

Project:

Water repellency for porous or fibrous surfaces such as carton, plasterboard, drywall, plaster and absorptive wooden surfaces

Product:

SurfaPore F

Key Benefits:

- Long Lasting
- UV and Weather Resistant
- Easy surface application
- Can be used as primer
- Excellent washability
- Water based
- Adhesion promoter
- Environmentally friendly
- Cost Effective

Applications:

- Water protection of porous surfaces
- Waterproofs plasters, plasterboards, drywalls, wood and carton
- Prevents mould growth
- Prevents Cracking
- Paint primer
- Protects wooden surfaces susceptible to moisture (tropical woods, softwoods, plywoods)

Packaging:

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

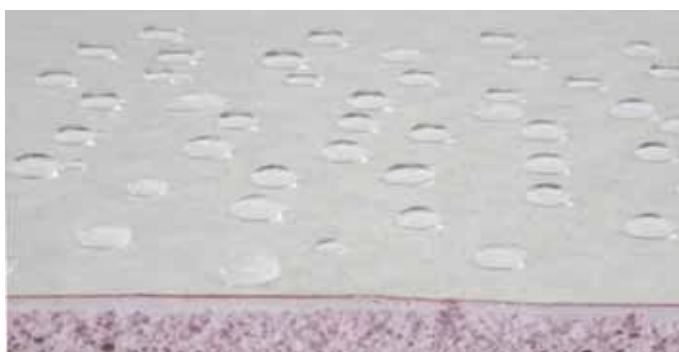
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SurfaPore® F

Water repellency of fibrous materials, plaster and wood Primer for plasterboard and drywall before painting

SurfaPore F is a water-based formulation that can be easily applied on fibrous surfaces such as plaster, plasterboards, drywalls, wood and carton. It protects and waterproofs surfaces assuring that water or other corroding factors are effectively repelled by chemical forces. Plasterboards and special wood types (tropical woods, softwoods and plywoods) are protected by moisture, mould and microorganisms. It can also be used as a primer on plasterboards and drywalls, improving the adhesion of paints. SurfaPore F modified surfaces can last longer, while their UV and weather resistance are enforced.



After SurfaPore F application, water is not absorbed by the protective carton nor by gypsum. Water droplets create beads due to the hydrophobicity of the surface.

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NanoPhos
Pioneering
Nanotechnology 

SurfaPore F Description

SurfaPore F is a water based, liquid formulation, developed and produced by NanoPhos SA. SurfaPore F creates a thin layer on the modified surfaces, preventing water from penetrating. Because of its flexibility, it reduces the swelling and cracking effect. It reduces water absorption of substrates by up to 90%. SurfaPore F has a prolonged lifetime and great resistance to UV radiation and weathering, while at the same time it is really cost effective. Modified surfaces undergo minimal change to the original natural appearance.

Whilst SurfaPore F contains a moderate tough and flexible resin, the application and the adhesion of the solution on surfaces are favoured. Due to its composition, SurfaPore F can be used as a primer before painting, in surfaces such as plasterboards. In this way, the adhesion of paint on substrates is enforced. All in all, SurfaPore modified surfaces remain dry and unchanged in both appearance and mechanical properties.

International Standards Testing

Water absorption under low pressure (RILEM Test Method 11.4): The test procedure determines the water absorption rate of horizontal plasterboard surface. Loss of water is inversely proportional to waterproofness. After 24 hours with water contact, the treated sample exhibited 0,6 cm³ absorption, while the untreated absorbed 5 cm³. **Water absorption on kraft paper:** Water mass absorption was reduced 93,25% after 1 hour immersion in a water tank at Room Temperature.

Contact angle measurement: Waterproofing can be quantified with contact angle measurement between water and substrate. 120 seconds after depositing water droplet, SurfaPore F treated samples exhibited 135°, while untreated 45°.



Protective carton surface



SurfaPore F treated carton

Water contact angle on untreated sample on the left (absorption) and beading effect on SurfaPore F treated sample on the right.

Application Note

Surface Application: The application surface should be dry and clean. Apply SurfaPore F by using a brush or roller. No dilution is required. On every absorptive surfaces re-apply within 3 hours. Maximum water repellency is achieved 24 hours post application.

Consumption: Estimated consumption rate 8-10 m²/L, strongly dependant on the properties of the surface applied.

VOC (Volatile Organic Compounds): Maximum EU VOC content limit value (Directive 2004/42/CE) of the product in a ready to use condition on (category A/h "Binding Primers", Type WB): 30 g/L (2010). Maximum VOC content of this product is 1 g/L.

Storage: Avoid freezing. Expiration Date: Two years after the production date.

Physical Properties

Milky White, Water Emulsion with slight odour and pH = 7.0±0.5. Boiling & Flash Point: >100°C. Auto Ignition Point: >100°C. Density: 1.01±0.05 g.cm⁻³ Viscosity: 4 mPa·s SurfaPore F is not considered an oxidant.

Safety

Warning. May cause an allergic skin reaction.

Contaminated work clothing should not be allowed out of the workplace. Take off contaminated clothing and wash it before reuse. Wear protective gloves. IF ON SKIN: Wash with plenty of water. Avoid breathing dust / mist / spray. Use only outdoors or in a well-ventilated area. IF SWALLOWED: Immediately call a POISON CENTER / doctor. Dispose of contents / container according to national legislation. Store in a closed container. Keep out of the reach of children.



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 macro-world" – 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, Norway, Sweden, Denmark, Portugal, Spain, France, Italy, Greece, Cyprus, Egypt, Sudan, Saudi Arabia, Bahrain, UAE, Qatar, Oman, Iran, India, New Zealand, China, Japan, Mexico, Guatemala, Thailand, Malaysia and Singapore.

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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 and the environmental management system EN ISO 14001:2004 for the development, production and sales of chemical products for cleaning and protection of surfaces and nanotechnology products. Furthermore, it is certified for occupational health and safety management systems with OHSAS 18001:2007.

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