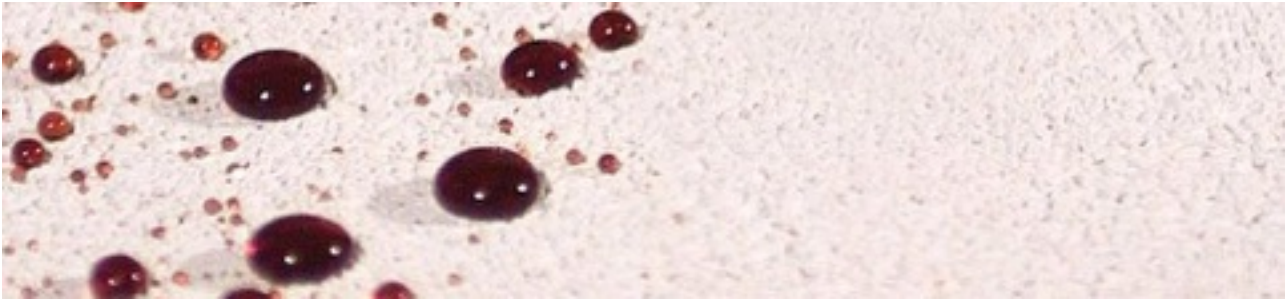




HIGH QUALITY NANOTECHNOLOGY COATINGS FOR MINERAL SURFACES

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CERACOAT COATING FOR MINERAL SURFACE:

These products are optimized for absorbent surfaces because of their formulation. They can therefore be used as an invisible, water- and contamination-resistant, UV-stable coating of porous substrate surfaces, regardless of whether the surface is a natural stone such as sandstone, concrete, terra-cotta, clay brick or stone panelling. Floor or wall coatings, building facades, functional terra-cotta or roof tiles are all in the scope of application for this product. Since nano-coatings only apply an ultra-thin coating on the inside of the pores, the substrates remain breathable after the coating – the perfect structural protection. The majority of the contamination is washed away by the rain.

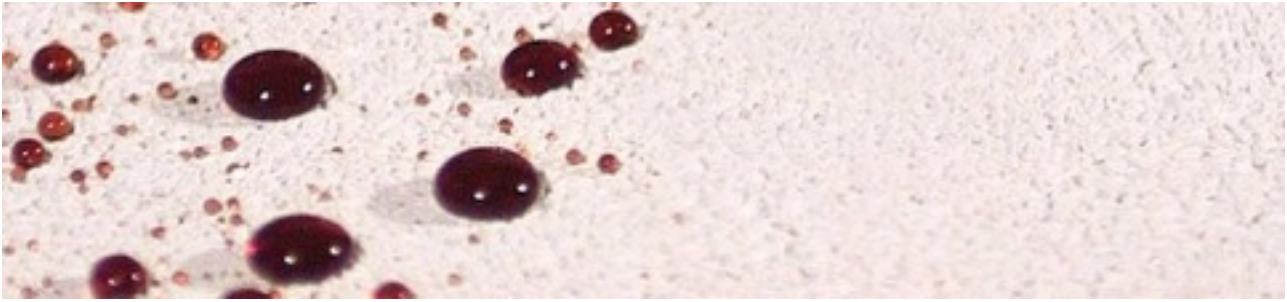
EXAMPLES OF USE:

Every type of porous surface with a mineral-based origin

- Concrete / Concrete blocks
- Lime stone / Sandstone
- Porous granite/marble
- Roof tiles / clay / Terra-cotta

PRODUCT CHARACTERISTICS:

- Strong hydrophobic + oleo phobic properties
- Strong non-stick properties
- Excellent easy-clean effect regarding deposits of air pollution
- Food safe (inert)

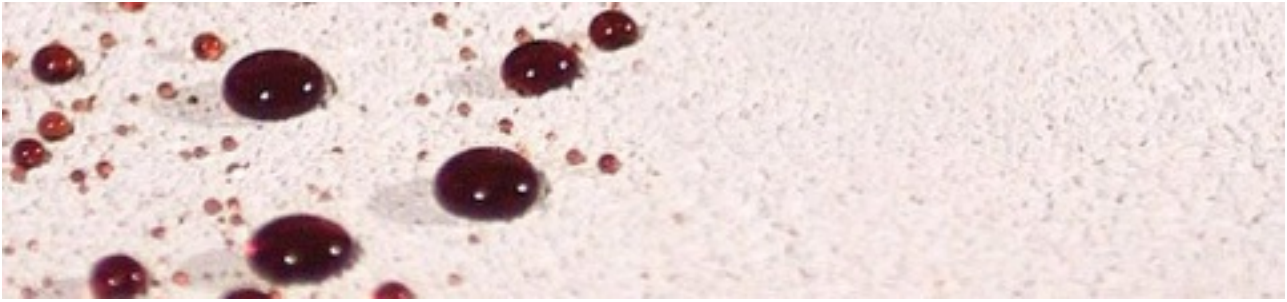


ADVANTAGES:

- No influence on the appearance of the substrate (Layer thickness: 100- 150 nm)
- Excellent Hydro and Oleo phobic properties
- Solvent free and odorless
- Hardening at room temperature. No additional energy or UV light required.
- Pressure wash-resistant (50 - 60 bar)
- Excellent efficiency with low quantity consumption
- No color infiltration to coated substrates.
- High temperature-resistance - UV-stable
- Absolute frost resistance

OTHER POSITIVE EFFECTS, SUCH AS FOR EXAMPLE:

- No contamination can infiltrate the pore-structure through water.
- Easy cleaning
- Enduring impregnation enables very high freeze-thaw resistance and no cracking because of ice.
- Very heavy reduction of moss and fungus growth
- Longer life-spans for substrates because of lowered cleaning cycles.
- Enduring protection for the surface structure.
- Weather damage prevention



GRAFFITI-RESISTANCE:

Special high-quality NANO-coatings are excellent graffiti protection.

Nano-anti-graffiti coatings are graffiti-resistant coating formulas for application on porous silica-based substrates, such as sandstone, concrete, Terra-cotta and clay.

More information is available upon request.

APPLICATION:

Simple do-it-yourself application makes it suitable for end-customers as well:

1. Industrial: Application using standard HVLP systems
2. Manual: Application by wetting the surface (spraying or dipping)

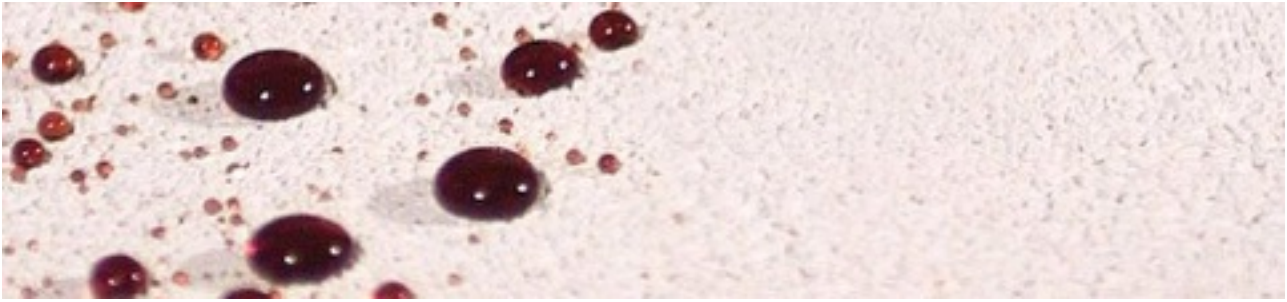
This NANO-coating is completely networked and hardened after 24 hours. The easy-clean effect can only be tested after this hardening phase.

STORAGE STABILITY:

Unopened original containers can be stored for at least 2 years. Recommended storage- and transport temperature: +3 to 30°C

CONSUMPTION:

Manual + Industrial: between 20 and 100 ml/m², depending on absorbency of the substrate



ADVANTAGES COMPARED TO COMPETITIVE PRODUCTS

Permanence and longevity:

The UV-stability enables a lifetime performance of the coated surface – assuming it is not damaged by abrasion.

Many competitive products like silicon oils or fluorocarbon technologies are slowly destroyed by sunlight

(Abrasion resistance)

Negligible on mineral surfaces due to the low abrasion resistance of the substrate.

Chemical stability:

The product is resistant to almost all standard household and industrial cleaners (with the exception of concentrated alkaline solution).

Many competitive products do not have this property and must be reapplied.

IMPORTANT NOTICE:

Our explanations correspond to our current knowledge and experience. The right to make alterations within the framework of technical advances and operational development is reserved. The customer is not released from careful product application. We guarantee the quality of our products in accordance with our general sales conditions as a matter of course.

The products are ready-to-use. Mixing with other substances or other charges is strictly forbidden.

TESTING RESULTS:

Please find below UV and abrasion tests results of Ceracoat™ against competitive technologies. (coatings for mineral surfaces)

The test was executed according the ASTM G154 standard. Samples 1 to 7 are fluoropolymers, sample 9 is a silane/siloxane (Belzona). 8 is Ceracoat™

sample	Contact angles before UV [°]		Contact angles after 250 hours of UV [°]		Contact angles after 500 hours of UV [°]	
	water	hexadecane	water	hexadecane	water	hexadecane
1	135,9	98,8	104,3	88,9	79,6	60,9
2	133,3	96,7	82,8	77,4	44	34,6
3	134,7	97,7	118,2	75,8	80,2	63,6
4	127,3	69	124,6	69,1	125	61,2
5	132,4	90,7	62,6	65,6	41,1	57,6
6	131,9	113,3	98,8	99,3	91,4	77,3
7	135,5	91,8	50,4	36,7	36,8	32,4
8: CC	141,2	121,9	140,1	111,2	139,8	108,7
9	118,2	38,2	109,5	39	99,4	33,7

You see that after 500 Hours of UV-test, Ceracoat™ was outperforming the competitive products.

Abrasion/washability resistance was performed according to EN ISO 11998 standard.

Sample	Contact angles before abrasion (°)		Contact angles after abrasion (°)	
	Water	Hexadecane	Water	Hexadecane
1	124,7	94	109,1	68,4
2	133,7	100,6	52,3	73,9
3	135,3	96	74,3	70,5
4	121,3	65,5	81,2	45,7
5	135,3	90,4	117,8	74,1
6	133,8	116,6	97,7	73,9
7	135,5	91,7	112,4	74,7
8: Ceracoat™	141,2	121,9	136,8	102,8
9	117,9	31,3	71,9	24,7

Also in term of abrasion we are on the top, so that Ceracoat™ was by far the best product in this extensive tests.



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