

Protectosil® 100 NK

Water repellent formulation with water beading effect for mineral and hydroxyl-group containing substrates

Technical Data

Properties and test methods	Value	Unit	Method
Density	approx. 0.88	g/cm ³	DIN 51757
Boiling point	175 - 186	°C	DIN 51751
Flash point	> 57	°C	DIN 51755
Active ingredient content	97 - 100	%	-

Registration

Protectosil® 100 NK

AICS (Australia):	Yes
DSL/NDSL (Canada):	No
PICCS (Philippines):	Yes
TSCA (USA):	Yes
IECS (P.R. China):	Yes
ENCS (Japan):	Yes
ECL (South Korea):	No
EINECS/ELINCS (EU):	Yes

Protectosil® 100 NK is suitable for waterproofing of porous mineral building materials.

An excellent beading effect develops on suitable substrates only a short time after application. Protectosil® 100 NK can be applied at full-strength or after dilution with suitable solvents.

Safety and Handling

Before considering the use of Protectosil® products please read its Safety Data sheet (SDS) thoroughly for safety and toxicological data as well as for information on proper transportation, storage and use. The Safety Data Sheet is available on our website www.protectosil.com or upon request from your local representative, customer service or from Evonik Resource Efficiency GmbH, Product Safety Department, E-MAIL sds-hu@evonik.com.

Packaging and Storage

Protectosil® 100 NK can be stored in originally sealed containers without any deterioration in quality for at least 6 months. The storage temperature are between -10 °C and 40 °C. Protectosil® 100 NK is available in 25 l, 205 l and 1.000 l.

Properties and Use

Suitable solvents:

- Ethanol* (water free, denatured with petroleum hydrocarbons)
- Aliphatic hydrocarbon solvents (pentane, hexane, heptane, etc.)
- Aromatic hydrocarbon solvents (toluene, xylene)
- White spirit

Dilutions of from 1:1 to 1:9 are possible (Dilution of Protectosil® 100 NK and solvent)

* recommended solvent

Suitable porous, mineral substrates:

- Concrete (fresh or carbonated)
- Clinker masonry
- Ceramic tiles
- Sand-limestone
- Natural stone
- Cement render

Product Characteristics

- solvent-free
- low volatility
- high reactivity
- very good beading effect
- water vaporpermeable, colorless impregnation
- seals hairline cracks up to 0.3 mm
- considerably reduces absorption of water and damaging water-borne salts (e.g. chlorides)
- very good penetration capacity
- very high alkali resistance
- stops the alkali-silica reaction

The substrates to be treated should be air-dry and clean in order to ensure deep penetration of the active ingredient. During application, the outside temperature and the temperature of the substrate should be in the range from 0 °C to 40 °C. The material should not be applied if there is strong wind or if it is raining. Protectosil® 100 NK must not come into contact with water either before or during use.

Protectosil® 100 NK must be applied by flow coating to the saturation point. This is achieved by allowing it to flow without pressure against the surface to be treated. All liquid delivery devices are suitable (airless spray guns, for example). The material must not be atomized.

Protectosil® 100 NK must remain in contact with the substrate for several seconds as a liquid film. Horizontal surfaces should have a shiny, wet appearance for 3-5 seconds. Vertical surfaces should exhibit a 30-50 cm shiny curtain of liquid.

Application

All equipment and containers must be clean and dry. After use, they can be cleaned with any organic solvent (methylated spirit, petrol or thinners).

Non-absorbent substrates such as window frames, window sills, plastic fittings, window glass, etc., should be covered before application. Surfaces which accidentally come into contact with Protectosil® 100 NK can be cleaned with alcohol (spirit) or aqueous soap solution (the compatibility with the surface in question should be checked in advance). Cleaning should be carried out as quickly as possible (within a few hours), otherwise formation of a silicone resin film can make cleaning more difficult. Silicone resin films which have formed are best removed using ethanol (spirit).

Plants in the region of the surfaces to be treated should be protected against contact with Protectosil® 100 NK. Protectosil® 100 NK reacts with the interfaces in pores and capillaries of the mineral surface and forms invisible, water-repellent interfacial compounds. However, since it is frequently unknown whether the material has been previously treated, and the exact type of treatment, a test should always be performed on a small area to make sure that no undesired secondary phenomena occur.

Application Details

Suitable substrates	Approximate consumption - Mode of application
Concrete	min. 150 g/m ² - Low pressure pumping
Clinker masonry	min. 150 g/m ² - Low pressure pumping
Ceramic tiles	approx. 100 g/m ² - Low pressure pumping

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