

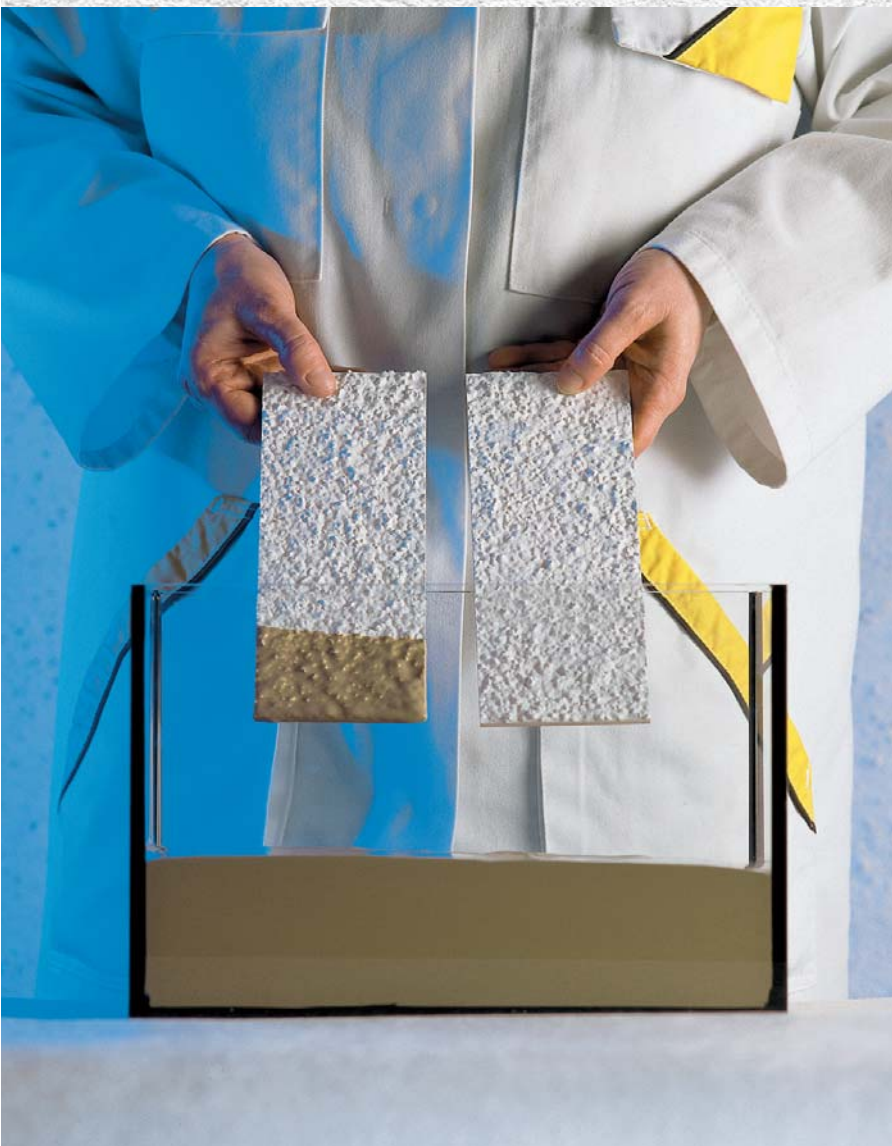
Uniclass L682, L5171	EPIC E61, E271
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Sto Ltd | **Facade**

Facade coatings with Lotus-Effect®

Keeping your facade clean with a paint or render finish: StoLotusan Color and StoLotusan K/MP.

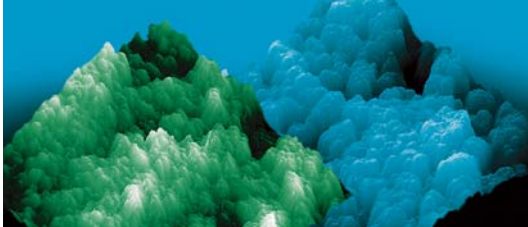


Nothing compares with nature's perfection. And nature has long been discovered as a veritable "treasure chest" of ideas which can be applied to cutting-edge technology.

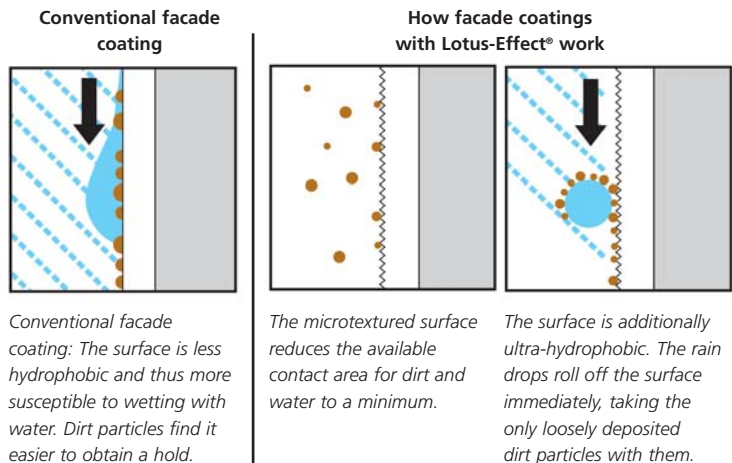
Sto has also drawn on nature's model. Our rigorous research and development efforts have enabled us to combine biology and technology in an innovative manner to produce the new facade coatings with Lotus-Effect®.

The sludge test demonstrates the effect: The surface coated with StoLotusan facade render stays clean and attractive.

The Lotus-Effect®: Dirt runs off with the rain.



As seen under the electron microscope:
On the left the surface of the lotus leaf and on the right the virtually identical surface of StoLotusan.



It's an all too familiar story: Soiling on facades becomes increasingly conspicuous and the facades increasingly unsightly over the course of time. The sides of buildings which are exposed to the weather suffer particularly severely, with moisture and deposits of dirt providing the ideal environment for colonisation by microorganisms.

Deposits of dirt can be reduced substantially with StoLotusan Color or StoLotusan K/MP. Similarly to the lotus leaf, paint and render incorporating the Lotus-Effect® possess a highly water-repellent surface with a special microstructure. Dirt particles are unable to obtain a hold on this surface – rain falling on the surface forms into droplets and flows off, taking the dirt with it.

This means perfect protection for facades! Dirt runs off with the rain – and the facade stays dry and attractive.

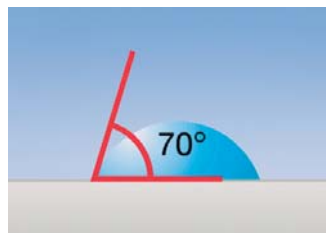


Fig a

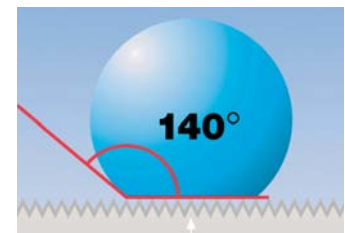


Fig b

The greater the contact angle between water droplet and surface, the greater the water repellence. Only on super-hydrophobic surfaces with angles of around 140° will water reach this characteristic round droplet form. Fig b is now referred to as the 'lotus effect®'.

StoLotusan Color and StoLotusan K/MP at a glance:

- Highly water and dirt repellent
- Maximum resistance to soiling - keeps facades clean and dry for longer
- Ideal protection, above all for sides of buildings which are particularly exposed to the weather
- Outstanding weather and chalking resistance, UV-stable
- Excellent water vapour permeability
- Matt finish
- White and tinted in many colours of the StoColor System
- Patented innovation



(Right) With StoLotusan Color protection, dirt runs off each time it rains to leave a beautifully clean and dry facade.



StoLotusan Color

Outside walls coated with StoLotusan Color are simply washed clean by the rain, providing ideal protection even for facades which are severely exposed to the weather.

Area of application: Suitable for coating old and new render substrates on outside surfaces. Priming with Sto-HydroGrund.



StoLotusan K/MP

The latest innovation in the render sector: StoLotusan K/MP is the first facade render to incorporate the Lotus-Effect®. No additional coating is required, as the Lotus-Effect® can now be obtained with a render finish.

Area of application: Finishing render for outdoors and individual features on exterior surfaces. Intermediate coating with Sto-Primer.



*Lotus plants in full bloom:
Mother nature provides
the template for many
technologies.*

*Like water off a duck's back:
Water droplets simply carry dirt
particles away with them as
they roll over a lotus leaf.*



The Lotus-Effect® – modelled on nature.

The Lotus-Effect® is a natural phenomenon dating from time immemorial which is manifested on the lotus plant. The leaves of the lotus plant are immediately clean and dry again after every rainfall. Water is unable to wet the leaves, and dirt runs off with the rain.

The phenomenon of the so-called Lotus-Effect® was unravelled by German botanist Prof. Dr. Wilhelm Barthlott, who discovered that it was not an extremely smooth surface that was responsible for the plant's dry and clean leaves. On the contrary, this astounding process is attributable to an extremely rough surface in conjunction with equally pronounced surface hydrophoby.

The self-cleaning effect of the lotus plant was incorporated first of all into a facade paint and subsequently into a facade render. Thanks to StoLotusan products, facades are now able to stay dry and retain their attractive appearance on a sustained basis. Dirt particles are simply washed off with the rain. This breakthrough makes facade coatings with the Lotus-Effect® one of the most outstanding results of applied bionic research.

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