



TECHNICAL SHEET

FUNCTIONAL PAINT AETERIO

Protective photocatalytic coating for efficient air purification 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.

USAGE:

Functional coating AETERIO can be used both in exterior and interior.

FOR PERMANENT, LONG-LASTING PROTECTION OF BUILDINGS: The surface provided with the AETERIO protective layer does not allow the settling of soot or other dirt from the air and prevents blackening and greening caused 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 the binder from breaking down.

FOR A CLEAN AND HEALTHY ENVIRONMENT: AETERIO is used to create a special wall surface that provides efficient, low-noise, low-cost and maintenance-free technology for improving indoor environments in buildings.

ECO-TECHNOLOGY FOR AIR CLEANING FROM EMISSIONS AND GREENHOUSE GAS: The functional surface created by the AETERIO coating effectively cleans the air of a wide range of pollutants that are dispersed in the air, efficiently, in the long term and at extremely low cost. 1,000 m² removes hundreds of kilograms of nitrogen oxides (NO_x), and other greenhouse gases and fine suspended particulate matter containing toxic and carcinogenic substances of an organic nature from the air per year. This technology enables construction investors, developers and designers to effectively offset the negative environmental impact of buildings. Painting larger areas of noise barriers, walls, facades and road surfaces with AETERIO can compensate for the environmental footprint of thousands of cars with internal combustion engines.



**SUPER-STRONG
SELF-CLEANING
EFFECT**



**UV-FILTER
COLOR
STABILITY**



**PREVENTS
MICROORGANISM
BUILDUP**



**USES NO
CHEMICALS**



**GUARANTEE OF
EFFECTIVENESS**

PRODUCT DESCRIPTION:

It is a very effective functional mineral coating for **the protection of building surfaces**, which works 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 properties. Effectively and long-term protects surfaces against dirt deposits (soot and dust particles), microorganisms (molds, algae) and against degradation by UV radiation (breakdown of binder paints and plasters). Its protective and self-cleaning properties **are inexhaustible, unlike chemical products**.

It provides extremely effective substrate protection and is also often used as an effective technology to reduce the risk of transmitting infections indoors.

We supply it in basic white color.

The AETERIO coating is inert, does not contain any organic substances and does not release any undesirable chemicals into the environment. **The product meets all safety and nano safety requirements.**

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 bending and degradation of the binder**
- **Self-cleaning function - protects the surface from atmospheric dirt build-up and darkening / staining of facades**
- **High breathability and vapor permeability**
- **Used for creating anti-graffiti protection**

APPEARANCE:

AETERIO is partially transparent and suitable for all porous surfaces, where we want to achieve a beautiful and clean appearance as long as possible, without attack by algae, fungi, fungi and other microorganisms. Photocatalytic titanium dioxide ensures the function of the coating even in minimal quantities. The coating thickness is preferably 5-30 microns. The layer is slightly white.

The layer is active immediately after the impact of 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.

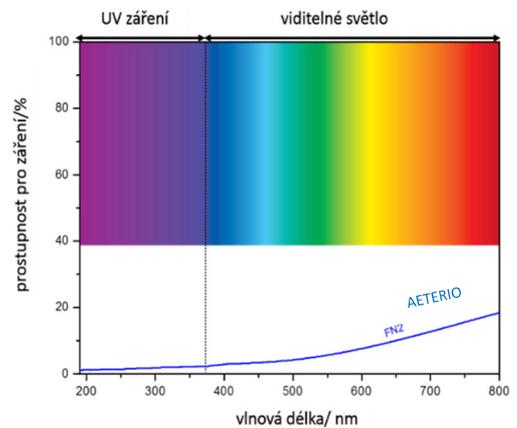
The paint is matured after 24 hours and fully functional after the first rain or rinsing with water.

THE PHOTOCATALYTIC EFFECT IS PERMANENT, DEEPLY BONDED AND DOES NOT WEAR OFF WITH TIME.

ALL PROTECTIVE FUNCTIONS ARE PRESERVED FOR THE WHOLE EXISTENCE OF THE COATING.

The surface created by AETERIO coating, which is activated by UV light, does not deposit dirt, bacteria or other microorganisms (it works as a barrier against microorganisms) due to photocatalysis. 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 AETERIO functional coating 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.



INGREDIENTS:

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 global environmental and health protection trends. The applied AETERIO 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 constructions, 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 micro-organisms that erode the surface. Subsequently, we recommend the use of AETERIO functional coating for the next 2 layers.

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



The White Wall at the Embassy of the Czech Republic in London may look normal, but it does not get dirty and cleans up the air that thousands of people breathe daily.

INTERIOR:

For masonry and plasterboard substrates (white colors) - in case of problems with mold, fungi, etc., we recommend first treating the surfaces with a mildew, let them dry and then apply one coat of FN[®] 1 to prevent build-up of microorganisms. Subsequently apply two additional layers with AETERIO functional paint to create active antimicrobial protection and self-cleaning nano air purifiers. Here it is necessary to ensure a sufficient light source for its long-term functionality to activate it.



METHOD OF APPLICATION:

Before each application, it is necessary to shake the paint very thoroughly (30 - 40 s) in the package in which it is delivered. Perfect shaking is required to achieve uniform mixing of the insoluble dust component in the coating. This is necessary to ensure the proper functioning of the protective coating. Before applying FN[®] technology, it is important to have the primer perfectly matured. FN[®] coatings can be applied to the primer after 24 hours at the earliest. This is important for correct functionality of the coating.

It is therefore important that the paint is always 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, always apply **as thin as possible, but a uniform even layer**, which is allowed to dry before the next coat.



Spraying - optimally three coating layers. On smooth surfaces, the manufacturer recommends spraying to form 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 treating areas that can be affected, for example, by mold.

- Cover well all surfaces that are not treated with AETERIO
- 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 the long-term photocatalytic effect 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 coatings.

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 more consumption - about 6-10m² of painted surface of 1 l in 3 paint layers on average.

Cleaning tools:

Water - as soon as possible after use.

Plastic containers 1 liter

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. Must not freeze!

SAFETY PRECAUTIONS FOR HANDLING AETERIO COAT:

Observe precautions in accordance with the safety data sheet and the applicable regulations, wear a respirator or other suitable respiratory equipment. Do not breathe spray mist, wear safety goggles and hood 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:

Return 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. Follow the rules given in the safety data sheet and local regulations.

Notice:

The information given is based on the present 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:

Advanced Materials – JTJ s.r.o.
273 01 Kamenne Zehrovice 23
Czech Republic
www.advancedmaterials1.com



DISTRIBUTOR:

FN-NANO s.r.o.
273 01 Kamenne Zehrovice 23
Czech Republic
www.fn-nano.com

