

Clean and healthy air

Odor removal

Bacteria and molds inhibition

Self cleaning surfaces

activa[®]

The intelligent coating

**Eco-Active
Photocatalytic System**

Photocatalysis:
A revolution for your health and the environment

Photocatalysis

What is it?

Photocatalysis is a natural process where solar or artificial light radiation is utilized to modify the rate of chemical reaction. It uses the decontaminating and auto-cleaning properties to destroy pollutants and harmful compounds.

Once active, the coated surface will make use of UV source light the same way a solar cell (photovoltaic panel) does, it deodorizes and decompose organic matters as well as any harmful substances in the air and water. The coating will keep microbial at bay.

activa® helps to reduce environmental contaminations, prevent harmful microbes, bacterial and other harmful organic compounds, which includes:

Microbes and
Bacteria

Carbon
Monoxide
(CO)

Organic and
Inorganic
Compounds

Xylene

Nitrogen
Oxides
(NO_x)

Ethanol

Methanol

Fine Particulates
(PM 2.5, PM5, PM10)

Polycondensate
Aromatic
Compounds

Acetaldehyde

Sulphur
Oxides
(SO_x)

Benzene

Formaldehyde

Ethyl benzene

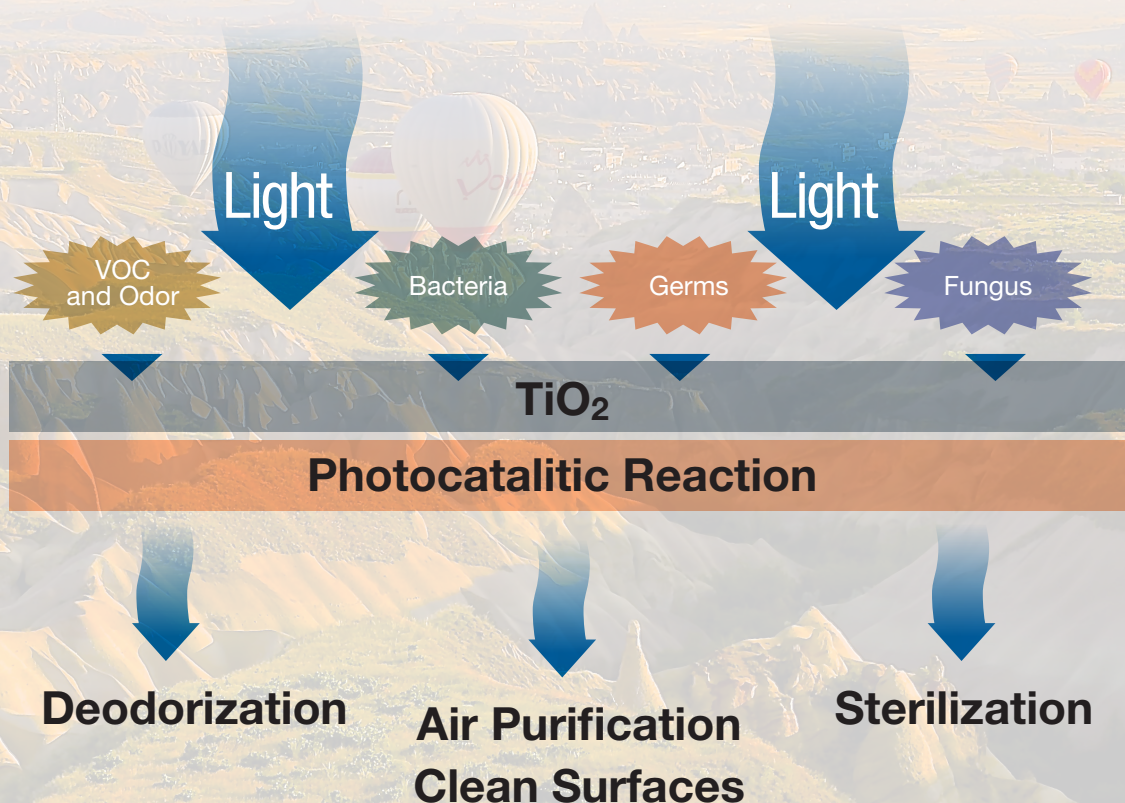
Toluene

How does it work?

The photocatalytic process transforms these pollutant and harmful compounds (see image) into gypsum (CaSO_4), calcium nitrate ($\text{Ca}(\text{NO}_3)_2$) and limestone (CaCO_3), which are completely safe for your health and the environment.

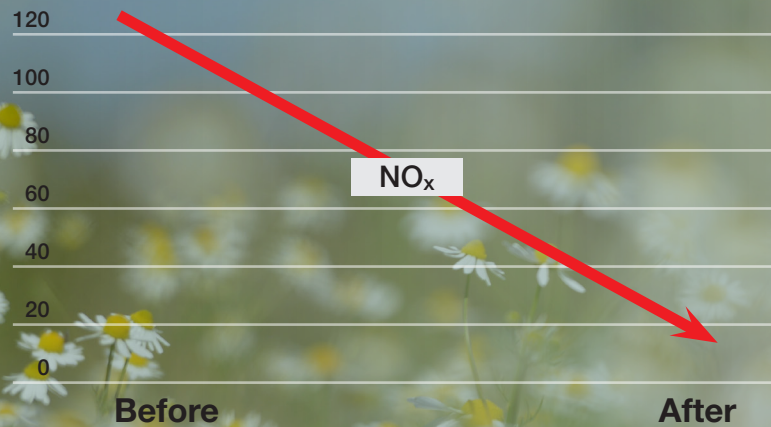
The process has the following features:

- Elimination of airborne toxic pollutants produced by cars, factories, varnishes, glues, heating, kitchens and etc.
- Inhibition of microorganisms (bacteria, fungi, moulds, etc) growth, by destroying the substances that feed them.
- Maintenance of cleanliness and saving on maintenance costs by destroying and removing dirt from applicable surfaces.
- Elimination of odours



Advantages of the photocatalytic ecoactive system

Clean and healthier air



Clean surfaces

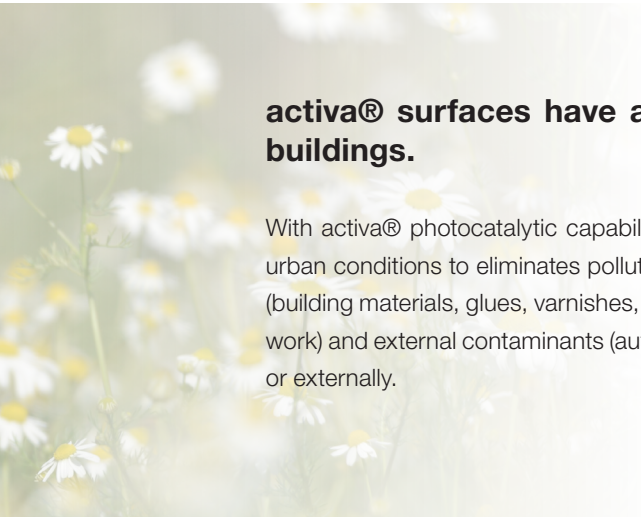
Untreated

Treated

Self-cleaning panels: treated and untreated.
Trump Tower Chicago

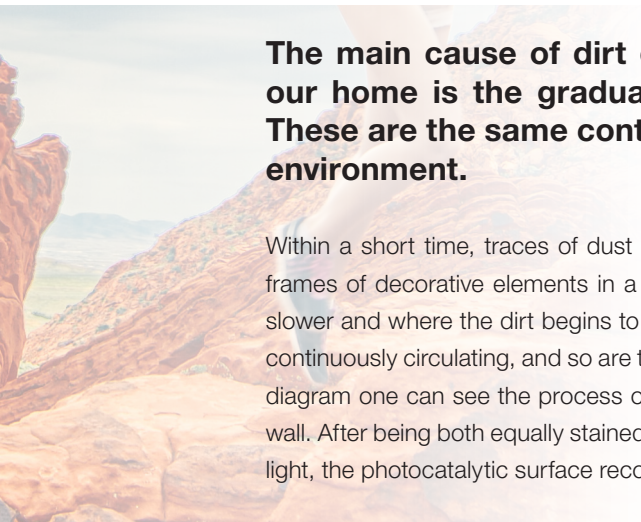
Bacteria control

Compared bacteria growth in lab test



activa[®] surfaces have amazing results in reducing pollution inside buildings.

With activa[®] photocatalytic capabilities, is the most ideal coating for building surfaces under harsh urban conditions to eliminates pollution. Contaminants may come from internal building environment, (building materials, glues, varnishes, solvents...) , or by our daily activities (cooking, toilet, maintenance work) and external contaminants (automobiles and factories). activa[®] will act as a shield be it internally or externally.



The main cause of dirt on the walls on the internal and exterior of our home is the gradual accumulation of particles and pollutants. These are the same contaminants that we are breathing in within the environment.

Within a short time, traces of dust can be seen at the corners and edges of windows, doors and frames of decorative elements in a newly painted room. These are the areas where the air moves slower and where the dirt begins to accumulate. For rooms with air-condition and air vents, the air is continuously circulating, and so are the pollutants. Pollutants are nutrients for bacteria and fungi. In the diagram one can see the process of self-cleaning of a photocatalytic surface compared to a normal wall. After being both equally stained with a dye (Rhodamine B), and only after 60 hours of exposure to light, the photocatalytic surface recovers to its original whiteness.



Photocatalytic surfaces prevent the growth of microorganisms, as it prevents accumulation of substances that support their growth.

activa[®] coated surface are very effective against attacks from bacteria, fungi, moulds and microorganisms in general. The results of such action are backed by numerous measurements made on sensitive walls (schools, hospitals and food factories), and the results obtained in specialized laboratories.



Advantages of the photocatalytic ecoactive system

Healthy and Odorless Housing

Traditional deodorant system consist of using scented spray to stop any unpleasant smell in an environment, however the fact is we are still breathing in the pollutants.

Photocatalytic coated surfaces do not emit any odour but destroy harmful compounds that produces them. The absence of unpleasant smells in an environment indicates the purity and cleanliness of the air entering into our lungs.



Healthy Families

Research have shown that people living in urban environments suffer more respiratory problems, and their life expectancy is relatively lower than that of people living in areas with clean air.

Photocatalytic walls in homes perform the purification process the same way as forests and grassland does, by using the same energy source, Light.

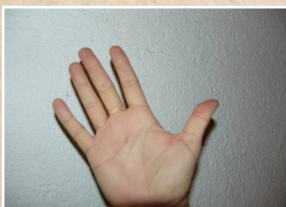
activa® products represent a step forward in technology and environmental health:

- Our products are not only **environmental friendly**, but also actively cleans the contaminated environment.
- In addition to the environment amelioration, the most significant **benefit is enhanced family health**
- A technology that saves substantial resources (**money, water, labour, chemical**) on maintenance.
- The effect is **PERMANENT**





An extreme test: Urban tunnel in Milan. (Via Porpora)
State of the Photocatalytic wall (left) and untreated area (right), after a month of traffic.



Our photocatalytic products

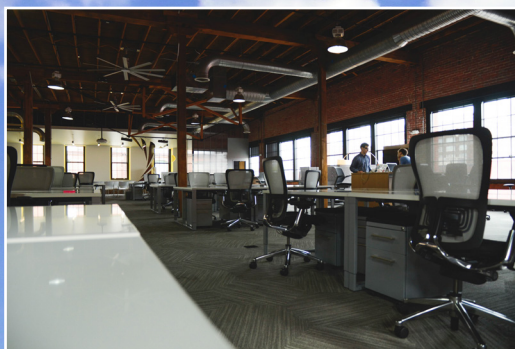
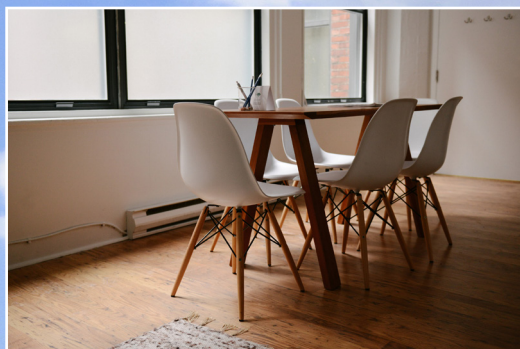
Our products improve the environment actively.

All our products are water-based with fabulous features that enables us to play an innovative role in the green architectural industry. The products actively improves the environment by breaking down contaminants and unpleasant odours.

Our product range includes various types of coatings, tailored to the needs of families, communities and professionals. From colourless coating to a range of coloured paints, they are applicable to indoor or outdoor settings.

activa® products comes with a degree of elasticity and optimal breathability, with the value added photocatalytic properties of antipollution, self-cleaning and antibacterial.

We also have a range of primers to ensure perfect adhesion to any type of surface. activa® coatings are easy and ready to use. They can be applied by roller, brush or spray.



- Building facades, balconies, galleries, indoor and outdoor walls
- Concrete
- Subways, tunnels, garages... (1)
- Indoor areas, such as kitchens, bathrooms, offices, stairs, restaurants, hospitals, gyms... (1)

(1) Sufficient Quality and Quantity of light must be checked to assure results





Product range in our photocatalytic system



Wide range of solutions

Our activa® product solutions is applicable to the majority surfaces of homes, public buildings, industries, monuments and structures. Please refer to our TDS and HSDS for more information.

activa
PhotoDeco

activa
PhotoWall

activa
PhotoLacq

activa
PhotoSiloxane

activa
PhotoSilicate

activa
PhotoCryl

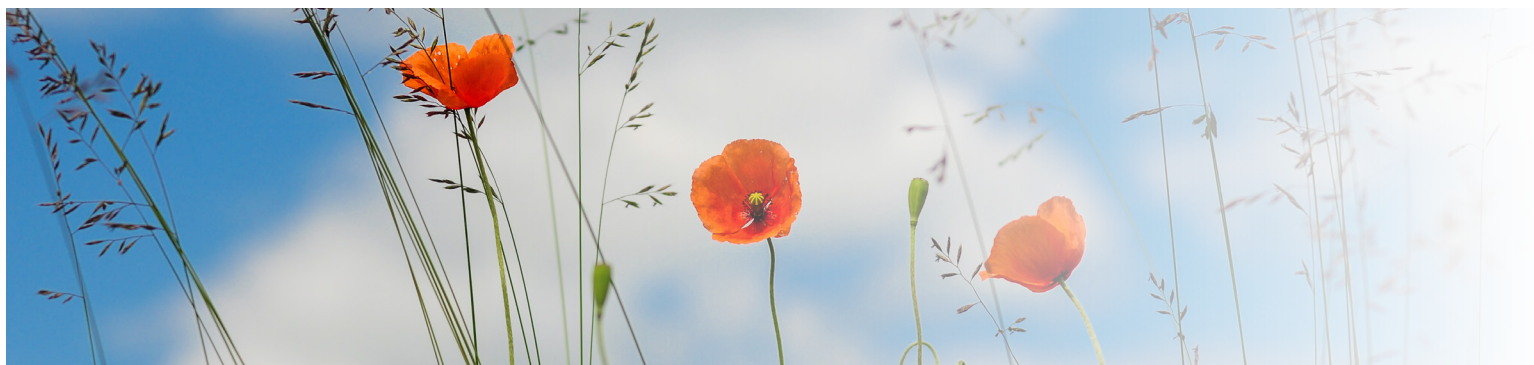
activa
PhotoActiva

activa
CristaClean

activa
PhotoTunnel

activa
Stuccos

activa
Pavements





- Indoor Waterborne coatings (**PhotoDeco, PhotoWall, PhotoLacq**) (*)
- Outdoor Waterborne coatings (**PhotoSiloxane, PhotoSilicate**) (*)
- Treatments for concrete, natural stone and bricks (**PhotoActiva**)
- Treatment for Glass (**Cristal Clean**)
- Products for asphalt roads and pavements (**PhotoCryl Asphalt**)
- Products for sidewalks and structures (**PhotoActiva**)
- Tunnels Coatings (**PhotoTunnel**)
- Concrete protection coatings (**Photo Siloxane**)
- **Photocatalytic Stucco** (*)
- **Photocatalytic Pavements**
- **Photocatalytic Quartz for concrete pavements**
- Wide range of colours option to choose from, production on request.

Public Works, Flooring, Grouts, Facade finishes and cement based coating, are also available in our photocatalytic range.

(*) A wide colour range is available, on request

Other Cement based solutions are also available, on request.

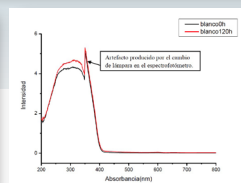
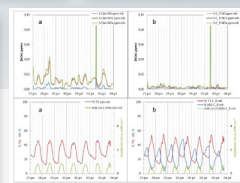
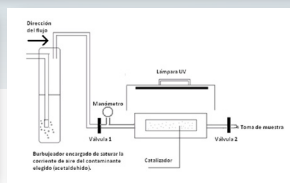
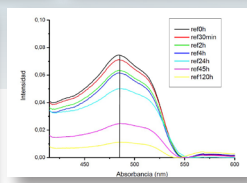
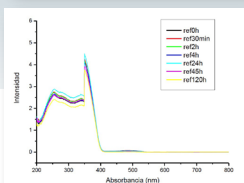
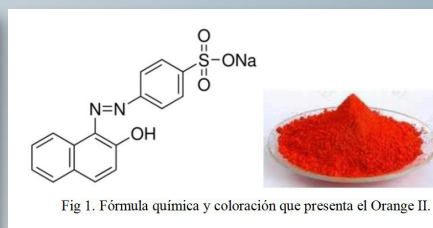
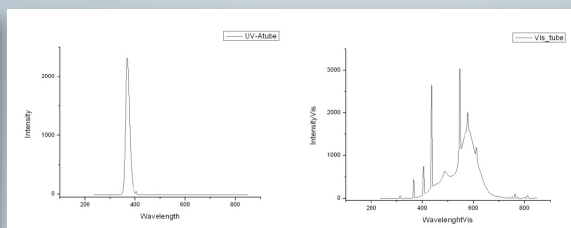
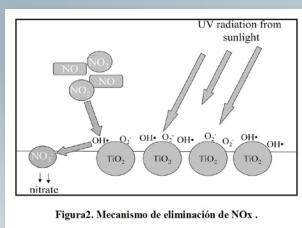


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