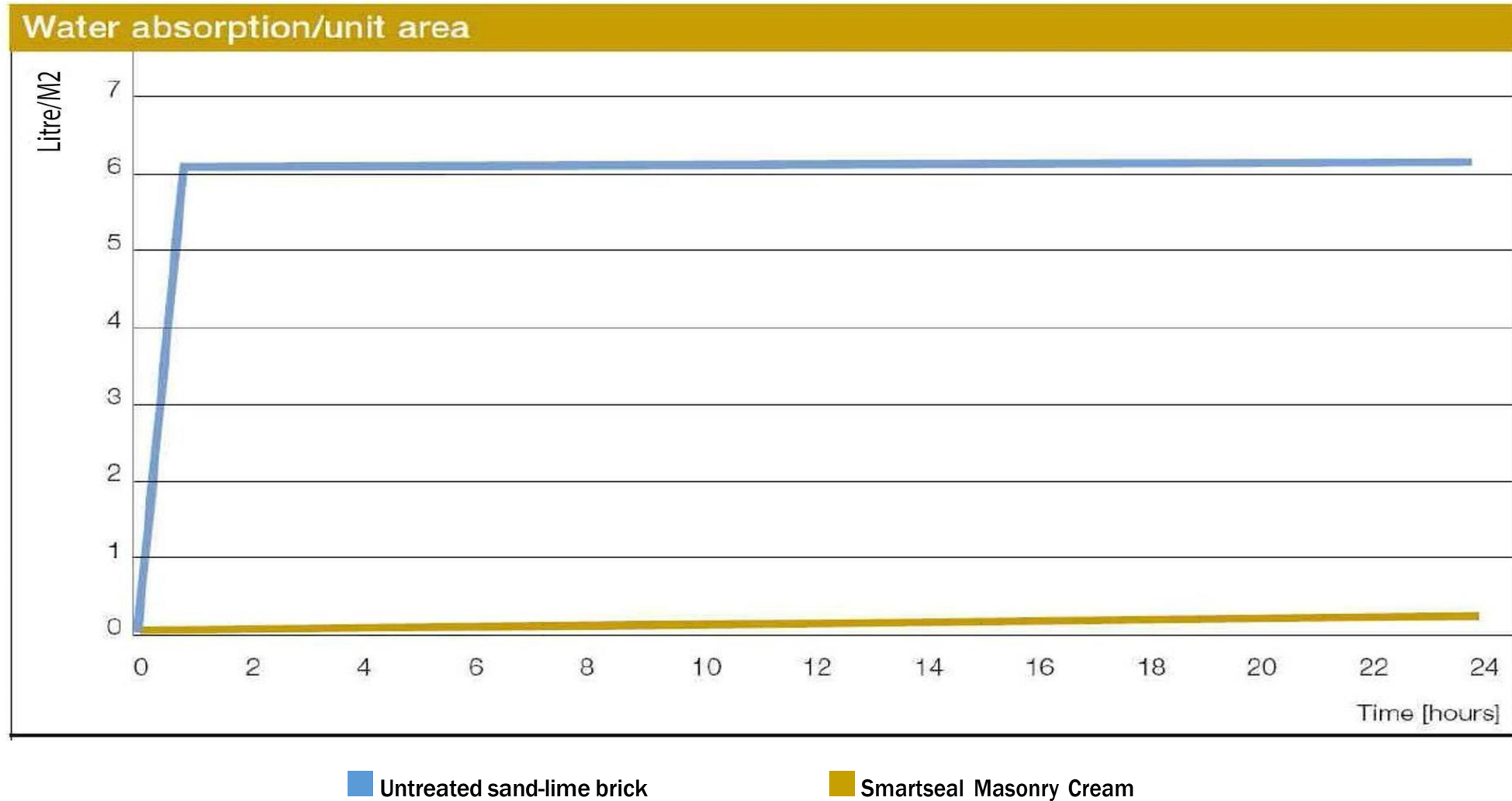
SMARTSEAL MASONRY PROTECTION CREAM – OUTPERFORMS ALL HYDROPHOBIC IMPREGNATION AGENTS ON THE MARKET

Substrate	Cream	Impregnation Agent uptake [ml/m²]	Beading Effect (after)	Water uptake [%]	Reduction of water uptake [%]	Penetration Depth [mm]	Surface changing
Limesandstone	Masonry Cream	200	1	0.82	93.2	3	No
	Untreated	-	5	12.07	-	-	-
Brick	Masonry Cream	200	1 – 2	0.58	95.4	17	No
	Untreated	-	5	12.69	-	-	-
Ettringer tuff	Masonry Cream	200	1	1.67	91.0	3	No
	Untreated	-	5	18.43	-	-	-
Sandstone	Masonry Cream	200	1	0.48	91.0	6	No
	Untreated	-	5	5.29	-	-	-
Sander Sandstone	Masonry Cream	200	1	0.88	85.1	5	No
	Untreated	-	5	5.91	-	-	-
Mortar slide	Masonry Cream	200	2	0.65	90.0	4	No
	Untreated	-	5	6.31	-	-	-

SMARTSEAL MASONRY PROTECTION CREAM – OUTPERFORMS ALL HYDROPHOBIC IMPREGNATION AGENTS ON THE MARKET



SMARTSEAL MASONRY PROTECTION CREAM – PRIMER



SMARTSEAL MASONRY PROTECTION CREAM – PRIMER PROPERTIES

Substrate (11x11x2.5cm)	W24			SD		Adhesion [N/mm²]		
	Penetration	Impregnation uptake 1x	Liquid water Transmission	Impregnation uptake 1x	Water vapour permeability	Silicone resin	Dispersion	Silikate emulsion
	depth	application by brush	rate W24 value EN1062-3	application by brush	Wet-cup sd value ISO 7783-2	emulsion paint	paint	paint
	[mm]	[ml/m²]	[ml/m²h0.5]	[g/m²]	[m]	[N/mm²]	[N/mm²]	[N/mm²]
Limesand stone	2	250	0.04	200	0.06	2.29	1.93	1.46
Untreated	-	-	1.15 / 6.19* *(after saturation)	-	-	1.85	1.92	1.1

SMARTSEAL MASONRY PROTECTION CREAM

– PRODUCTS RESPONSIBLE CARE

- Physical state:	Paste
- Colour:	White to yellowish
- Odour:	Odourless
- Density:	0.84 ml/cm ³
- Ignition Temperature:	375 °C
- Flashpoint:	75 °C
- R-phrase:	-
- S-phrase:	-
- VbF:	A III
- WGK:	1

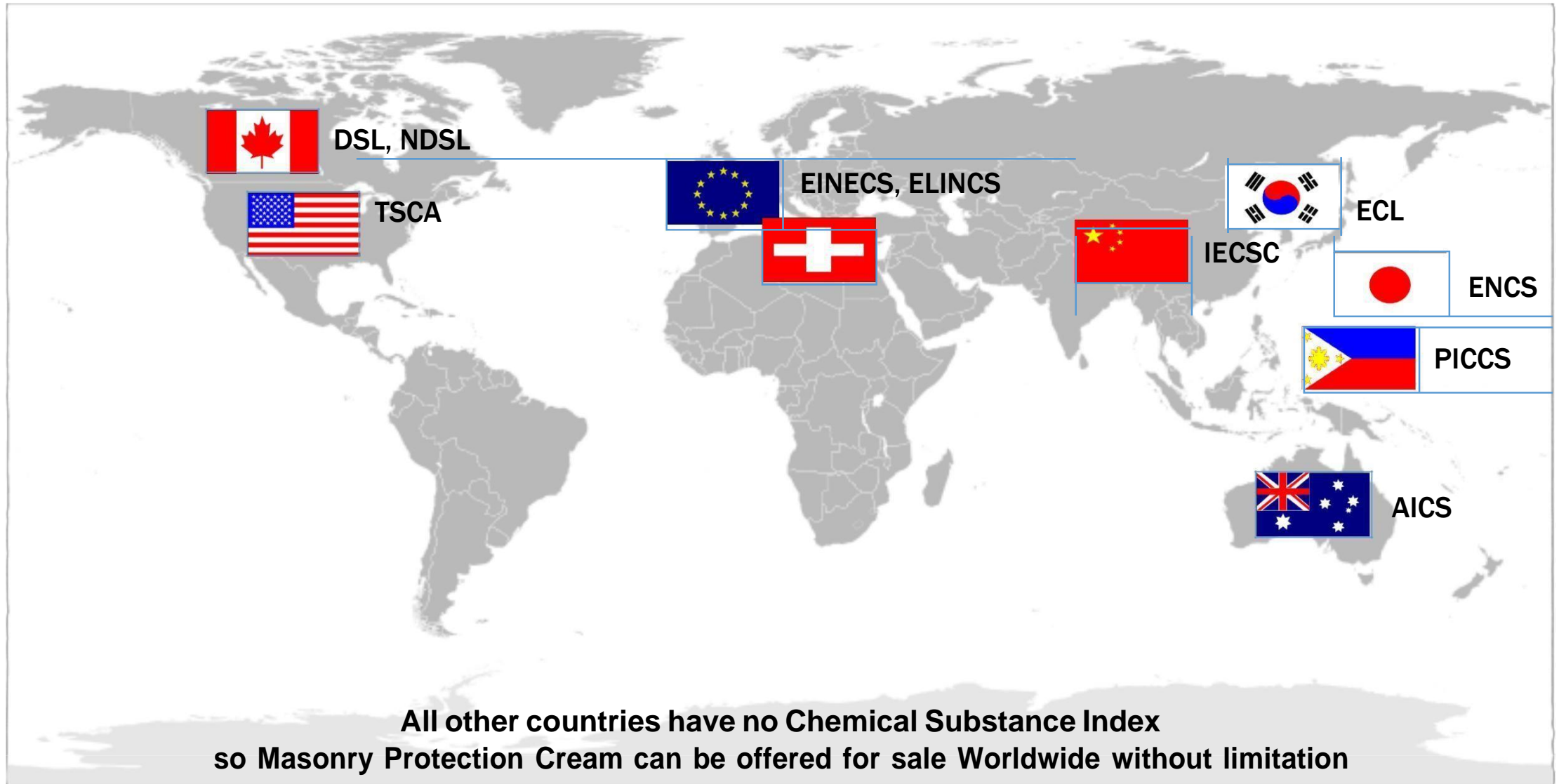
MASONRY PROTECTION CREAM – REGISTRATION STATUS: WORLDWIDE



Country	Abbr.	Old	Description
Australia	AICS	ACoin	Australian Inventory of C hemical S ubstances
Canada	DSL	CEPA	D omestic S ubstance L ist
	NDSL	-	N on D omestic S ubstance L ist
China	IECSC	CECI	Inventory of E xisting C hemical S ubstances in C hina
EU, Switzerland	EINECS	ECoin	E uropean Inventory of E xisting C ommercial S ubstances
	ELINCS	-	E uropean L ist of N otified C hemical S ubstances
Japan	ENCS	MITI	Handbook of E xisting & N ew C hemical S ubstances
Korea	ECL	KECL	Korean E xisting C hemicals L ist
Philippines	PICCS	-	P hilippine Inventory of C hemicals & C hemical S ubstances
USA	TSCA	-	T oxic S ubstance C ontrol A ct Chemical Substance Inventory

All other countries have no Chemical Substance Index
so Masonry Protection Cream can be offered for sale Worldwide without limitation

MASONRY PROTECTION CREAM – REGISTRATION STATUS: WORLDWIDE



ADVANTAGES OF SMARTSEAL MASONRY PROTECTION CREAM OVER COMMONLIQUID EMULSION TECHNOLOGY

The Application:

- In a single step
- By airless spray process, brush or lambskin roller
- The Material can be applied without trickling or dripping off
- The enhanced contact time enables an outstanding penetration depth without waste of material

The Properties:

- Based on a special silane/siloxane with lower volatility
- The consistency provides with enhanced contact time

The Effect:

- Tremendous reduction of water
- High beading effect
- High penetration depth
- No discolouring of the surface
- High speed penetration of the active content within < 20 min
- The treated surface remains coatable

SMARTSEAL MASONRY PROTECTION CREAM

– BENEFITS

Performance of Smartseal Masonry Protection Cream:

- Outperforms all creams for hydrophobic impregnation of facades on the market.
- Optimised active content with a special molecular weight distribution:
- Silanes for high penetration depths, Siloxanes with different molecular weights and properties for medium penetration depth and surface effects
- Start with a small test area first. Especially for the most critical substrate: Limestone

SMARTSEAL MASONRY PROTECTION CREAM

– BENEFITS

Re-coatability of facades treated with Smartseal Masonry Protection Cream:

No loss of adhesion by using silicone resin emulsion paints (SREP), emulsion paints, silicate emulsion paints for coating of hydrophobic impregnated or primed surfaces.

All surface active materials (wetting agents) containing coatings are suitable. All pure mineral systems (e.g. lime wash paints, pure silicate paint, and plasters based on cementitious plasters) are not suitable as coatings for hydrophobic impregnated or primed surface.

Due to variations in paints formulations, substrate conditions and environmental factors, it is recommended to apply a test section of paint over the Smartseal Masonry Cream treated surface to check for compatibility.

SMARTSEAL MASONRY PROTECTION CREAM

Preparation of a masonry surface for treatment with Smartseal Masonry Protection Cream:

For removal of normal dirt (e.g. grease, soot, moss algae, etc.) use a high-pressure cleaner and clean at a low to medium pressure with 60°C hot water and a broad fan nozzle (not a point jet).

If the pressure is not sufficient it must be increased gradually.

No additives or cleaning agents may be added during cleaning, because surfactants increase surface hydrophilicity. Mould or fungus should be removed with a chemical cleaner specifically designed for that purpose, following the application instructions carefully, especially for neutralisation and rinsing of the substrate. Never apply silane/siloxane-based water repellents to a visibly wet or damp surface.

Wait at least 48 to 72 hours of dry, sunny weather after pressure-cleaning a structure before beginning application of Smartseal Masonry Protection Cream.

SMARTSEAL MASONRY PROTECTION CREAM

1: very good, no wetting



2: good, low wetting



3: wetting



4: strong wetting



5: completely sucked in



Testing procedure:

add a waterdrop
to the surface
(0,1 ml)

Evaluation right away
and after 1 h

SMARTSEAL MASONRY PROTECTION CREAM

TESTING PROCEDURE – WATER UPTAKE

Capillary water absorption via immersion test (DIN 18180, EN 15148:2002):

- Apply the defined amount of the ready-to-use product to the substrate by brush
- Control applied amount by taking the weight before and after application
- Store the treated sample for 14 days at 25°C and 50%

relative humidity **Testing of the water uptake:**

- Take the weight
- Immersion for 24h into water with 5 cm water column above the sample
- Reweight after: 0.5h, 1h, 4h and 24h
- As reference an untreated substrate is tested parallel

Results:

- The tested product fulfils the requirement for good performance, if the reduction of the water uptake within 24h is > 80% compared to the untreated substrate

SMARTSEAL MASONRY PROTECTION CREAM – TESTING PROCEDURE – PENETRATION DEPTH

Application of the hydrophobic agent and hardening:

- Apply the defined amount of the ready-to-use product to the substrate
- Control applied amount by taking the weight before and after application
- For curing and development of hydrophobicity, the sample are stored for 14 days at 25°C and 50% relative humidity

Measurement of the penetration depth:

- Afterwards the samples will be broken (i.e. with a hammer) and the broken surface is wetter with coloured water. The hydrophobic zone does not absorb the coloured water light but does not change appearance. The untreated, inner area, is not water repellent, absorbs water and becomes darker. So the hydrophobic zone can be measured (i.e. with a ruler or vernier calipers) or it can be documented by taking a picture.

SMARTSEAL MASONRY PROTECTION CREAM

– TECHNICAL DATA SHEET

Characteristics

Smartseal Masonry Protection Cream (MPC) is an aqueous, solvent based, creamy hydrophobic impregnating agent based on a mixture of silane and siloxane.

Smartseal MPC is a high quality speciality product for hydrophobic impregnation of natural mineral substrate.

Application

Smartseal MPC is recommended for the hydrophobic impregnation of mineral substrates like brick, limestone and sandstone. With proper application it leads to a low water uptake, a high penetration depth and a good beading effect.

The natural appearance of the treated surface remains unchanged.

SMARTSEAL MASONRY PROTECTION CREAM

– TECHNICAL DATA SHEET

Processing

Smartseal Masonry Protection Cream is best applied to the substrate by an airless sprayer, undiluted and in the desired thickness. Brushes or rollers may be used for smaller areas. Up to 100 – 200 ml/m² may be applied in one operation to vertical surfaces and roofs, without loss of material. The exact amount depends on the absorbency of the substrate.

SMARTSEAL MASONRY PROTECTION CREAM

– TECHNICAL DATA SHEET

Storage

Smartseal Masonry Protection Cream has a shelf life of at least 12 months when stored between 0°C and 30°C in the tightly closed original container.

Safety Information

Detailed safety information is contained in each material data safety sheet, which can be obtained from our sales offices.