Project:
Protects porous surfaces, marbles and granites from oil, water and stains

Industry:
Building & Construction
Marble & Granite Processing

Product:
SurfaPore M

Key Benefits:
- Most Effective & Nano Based
- High Breathability
- Not Film Forming, Invisible
- Long Lasting & UV Resistant
- Easy Application
- Withstands up to 350°C
- Water based
- Environmentally friendly
- Cost Effective

Applications:
- Oil & water protection of porous surfaces (marbles and granites)
- Prevents staining of kitchen countertops
- Protects high traffic areas

Packaging:
1L, 4L, 30L Containers,
1000L IBCs

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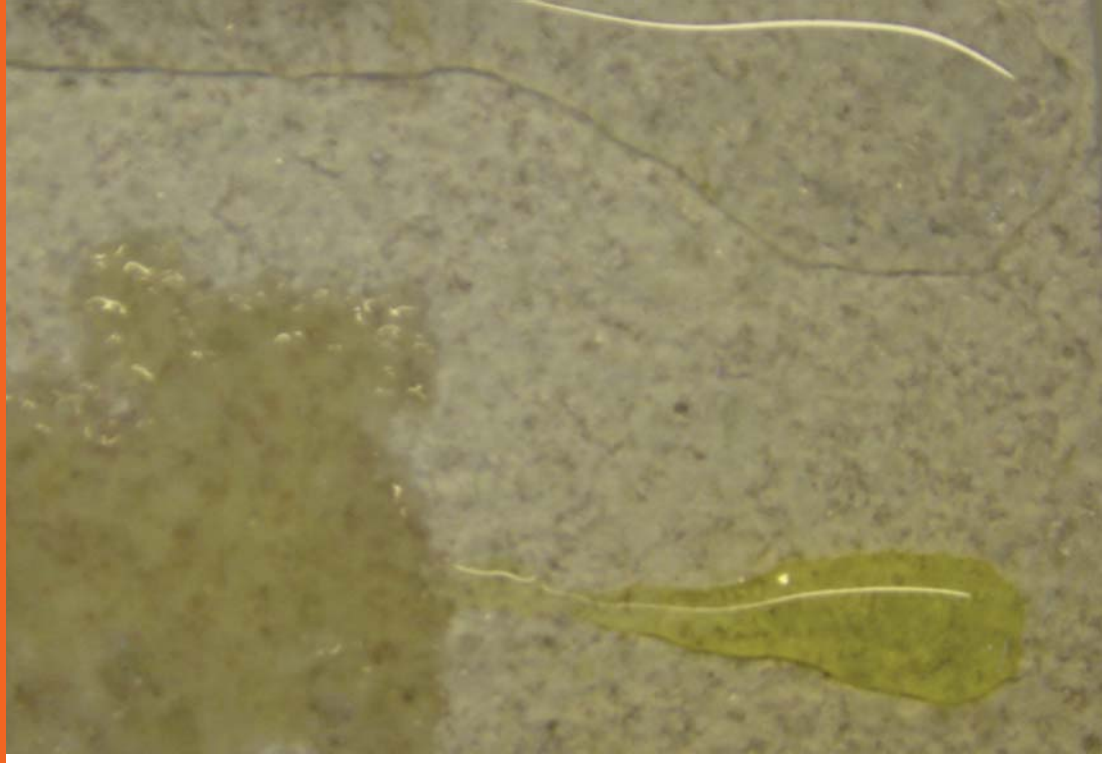
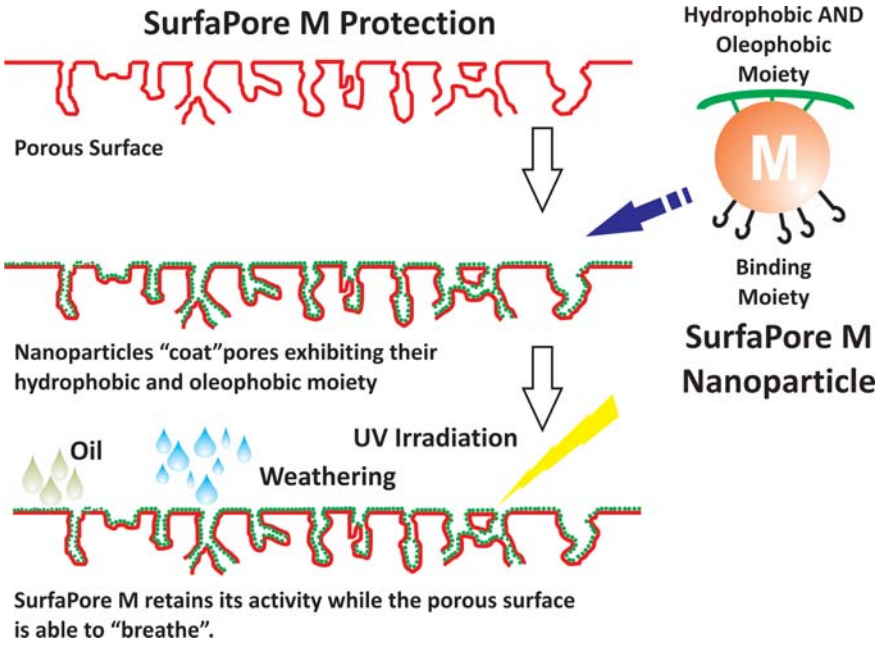


SurfaPore® M

Active Nanotechnology for protecting marbles, granites & stones against stains and oil.

Stains can destroy your valuable stone, marble and granite surfaces. SurfaPore M not only protects these surfaces from stains, but also makes them oil and water repellent. Microscopic analysis of marbles, granite and stone surfaces reveals multiple interconnected pores that readily collect stains, resulting in loss of shine and natural appearance. SurfaPore M coats the pores of your valuable surfaces, without changing their appearance and enables them to actively repel oil based stains. Therefore, a dual effect is achieved: Passive protection by dressing the surface of pores and active oil repellency. An effective protection shield!



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NanoPhos
Pioneering Nanotechnology

SurfaPore M Description

SurfaPore M is a water based formulation, specifically designed to harness the power of nanotechnology, in order to achieve both oil and water repellency on the surfaces applied. It contains a blend of different size nanoparticles, so as to successfully modify slightly porous surfaces (like marble or granites) and absorptive surfaces (like cement or stones).

SurfaPore M action mechanism is simple in concept but effective in practice: The core nano-sized particles, suitably engineered to fit the pores of the surface applied, penetrate and "flood" pores that can accumulate water, oil or dirt. SurfaPore M anchors on the surface applied, so as the coating is permanent and effective. After coating, water, oil or dirt fails to penetrate into the microporosity of the substrate, as the chemical structure of billions of nanoparticles repel the "attacking" molecules. Therefore, an important, value-adding objective has been achieved: Permanent pore protection provides stain proofing and easy cleaning properties. The application of SurfaPore M does not induce any visual change on the surface applied and does not block its breathability.

Its unique formulation combines water repelling nanoparticles, partially coated with organofluorated coatings that provide oil repellency and resistance to extreme temperature ranges. The ability of SurfaPore M to retain functionality up to 350°C, makes it ideal for application on kitchen tops or other surfaces where hot objects are placed.SurfaPore M nanoparticles blocks the apsorbance of UV radiation without affecting the surface. Therefore, superior protection of the substrate is achieved without discolorations (yellowish essence) or loss of effectiveness. Industrially, SurfaPore W has found important applications both by spraying and by dipping of building blocks (stones). Significant references include restoration of archaelogical monuments, preservation of high traffic areas or application on industrial flooring that loose their shiny look.

International Standards Testing

ASTM E514 – Pressure Driven Water Resistance: Five SurfaPore M modified natural stone samples of one cm thickness (modified on both sides) were examined under constant 500Pa pressure for 120h: Reduction of Water Penetration: 85,4% ±2%, Reduce of Water Leakage: 97,1% ±2%. **Stability under Ultra Violet (UV) Irradiation:** SurfaPore M exhibits at least 3 times more resistance to UV irradiation than traditional, solvent based water repellents. **Water Vapour Permeability Loss:** Water Vapor Permeability was determined as the rate of water vapors "travelling" through a 1cm thick porous stone sample. Vapor Permeability Loss: 2,12% (surface application). **Stain Resistance EN ISO 10545-14:** SurfaPore M modified surfaces are not susceptible to staining and exhibit Class 5 Stain Resistance.

Application Note

Surface Application: The application surface should be dry and clean. Apply SurfaPore M by brush, roller or spraying. No dilution is required. After about 15 minutes, and before SurfaPore M dries completely, remove application excess with a wet, soft cloth and polish the surface. For extra protection of very sensitive surfaces reapply, within 3 hours after the first application. Maximum efficiency is achieved 7 days post application. **Consumption:** Estimated consumption rate 12-18 m^2 per litre, strongly dependant on the absorption properties of the application surface.

Physical Properties

Milky White, Water Emulsion with slight odour and pH = ~6.
Boiling & Flash Point: >100°C
Auto Ignition Point: >100°C
Density: 0,98 $g.cm^{-3}$ Viscosity: 6 mPa.s
SurfaPore M is not considered an oxidant.

Safety & Storage

SurfaPore M contains no dangerous ingredients and it is water based. VOC Content: 75g/L (EU limit (2010): 140g/L). Not hazardous according to Council Directive 1999/45/EC and its subsequent amendments. Request, read and comprehend the MSDS. Avoid freezing. Expiring Date: Two years after the production date.

What is Nanotechnology?

Nanotechnology refers to the scientific field, which deals with very small structures, usually sized below 100 nm. One nanometer (nm) is one billionth of a meter (10^{-9} m) - it is so small that if earth were one meter in diameter, then one nanometer would have been the size of an apple! Nano-sized materials reveal unique properties when compared to ordinary, bulk materials or even molecules.

NanoPhos at a Glance...

At NanoPhos, we take advantage of the unique properties of nanotechnology and invent clever materials that solve every day problems. By harnessing nanotechnology, we seek to create a more comfortable, safe and trouble-free living environment. We transfer innovations out of our lab into the hands of consumers. Our vision is clear: "Tune the nanoworld to serve the macroworld" – in simple terms we make nanoparticles solve common problems. NanoPhos was recognized in January of 2008 by Bill Gates as one of the most innovative companies and also received the 1st prize for innovation at the prestigious 100% Detail Show in London. NanoPhos is a rapidly growing company that is actively expanding its distribution network. Currently, the company is present in the UK, Ireland, Norway, Sweden, Finland, Denmark, Portugal, Greece, Cyprus, Poland, Saudi Arabia and Australia.

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NanoPhos SA has been approved by Lloyd's Register Quality Assurance to follow the EN ISO 9001:2000 Quality Management System for the development, production and sales of chemical products for cleaning and protection of surfaces and nanotechnology products.

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