



## TECHNICAL SHEET

### FN NANO® Transparent functional coating

- ⇒ **Protective photocatalytic coating specially developed for long-term protection of concrete limestone, sandstone, travertine and similar natural and artificial stones with porous structure**
- ⇒ **Due to its breathability and vapor permeability, the substrate does not freeze in winter.**
- ⇒ **The coating layer is highly transparent**
- ⇒ **The resulting self-cleaning surface forms a perfect protective shield against UV radiation, microbiological attack and airborne dirt deposits**
- ⇒ **Guarantee of functionality on vertical surfaces – 10 years<sup>[1]</sup>**



**PRODUCT DESCRIPTION:** This is a special, highly effective functional mineral coating **for surface protection** that works on the basis of a purely physical phenomenon called photocatalysis. FN NANO® Transparent is activated by daylight and has highly effective protective and self-cleaning properties. It effectively and long term protects surfaces against dirt deposits (soot and dust particles), microorganisms (mold, algae) and UV degradation. **Unlike chemical products**, its protective and self-cleaning properties are **inexhaustible**. **High breathability and vapor permeability – the coating does crack when frozen in winter.**

#### PHOTOCATALYSIS PROVIDES:

- **High effectiveness against molds, algae, fungi and other microorganisms**
- **Maximum protection against UV radiation and degradation of materials**
- **Strong self-cleaning function - protects the surface for a long time and maintains a clean appearance**
- **Cleaning of pollutants, allergens, and odors from the air**

**THE PHOTOCATALYTIC EFFECT IS PERMANENT, INEXHAUSTIBLE AND DOES NOT DIMINISH OVER TIME.  
ALL PROTECTIVE FUNCTIONS ARE MAINTAINED THROUGHOUT THE LIFE OF THE COATING.**

**APPEARANCE OF THE COATING:** FN NANO® Transparent is semi-transparent with slight white hue and suitable for all porous surfaces where we want to acknowledge the specific texture of the substrate and achieve a beautiful and clean appearance for as long as possible, without being attacked by algae, mold, fungi and other microorganisms. Created layer is 80 % transparent, initially with a slightly whitish hue (creates a slightly matte wax-like film), which disappears over time. The thickness of the coating layer is optimally 5-20 microns. The coating is active immediately after exposure to the ultraviolet component contained in daylight (exterior) or artificial light with a UVA spectrum (interior). The maximum efficiency of the coating is achieved by light wavelength of 365 nm. The coating is cured after 24 hours and fully functional after the first rain or water rinse.

**COMPOSITION:** Purely water-based composite coating that contains an untreated photocatalyst and inorganic binders. The very high concentration of the photocatalyst (50-70 g/l) ensures long-term and flawless protection and a particularly high self-cleaning efficiency.

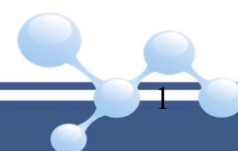
**APPLICATION PROCEDURES:** Before each application, the coating must be shaken very thoroughly (30 - 40 seconds) in the original container. Perfect shaking is necessary to achieve even mixing of the insoluble particles in the coating. This is crucial to ensure the proper function of the protective coating. It is important that the coating is always in motion and does not sediment. In practice, this means pouring off only a small amount of already thoroughly mixed coating before applying. Shake again before pouring. To achieve a nice appearance, always apply as **thin but continuous and even a coat** as possible, allowing it to dry completely before the next layer.

#### COMMON APPLICATION PROCEDURE:

**EXTERIOR:** Substrates that are contaminated or infested with microorganisms are recommended to be gently washed with water first. After thoroughly drying the substrate, it is possible to apply a functional coating FN NANO® Transparent. For new constructions, we recommend applying the functional coating FN NANO® Transparent as a protective layer that will protect the surface and reduce the concentration of viruses, bacteria, fungi and prevent the growth of lichens and other microorganisms eroding the surface.

**INTERIOR:** We recommend first removing biological contamination (e.g. mold) with healthy and ecologically suitable means (preferably water-based), allowing it to dry thoroughly and then gradually applying three coats of FN NANO® Transparent. To ensure full functionality, it is necessary to ensure access to daylight or ultraviolet radiation with a minimum intensity of 0.2W/m<sup>2</sup>.

A detailed procedure for the application of FN NANO® functional coatings is published on the website in the section FN NANO® Technology/Hints and Tutorials. ([www.fn-nano.com](http://www.fn-nano.com))





**Spraying** – in three layers to form a thin uniform layer. Pneumatic spraying or high-pressure airless spraying can be used.



**Roller application** – in three coats is suitable for virtually all surfaces. Requires some skills to make a homogenous layer.



**Brush application** – in three coats, it is suitable for hard-to-reach areas, deeper diffusion of the active substance and for treating areas that may be affected by mold, for example.

- Cover all surfaces that will not be treated with FN NANO® layer
- The layer must be allowed to dry between coats
- Do not apply in adverse weather conditions.
- Air and substrate temperature between + 10 °C and + 25 °C and relative air humidity maximum 75%.
- **Do not apply on a water-repellent (hydrophobic) surface.**

#### PRODUCT FEATURES:

Low viscosity liquid, product density: 1.088 g/cm<sup>3</sup>, without volatile organic compounds (VOC).

High vapor permeability of the coating (class V1- High).

The thickness of the film is optimally 5-20 micrometers.

The coating is frost-resistant after maturing, it is not washable.

Adhesion to concrete 5 MPa (ČSN EN 1542: 2000)

Non-flammable liquid in the sense of ČSN 65 0201

**Dilution:** Don't dilute!

**Consumption:** Typically, 1 liter = 10 m<sup>2</sup> of protective surface in three layers. On a smooth interior surface 10-12 m<sup>2</sup>, on faced concrete (Béton brut) and tiles of houses, depending on the surface structure, we have to consider a higher consumption of typically 6-10 m<sup>2</sup> of coated area from 1 l in 3 coats.

**Cleaning tools:** With water – as soon as possible after use.

#### PACKAGING:

Plastic containers 1 and 5 liters

**STORAGE:** Maximum 4 months from the date of manufacture at 10-25 °C, in unopened original packaging. Before use, the mixture must be shaken very thoroughly in the original packaging. **Must not freeze.**

**SECURITY MEASURES AND ECOLOGY:** The coating does not contain any organic compounds in accordance with European and world trends in environmental and health protection. The applied coating is inert and completely safe. It does not release any harmful substances into the environment. More detailed information can be found on the packaging and in the Safety Data Sheet of the product – available on request.

#### More information:

*The information provided in this technical sheet is compiled on the basis of laboratory knowledge and our professional experience in order to achieve the best possible results at a professional level when using the product. Depending on the homogeneity and contamination of the substrate, optical defects may occur in the final coating. We do not accept any liability for damage caused by incorrect use of the product or its improper selection. Therefore, we recommend professionally and correctly testing our materials to see if they are suitable for the intended purpose of use under the given conditions.*

*This data sheet expires when an update is issued. The manufacturer reserves the right to make subsequent changes and additions. Last updated: September 2021.*

#### THE OWNER OF THE PATENT AND THE MANUFACTURER:

Advanced Materials-JTJ, s.r.o., Kamenné Žehrovice č.p. 23, 273 01, Czech Republic, [www.amitj.com](http://www.amitj.com)

#### DISTRIBUTOR:

FN-NANO s.r.o., Kamenné Žehrovice č.p. 23, 273 01, Czech Republic, [www.fn-nano.com](http://www.fn-nano.com)

**CZECH INVENTION - PROTECTED BY PATENT AND TRADEMARK FN NANO® – VERIFIED BY MORE THAN TEN YEARS OF EXPERIENCE**

<sup>[1]</sup> The guarantee is valid only if the specified application procedure is followed by a professional certified company