



# NANO-320 Stone Protect

BREATHABLE PROTECTIVE COATING FOR HEALTHY WALLS

- ✓ For mineral substrates.
- ✓ Invisible and water-repellent.

## Technical Info

- Base: Silicon dioxide / Silica.
- Form at 20°C: liquid.
- Colour: colourless.
- Odour: odourless.
- Solvent: water.
- Relative density at 20°C: approx. 1.004 kg/l.
- pH: 7.5.
- Viscosity at 20°C: 1 mPa.s.
- Penetration: 5 to 7 mm.
- Drying time: 24 hours, low temperatures and a high relative humidity delay drying.
- Shelf life: at least 24 months, in the original, closed packaging, if stored in a cool, dry and frost-free place.

## Packing

NANO-320 Stone Protect - can 5L	486505000
NANO-320 Stone Protect - can 20L	486520000

## Product [NANO-320]

### Characteristics

Durable, moisture-resistant coating for all absorbent, mineral substrates, such as natural stone, concrete, brick, roughcast, ...; for both indoor and outdoor use. Made from water-based, mineral nanoparticles, Stone Protect is ecological; it doesn't contain plastics, solvents or other toxic substances. The product's strong water-repellent effect makes sure the treated surface dries very quickly. This inhibits algae and moss efflorescence and thus the formation of green and black deposits, and dirt is washed away by rain. It is not necessary to mask windows, glass panes and other surfaces. Easy to apply with an HVLP spray gun, Stone Protect offers more than ten years of protection in a single coat.

### Applications

- Due to its antistatic properties, it increases the self-cleaning capacity of concrete structures, facades and walls.
- Prevents and delays the build-up of algae and mould efflorescence on walls and balconies/terraces.
- Greatly reduces frost damage and flaking in the case of soft brick and (limestone) sandstone.
- Stops moisture saturation of porous brick and natural stone facades, maintaining their insulating capacity.
- A second coat applied wet-on-wet delivers a urine-resistant result, useful for public buildings, among other structures.

## Use

### Preparation

- Apply on a clean, dry and receptive substrate. Clean, rinse and dry the substrate if necessary. If a moss remover, acid or alkaline cleaner has been used, rinse the surface well with water. Remove the dust completely after sandblasting or applying another abrasive method. The surface must be completely dry. Wait at least 24 hours after cleaning or a rain shower.
- Shake Stone Protect well before use and do not dilute.

#### Applying the coating

- Apply Stone Protect by spraying with the Novatio Pressure Bottle with the great advantage that a controlled, uniform amount of product is applied. For spraying with an HVLP spray gun, the guideline value is 4 bar, with a 0.7 - 1 mm nozzle size. This can be adjusted to suit the circumstances and user's experience.
- For an optimal result, treat the entire substrate with a single non-saturating coat.
- Spreading rate will depend on the absorbency and roughness of the surface, application method, user experience and weather conditions.
- Apply at ambient temperature between 10°C and 30°C and a RH of maximum 85%. Do not apply when it is raining or frosty. Dry in 24 hours, depending on substrate, temperature and amount applied. Maximum protection after 7 days. Clean surrounding materials with a damp, clean cloth before the product has fully dried. Immediately after use, clean the tool with clean water.
- The spreading rate is between 12 and 14 m<sup>2</sup> per litre (70-80 ml (g)/m<sup>2</sup>). Wearing gloves and proper ventilation is recommended. Should you be unsure of the product's compatibility with the substrate, first test it in an inconspicuous area.

#### Curing time

- The nanoparticle network needs 24-48 hours to harden, adhere and activate. Curing time will shorten as the ambient temperature rises. The product must not come into contact with water during this time. The bead effect is only visible after curing. The effect is optimal from 7 days after application.

#### Durability

- The durability of the coating depends on the stability of the substrate, the weathering caused by foot traffic or contact, the chemical load and the extent of air pollution. An actual active durability of more than 10 years is realistic.

#### What can negatively influence the product's durability or action?

- Degradation of the surface. Fragile sandstone may flake off, causing the active ingredients to wash away.
- Weathering caused by foot traffic or contact. The top layer may wear off in places where there is a lot of foot traffic.
- Build-up of a layer of dirt. Stone Protect is a surfactant. If the surface is covered with dust, pollen or mud, it will temporarily lose its effect. Rainfall and drying restore the effect. In particular, this happens in the case of horizontal surfaces, in highly polluted environments (industry) and following exposure to intense atmospheric pollution (Sahara Desert sand, pollen).
- Humidification of the surface. Rather than impregnation, Stone Protect works by repelling water electrostatically. If the substrate becomes moist due to water pressure or penetration, this surface effect is cancelled. Stone Protect does not protect against standing water or water pressure. The nanoparticles form a network that makes the surface water-repellent. If that network is broken by pressure, friction or the use of surfactants, the subsurface will absorb water. Once the substrate has dried fully, the water-repellent effect is automatically restored.
- Stone Protect only affords limited protection against mineral efflorescence on brick facades and walls. This happens when the water containing dissolved metal salts evaporates from the stone, mortar or grout, causing the minerals to crystallize on the surface. Since the product does not impregnate and is fully breathable, evaporation and crystallization will still take place. However, the penetration of moisture through the façade will be greatly reduced, which will delay the effect significantly. There is no effect if the efflorescence is caused by stones or mortar that are too wet, by moisture penetrating from the roof or drain, or by rising damp.
- Stone Protect is not a cleaner. Stone Protect is not suitable for treating water-repellent or poorly absorbent mineral substrates (i.e. already treated with a water repellent, polished or non-porous).