

VITEX FOS

Innovative photocatalytic paint

Innovative paint for interior application, based on active nano Titanium Dioxide photocatalysts, which are product of research and development by the Foundation of Research and Technology -HELLAS (FORTH) and the spin-off company PCN Materials. The paint was developed by VITEX S.A., specifically for indoor use by exploiting the properties of photocatalysis using visible light, i.e. light from light bulbs, without the requirement of UV radiation. It breaks down and decomposes pollutants, cleaning the interior air from inorganic and organic gaseous pollutants such as nitrogen oxides (NOx) and Volatile Organic compounds (VOCs) and unpleasant odors. The degradation process is on a continuous basis as long as there is artificial or natural lighting with zero other additional energy costs. Besides, due to its photocatalytic action, the product is characterized as a self-cleaning paint. It maintains its whiteness and dramatically reduces the need for maintenance, cleaning or repainting for over 7 years. In case of deterioration of the paint surface, repainting is required to recover the original photocatalytic activity. The photocatalytic material, paint additive consists of modified nano-Titanium Dioxide (TiO2) produced by the company PCN Materials based on patents registered in Europe (17 countries), China and USA.



Photocatalytic Technology

Advantages:

- As documented by applications of the product in big projects, it is applied once, and its activity lasts more than 7 years, without the need for additional maintenance or activation costs (e.g. 2014 application at the Stalida tunnel on the NW road axis of Heraklion – Agios Nikolaos Crete. No repainting required until 2024).

PRODUCT FEATURES

TECHNICAL CHARACTERISTICS



Viscosity

110 ± 10 KU (ASTM D 562, 25°C)

Density

1,45 ± 0,02 Kg / L (ISO 2811)

Gloss

< 5 units @ 85° (ISO 2813)

COVERAGE



For one coat

12 m²/L

PACKAGING

White	750 mL	3 L	10 L
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DILUTION



Water

Up to 10%

DRYING TIME



Touch dry

30-60 min

Recoat

3-4 h

COLOURS

White



PHOTOCATALYTIC CHARACTERISTICS

Type of pollutants reduced:

NOx, VOC's like formaldehyde, benzene, etc. Also smells from exhaust gases, cigarette smoke, furniture, detergents, etc.

Activation:

By natural or artificial light

LABORATORY AND ON FIELD MEASUREMENTS / RESULTS:

- LABORATORY: NOx reduction > 55% (Test performed: Decomposition of nitric oxide (NO) by hotocatalytic materials. Test method: Based on EN 16980-01:2021 in chamber tester under Visible light) NCSR DEMOCRITOS.
- ON FIELD: NOx reduction>80% for one hour in demo house (UNE EN 16980-1:2022) FORTH/ NCSR DEMOCRITOS.



INTERIOR USE

APPLICATION

APPLICATION FIELD

It is suitable for particularly burdened indoor / closed spaces such as classrooms, offices, basements e.g. car parks, metro stations, etc. with large concentration of exhaust gases, smoke / nicotine, formaldehyde, etc.

It is especially recommended for places where artificial light is available and an increased reflectivity of white paint is required, such as highway tunnels, hotel corridors, etc.

PREPARATION



1-2 coats of VITEX CLASSIC or a conventional white paint are required on properly prepared surfaces.



1 coat of **Vitex FOS** is required as a topcoat.



STEPS

1

Dilute up to 10% with water and stir well before use.

2

Apply one coat by brush, roller or airless spray gun.

TIPS

- Application at 5-35°C and <80% RH.
- Tools must be cleaned immediately after use with water and if needed, with soapy water or detergent.
- Minimize paint wastage by estimating how much paint you will need.

- Don't dilute all the paint in the can but what you need for the daily application.
- Recover unused paint for re-use. After paint application, seal the container and store it for future use.

- Do not dispose of liquid waste into ground water table. Unused paint requires special handling for safe disposal.

ADDITIONAL INFORMATION

VOCs (Volatile Organic Compounds)



"Interior matt walls and ceilings (Gloss $\leq 25@60^\circ$)" VOC content limit **30 g/L**.
Maximum VOC content **<5 g/L** VOCs (ready for use product).

PRECAUTIONS



Please read carefully the labelling mentioned on the can before use. For detailed instructions on hazards and safety in use the Safety Data Sheet is available upon request. Poisons Control Centre Tel. : +30 210 7793 777.

STORAGE



5°C-38°C

Keep containers closed in a cool and dry area.

The above technical data, information and instructions are based on our long experience and laboratory tests and are intended only to describe the product and determine its application. However, the end user should check the suitability of the product for its intended use. Our company guarantees the quality of the product itself, and in any case bears no responsibility for any damage or damage caused if the product is not used properly and in accordance with its instructions for use. The company has the right to revise this technical data sheet without any prior notice.

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TECHNICAL SUPPORT

ISO 9001
14001
CERTIFIED 45001

