
# TECHNICAL SHEET

## FUNCTIONAL COATING FN®2

**Protective photocatalytic coating for efficient air cleaning and for durable clean facades, walls, concrete and other surfaces.**
**Ensures active self-cleaning of the surface from dirt and color fading. Protects surfaces against microorganism buildup. Provides an impenetrable UV shield.**

**Guarantee of functionality on vertical surfaces - 10 years.**

## USAGE:

**The FN®2 functional coating can be used both outdoors and indoors.**

**FOR PROTECTION AND SUSTAINABLE APPEARANCE OF STRUCTURES: On surfaceS coated with FN®2, soot and other airborne dirt do not settle; blackening and greening caused by microorganisms do not settle. It is mainly used for the protection of facades, walls and exposed concrete. It is extremely suitable as a UV protection for thermally insulated facades - it prevents changes in the color and breakdown of the facade binder and texture.**

**FOR CLEAN AND HEALTHY INTERIOR ENVIRONMENT: FN®2 is designed to create a special wall surface that provides efficient, low-noise, low-cost, maintenance-free technology for improving indoor environments.**

**ECO-TECHNOLOGY FOR AIR CLEANING FROM IMMEDIATE SUBSTANCES AND GREENHOUSE GASES: The FN®2-coated functional surface effectively, long-term and with extremely low cost cleans the air from a wide range of pollutants that are dispersed in the air (air pollution). 1000 m2 remove hundreds of kilograms of nitrogen oxides (NOx), methane (CH4) and fine suspended dust particles containing toxic and carcinogenic substances per year from the air. This allows building investors, developers and designers to effectively compensate for the negative environmental impacts of buildings. Painting larger areas of noise barriers, walls, and facades with FN®2 can compensate for the ecological footprint of thousands of cars with internal combustion engines.**

**Building owners, architects and designers will appreciate the possibility of our coating as it comes in over 350 pastel shades.**

## PRODUCT DESCRIPTION:

J t is a very effective functional mineral coating for the protection of building surfaces, which operates on the basis of a physical phenomenon called photocatalysis. The coating is activated by the ultraviolet component of daylight and has highly effective protective and self-cleaning capabilities. It protects surfaces efficiently and long-term against dirt (soot and dust particles), microorganisms (molds, algae) and UV radiation degradation (decomposition of paint, plaster and paint dyeing). Its protective and self-cleaning properties are **inexhaustible in contrast to chemical products**.
FN®2 Ensures extremely effective substrate protection and is often used as an effective technology to reduce the risk of transmission of diseases inside buildings.
FN®2 comes in both basic white and more than 350 shades of pastel colors. It is also possible to perform so-called "Venetian stucco". FN® 2 is inert, contains no organic substances and does not release any unwanted chemicals into the environmentu.
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Video – How to create a self-cleaning facade (https://youtu.be/bkved-TNRFw)

## PROPERTIES:

- **Highly effective against fungi, mold, algae and other microorganisms**
- **Prevents virus and bacteria from settling - reduces disease transmission**
- **High UV protection - against dirt and paint degradation**
- **Self-cleaning function - protects the surface from the build-up of atmospheric dirt and darkening / dirt on facades**
- **High breathability and vapor permeability**
- **FN®2 is best for anti-graffiti protection**

## COATING APPEARANCE:

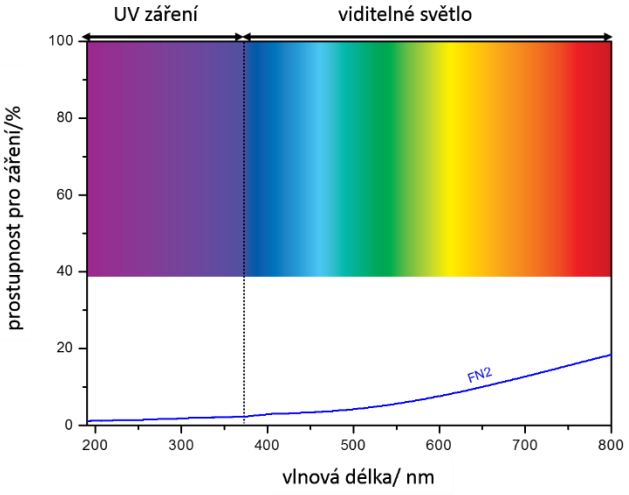
FN®2 is transucent and suitable for all porous surfaces, where the goal is to achieve a beautiful and clean appearance for as long as possible, without algae, fungi, mold and other microorganisms. The photocatalytic titanium dioxide ensures that the coating functions even in small amounts. The coating thickness is optimally 5-20 microns. The layer is either white or colored to the desired pastel shade.

The layer is active immediately after the impact of daylight (exterior) or artificial light with a UV lamp (interior). The optimal wavelength of UV light for illumination from an artificial source is 365 nm. The coating is mature after 24 hours and fully functional after the first rain or rinsing with water.

**A PHOTOCATALYTICAL EFFECT IS PERMANENT, UNFORCEABLE, AND ENDURING.**
**ALL PROTECTIVE FUNCTIONS ARE WORKING WHEREVER THE COATING IS APPLIED.**

On the surface created by FN® 2 coating, which is activated by UV light, dirt, bacteria and other microorganisms won't buildup due to photocatalysis (it acts as a barrier against microorganisms). It is a highly efficient technology for air decontamination (exterior air purification and reduction of indoor disease transmission risk).

**The optical properties** of the functional coating FN®2 are illustrated by the enclosed graph, where it can be seen how the shielding efficiency increases dramatically during the transition to UV. At UV wavelengths, photocatalyst nanocrystals absorb virtually all energy and convert it into a cleansing effect and an active barrier against microorganism deposition.




## COMPOSITON:

Water-based composite coating. Contains uncoated photocatalyst and inorganic binders. The color variants also contain mineral pigments. It contains high concentrations of photocatalyst (70 - 100 g / l), ensuring its long-term flawless protection function as well as particularly high self-cleaning efficiency.

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

## RECOMMENDATIONS FOR USE:

***EXTERIOR:***

**Certified for concrete protection and suitable for all common types of plaster and wall** - for new construction, we recommend applying FN®1 as the first protective layer to protect the surface and reduce the concentration of viruses, bacteria, molds and prevent the growth of lichens and other eroding organisms. Surface. Consequently, we recommend using FN®2 functional coatings for the next 2 layers either in the white base version or in the desired colored shade.

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Viditelná účinnost po aplikaci FN® NANO ochrany (vpravo), po 5 letech od aplikace.

Viditelný efekt aplikace FN® NANO (vpravo), po 5 letech od aplikace.

Viditelný efekt aplikace FN® NANO (vpravo), po 5 letech od aplikace.

***INTERIOR:***

**For masonry and plasterboard substrates -** in the case of mold problems, fungi, etc., we recommend that you first treat the surfaces with anti-fungal agents, allow them to dry and then apply one coat of FN® 1 as a prevention against microorganism deposits. Subsequently, apply two more layers with FN® 2 functional coating to create active antimicrobial protection and self-cleaning air nano-cleaner. Here it is necessary to provide sufficient light source for the long-term functionality of the coating to activate it.


## METHOD OF APPLICATION:

**Before each application, the coating should be shaken vigorously (30 – 40 seconds) in the package in which it is delivered. Robust shaking is needed to achieve even mixing of the insoluble dust component in the coating. This is necessary to ensure proper functioning of the protective coating.**

It is therefore important that the coating 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 re-pouring.

For a nice look, we always apply the **thinnest but consistent even layer** that will dry thoroughly before the next layer.


Spraying - optimally 3x. For smooth surfaces, i tis recommended spraying to form a thin, even layer.

 Brush application in one to three layers is very suitable for poorly accessible areas, deeper diffusion of the active substance and for the treatment of areas that may be affected by mold, for example.

 Roller application in one to three layers is suitable for practically all surfaces. Even application requires some skill.

- Cover all areas that will be treated with the FN® layer well
- The layer must be allowed to dry between layers
- Do not apply in rain
- For better performance, we recommend that you clean the surfaces thoroughly before applying the coating

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

During application of the coating, the nanoparticles of the active substance penetrate into the porous structure of the substrate where they bind in the layer of inorganic binders. Even an island-like layer with a thickness of only 200 nanometers is capable of providing a photocatalytic function of about fifty percent, which guarantees a long-lasting photocatalytic effect of this surface finish even in outdoor environments. The applied layer is frost-resistant and highly vapor-permeable - in winter, the substrate is not damaged by so-called defrosting.

***Thinning:***
Do not dilute!

***Consumption:***
USUAL CONSUMPTION FOR CREATING A PROTECTIVE SURFACE: 6-15 m2 / l in three coats (depending on material absorbency, surface roughness and application method).

***Tool cleaning:***
With water – soon after use.

Plastic containers, 1 and 5 liters

## STORAGE:

Maximum 3 years from date of production at 10-25 ° C, in unopened original packaging. Before use, mix thoroughly by shaking in the original container. For colored variants, we recommend mixing the suspension with a mixing stick after thorough mixing in the bottle (canister) if settled for more than 2 days from the delivery to distribute the pigment perfectly in the liquid. Do not freeze!

## FN®2 HANDLING PRECAUTIONS:

Observe the safety precautions in accordance with the safety data sheet and use a respirator or other suitable respiratory equipment with applicable regulations. Do not breathe spray mist; wear protective goggles and hood or other means to protect eyes, face and skin. If contaminated, rinse thoroughly with water and apply cream. In case of irritation seek medical advice.

## WASTE DISPOSAL:

Hand over the empty packaging to a collection point for packaging waste.
Dispose of packaging with product residues in a place designated by the municipality to store hazardous waste or deliver over to a person authorized to handle hazardous waste. Follow the safety data sheet and local regulations..

***Notice:***
*The information provided is based on current knowledge and experience and has been compiled to the best of our knowledge, but in no way may be construed as a legal guarantee of any kind..*

## PATENT OWNER AND MANUFACTURER:

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***PATENTED CZECH TECHNOLOGY, PROTECTED BY THE FN® TRADEMARK***

***OVER 10 YEARS OF PROVEN TECHNOLOGICAL SUCCESS***