

SurfaPore R

Water Repellent for clay-based surfaces

Product Description

SurfaPore R is a water emulsion formulation, composed of nanoparticles, that preserves the aesthetic appearance of clay surfaces while protecting them against water penetration, deterioration and from “greening” of mould growth. Most traditional sealers are based on plastic or small silicone-based molecules that create an impermeable water barrier. Instead of covering the clay surface with polymerizing additives, **SurfaPore R** “dresses” the pores, the capillaries and the “free” surface of a clay-based product with hydrophobic materials compelling the penetration of water impossible, while the surface is able to “breathe”. Hence, treated with **SurfaPore R** clay-based surfaces remain protected against “greening”, corrosion and cracking due to frost.

Recommended Use

Water repellent for clay-based surfaces, such as roof tiles, cotto and pottery. Ideal for frost threat protection, mould growth protection and efflorescence prevention.

Key Benefits

- ☆ Very effective & Nano-based
- ☆ High breathability
- ☆ Non film forming – Invisible
- ☆ Long-lasting & UV-resistant
- ☆ Easy application on surface or by dipping
- ☆ Water-based
- ☆ Environmentally friendly
- ☆ Cost-effective

Technical Specifications

Form/Type	▶ Water emulsion
Colour	▶ Milky white
Density	▶ $1.00 \pm 0.05 \text{ g/cm}^3$
Application temperature	▶ From +5°C to +35°C
pH	▶ 5.5 ± 0.5
VOC (Volatile Organic Compounds)	▶ Maximum: 1 g/L
Boiling & Flash point	▶ >100°C
Auto ignition point	▶ >100°C
Viscosity	▶ 2mPa·s
Slight odour	
SurfaPore R is not considered an oxidant	

International Standards Testing

Water absorption:

Results are based on laboratory testing of roof tiles samples provided by independent roof tiles manufactures A, B & C. Water absorption is calculated after 24h of immersion in a water bath and expresses as % w/w:

Manufacture A:

- Reference: 13.66%
- Treated with SurfaPore R: 0.53%

Manufacture B:

- Reference: 5.26%
- Treated with SurfaPore R: 0.54%

Manufacture C:

- Reference: 7.79%
- Treated with SurfaPore R: 0.84%

Mass loss after freeze-thaw salt stress (EN 13581:2002):

The SurfaPore R treated sample does not exhibit mass loss after 20 cycles.

Water absorption coefficient due to capillary action (EN 1015-18:2003):

Water absorption coefficient due to capillary action is inversely proportional to waterproofness and was measured $C_m=0.08$ kg/(m²·min^{1/2}) for SurfaPore R and $C_m=0.33$ kg/(m²·min^{1/2}) for reference.

Water Vapor Transmission of materials (ASTM E96):

Water Vapor transmission loss was determined as the rate of water vapors pass through a 2cm thick cement sample. Vapor Permeability Loss: 4.94% (surface application)

Surface Preparation

All surfaces should be clean, dry and free from dust, oil, grease and other foreign matters or contamination.

Application

Apply **SurfaPore R** by using a brush, roller or spray gun. No dilution is required. On very absorptive surfaces re-apply within 3 hours.

Dipping: Dip the clay-based surface in SurfaPore R for 30 seconds.

In any case (surface application or dipping) test results on a small area before full scale application. Maximum water repellency is achieved 24 hours post application.

Consumption

Estimated consumption rate 9-11 m²/L, strongly dependent on the properties of the surface applied.

Health and Safety

Read label before use. Safety Data Sheet are available through NanoPhos' website www.NanoPhos.com or upon request by contacting NanoPhos through email: info@NanoPhos.com or by telephone: (+30) 2292069312.

Available Packaging

- 1L Plastic Container
- 4L Plastic Container
- 30L Plastic Container
- 1000L IBCs

Notes & Precautions: Adverse weather conditions during or after the product application may affect the properties of the coating. Storage of closed containers, in controlled dry and enclosed space, away from sources of ignition and temperatures from 5°C to 35°C, for up to 24 months. The Technical Data should be read in conjunction with the Safety Data Sheets. The present edition of this technical datasheet automatically cancels any previous one concerning the same product. For more information please contact NanoPhos: info@NanoPhos.com