TECHNICAL SHEET
FUNCTIONAL COATING FN®1

Protective photocatalytic coating for efficient air cleaning and for permanently clean facades, walls, concrete and other surfaces.
Ensures active self-cleaning of the surface from dirt and color fastness. Protects surfaces against the build-up of microorganisms.
It forms an impenetrable UV shield.

Guaranteed functionality on vertical surfaces - 10 years.

Use:

Functional coating FN®2 can be used both outdoors and indoors.

FOR PROTECTION AND SUSTAINABLY CLEAN APPEARANCE OF STRUCTURES: The surface coated with FN®2 is a permanently clean surface where no soot or other dirt from the air is deposited or blackened by microorganisms It is mainly used for the protection of facades, walls and exposed concrete. It is particularly suitable as UV protection for insulated facades - it prevents color changes and breakdown of the binder of facade paints and plastered render.

FOR A CLEAN AND HEALTHY ENVIRONMENT: FN®2 is used to create a special wall surface that provides efficient, silent, low-cost and maintenance-free technology to improve indoor environments in buildings.

ECO-TECHNOLOGY FOR AIR CLEANING FROM EMISSIONS AND GREENHOUSE GASES: The functional surface created by FN®2 effectively cleans the air from a wide range of pollutants that are dispersed in the air, over a long period of time and at extremely low cost. 1000 m2 removes, annually, hundreds of kilograms of nitrogen oxides (NOx), methane (CH4) and fine suspended particulate matter containing toxic and carcinogenic substances of organic character from the air. This technology enables construction investors, developers and designers to effectively offset the negative environmental impacts of buildings. Painting larger areas of noise barriers, walls, facades and road surfaces with FN®2 can compensate for the ecological footprint of thousands of cars with internal combustion engines.


SUPER-STRONG SELF-CLEANING EFFECT


UV-FILTER COLOR STABILITY


PREVENTS GROWTH OF BACTERIA


USES NO CHEMICALS

GUARANTEE OF EFFECTIVENESS

PRODUCT DESCRIPTION:

Functional coating FN®2 has been developed and optimized for air cleaning and anti-fouling functions. The paint FN®2 is inert, does not contain any organic substances and does not release any undesirable chemicals into the environment.
It is designed for exterior and interior use. Its protective and self-cleaning properties are inexhaustible, unlike chemical products.
It guarantees extremely effective substrate protection and is also often used as an effective technology to reduce the risk of transmitting infections indoors.
It can be applied to concrete surfaces of raw masonry, stone, ceramics, plaster and also to common building surfaces that do not repel water. We therefore recommend its use especially in applications aimed at air purification or protection against microorganisms. The coating has the highest vapor permeability class (V_1 -High) and diffusion equivalent (S_d 1).

Video - How to create a self-cleaning facade (https://youtu.be/bkved-TNRFw)

PROPERTIES:

- **Highly effective against fungi, fungi, algae and other microorganisms**
- **Prevents the establishment of viruses and bacteria - reduces the risk of transmitting infections**
- **High UV protection - against deterioration and degradation of paint**
- **Self-cleaning function - protects the surface from atmospheric dirt deposits and facade darkening**
- ✓High breathability and vapor permeability
- **Used for creating anti-graffiti protection (Can only be created in white)**

APPEARANCE:

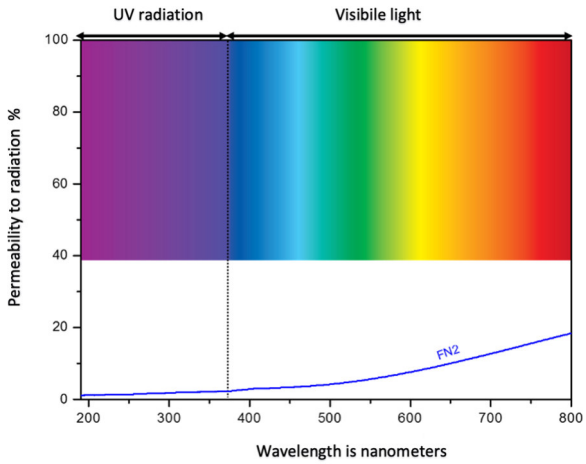
The coating is slightly transparent with a slightly whitish tinge and its surface is slightly chalky.
Transparency approx. 50%. It is suitable for all porous surfaces, where we want to achieve as long as possible a beautiful and clean appearance, without infestation with algae, fungi, fungi and other microorganisms. Photocatalytic titanium dioxide ensures the function of the coating even in minimal quantities. The coating thickness is optimally 5-30 microns.

The layer is active immediately after the impact of the ultraviolet component, which is contained in daylight (exterior) or artificial light with a proportion of UVA spectrum (interior). The optimal wavelength of UV light for illumination from an artificial source is 365 nm.
The coating is aged after 24 hours.

The photocatalytic effect is permanent, inexhaustible and does not fade with time
ALL PROTECTIVE FUNCTIONS ARE PRESERVED FOR THE WHOLE EXISTENCE OF THE COATING.

Dirt, bacteria or other microorganisms do not deposit on the surface created by the FN® 2 coating that is activated by UV light (it acts as a barrier against microorganisms). It is a highly efficient technology for air decontamination (exterior air purification and reduction of the risk of transmitting infections indoors).

The optical properties of the functional coating FN®2 are illustrated by the enclosed graph, which illustrates how the shielding efficiency increases dramatically when it passes into ultraviolet (UV) radiation. At UV wavelengths, photocatalyst nanocrystals absorb virtually all of the energy and convert it into a cleansing effect and an active barrier against the build-up of microorganisms.



COMPOSITION:

Pure water-based composite paint. Contains uncoated photocatalyst and inorganic binders. It contains high concentrations of photocatalyst (70 - 100 g / l), which ensures its long-term flawless protective function and also especially high self-cleaning efficiency.

The coating does not contain any organic compounds in accordance with European and worldwide environmental and health protection trends. The applied FN®2 coating is inert and completely safe. It does not release any substances into the environment.

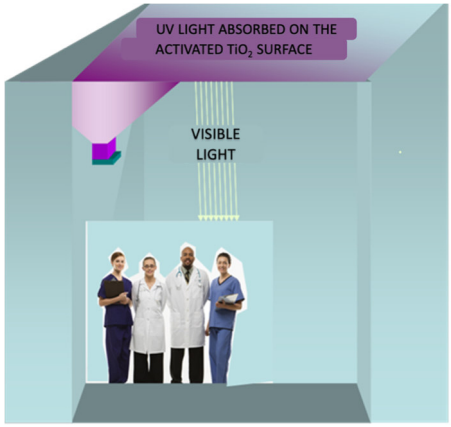
RECOMMENDATIONS FOR USE:

Exterior:

Certified for concrete protection and also suitable for all common types of plasters and walls. In new buildings we recommend applying FN®1 as a first protective coat to protect the surface and reduce the concentration of viruses, bacteria, fungi and prevent growth of lichens and other eroding microorganisms. It is then recommended to use a functional coating of FN 2forthe next 2 layers®2.

In case of already dirty and contaminated facade with microorganisms, we recommend first washing it, penetrating it and then applying our functional coating FN®1 for the first layer. Then apply 2 layers of FN®2.

Interior:



For masonry and plasterboard substrates - in the case of problems with mold, fungi, etc., we recommend that you first treat the surfaces with a mildew agent, allow them to dry and then apply one coat of FN® 1 to prevent the build-up of microorganisms. Subsequently apply two more layers with FN® 2 functional coating to create active antimicrobial protection and self-cleaning air nanopurifier. To ensure full functionality in interiors, it is necessary to ensure the access of ultraviolet radiation with a minimum intensity of 0.2W / m ^{2} to the created FN NANO surface.

METHOD OF APPLICATION:

Prior to each application, the coating should be thoroughly shaken in the package in which it is supplied. Perfect shaking is required to achieve even mixing of the insoluble dust component in the coating. This is necessary to ensure the proper functioning of the protective coating. Before applying the FN® technology, we must have a primer that is perfectly cured. For fresh painting we apply no earlier than 24 hours it is important for proper functionality of the paint.

The important thing is that the paint is still in motion. In practice, this means that only a small amount of the already thoroughly mixed paint is poured and then applied. Shake again before pouring.
To achieve a nice appearance, we always apply as thin as possible, but continuous and even layer, which is allowed to dry before the next coat.


Spraying - optimally three coating layers. On smooth surfaces, the manufacturer recommends spraying to create a thin, even layer.


Roller application optimally in three coats is suitable for virtually all surfaces. Even application requires some skill.


Brush application (for hard-to-reach areas) optimally in three coatings is suitable for hard-to-reach areas, deeper diffusion of the active substance and for the treatment of areas that may be affected by mold, for example.

- Cover all areas that are not intended to be treated with FN with protective a covering.
- The layer should be allowed to dry between individual layers
- Do not apply during rain
- For better effect we recommend thorough cleaning of surfaces before application.

Do not apply to water-repellent (hydrophobic) surfaces.

The method of application, aids and equipment used must correspond to the specific conditions, condition and requirements of the object on which the coating is to be applied.

During application of the coating, nanoparticles of the active substance penetrate into the porous structure of the substrate, where they bind in the layer of inorganic binders. An islet-like layer of only 200 nanometers is capable of providing a photocatalytic function of approximately fifty percent, which guarantees many years of functionality and efficiency of this coating even in outdoor environments. The applied layer is frost-resistant and highly vapor-permeable - in winter, the substrate is not damaged by so-called de-icing.

Dilution:
Do not dilute!

Consumption:
Typically 1 liter = 10m2 of protective surface in three coats.
On the smooth surface in the interior of 10-12m2, on the facades and walls of houses according to the structure of the surface we have to count with higher consumption - about 7-10m2 of painted surface of 1 l in 3 paint layers on average.

Cleaning tools:
Water - as soon as possible after use.

Plastic containers 1 and 5 liters

STORAGE:

Maximum 3 years from date of manufacture at 10-25 ° C, in unopened original packaging. Before use, mix thoroughly by shaking in the original container. Do not allow to freeze!

SAFETY PRECAUTIONS FOR HANDLING FN2 COAT:

Observe safety precautions in accordance with the safety data sheet and applicable regulations, wear a respirator or other suitable respiratory equipment. Do not breathe spray mist, wear respirator, safety goggles and helmet or other means to protect eyes, face and skin. In case of contamination, rinse thoroughly with water and treat with cream. In case of irritation, consult a doctor.

WASTE DISPOSAL:

Dispose of the used empty packaging to a collection point for packaging waste.
Dispose of packaging with product residues at a place designated by the municipality for the disposal of hazardous waste or hand over to a person authorized to handle hazardous waste.
Observe the safety data sheet and local regulations.

NOTICE:
The information given is based on the current state of knowledge and experience and has been compiled to the best of our knowledge, but in no case can it be construed as a legal guarantee of any kind.

OWNER OF PATENT AND MANUFACTURER:

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CZECH INVENTION-PROTECTED BY PATENT AND FN® TRADEMARK

VERIFIED BY MORE THAN TEN YEARS OF PRACTICAL EXPERIENCE