



## TECHNICAL SHEET

### CHEMICAL FEATURES

<b>Name:</b>	PhotoACTIVE in H <sub>2</sub> O with Silver
<b>Code:</b>	PA-Q07-H <sub>2</sub> O-AG
<b>Food Contact:</b>	NO
<b>Appearance:</b>	Whitish liquid
<b>Odor:</b>	None
<b>pH:</b>	From 1.7 to 3.3
<b>Relative density:</b>	0.98 g/cm <sup>3</sup>
<b>Level of hazard:</b>	None
<b>Uses:</b>	SU3 – Industrial uses; SU22 – Professional uses
<b>Revision:</b>	2

### PHYSICAL FEATURES

The PhotoACTIVE is a stable aqueous solution photocatalytic at room temperature, and once dry perfectly on the substrate, show a high hardness. If the drying process is too slow it may resort to the heating of the substrate (not over 100°C), with a remarkable increase in the hardness of the coating layer. It has strong adhesive properties towards both surfaces of the porous that smooth. The solution is transparent when dry, has a slight metallic effect.

### FIELDS OF APPLICATION

The PhotoACTIVE has been specially designed for the plastic industry but its formula active at room temperature, and its strong adhesive power, allow the application of various types of materials, such as steel, aluminium, metals, ceramic, painted surfaces, plastic, electrical cables, switches and micro switches, and more. Laboratory testing attests to the product life of at least two years. It dries in a few seconds. It can be packaged in spray cans.

### PROPRIETY

**Anti-bacterial:** acting on the lipidic membrane of the bacteria it denaturing them by reducing the bacterial load on the treated surfaces. The working mechanism of the antibacterial principle is increased because the silver contained in the product generates an Ag<sup>+</sup> ion.

**Self-Cleaning:** destroy through an oxidation photochemical process all of the organic matter with which it comes into contact with transforming it into water vapour and in non-toxic minerals as the urban pollution and all the molecules carbon-based.

**De-pollutant:** when applied on outdoor surfaces it reduces the concentration of NO<sub>x</sub>, SO<sub>x</sub> and PM<sub>x</sub> in the air.

**Anti-odour:** when applied on indoor surfaces it eliminates odours by reducing the concentration of VOC in the air and also reduces the concentration of any harmful pollutants (formaldehyde).

**Air purification:** Air contaminated with pollutants, viruses, bacteria, VOC is purified only by the simple contact of the air on the coated surface with PhotoACTIVE.

## REGULATIONS AND APPROVALS

The PhotoACTIVE product line is prepared with ECHA and FDA approved ingredients. The biocidal ingredients are disciplined into the Art.95 List. L&G using only ingredients of certified factories.

## YIELD

By applying the spray product with an airless HVLP with nozzle of 0.3 mm, the consumption is from 10 to 20g/m<sup>2</sup>. It can be applied for dip-coating. We recommend a quantity around from 5 to 15 g/m<sup>2</sup>. Require the installation protocol.

## ITEM SPECIFICATIONS

Amorphous aqueous solution based on colloidal Titanium Dioxide highly adhesive and hyper-hydrophilic with high photocatalysis level, antibacterial, registered as a new chemical substance, for the treatment of surfaces exposed to air, designed to ensure the protection of the substrate on which it applied over time.

## PRESERVATION, EXPIRATION DATE, WARRANTY

The PhotoACTIVE has an expiration date of two years from the date of manufacture if stored in a cool, not refrigerated, dry place, and not exposed to the sun. Apply the product using the steps described in the installation protocol. L&G provides the essential qualities of the product from the time of application to the end of the drying process, provided that no occur factors, independent of L&G, which might influence the drying. L&G also guarantees that the performed laboratory tests, certify the efficiency of the product for 2 years from application. For the bactericidal function the guarantee relates to bacteria detected at present to the exclusion of mutagenic conditions of them in time.

## TEST METHODS

- o Direct measurement of photocatalytic efficiency with the use of an innovative machinery, patented in Japan that allows the direct and immediate measure of photocatalytic efficiency showed by various substrates coated with TiO<sub>2</sub>.
- o Artificial, pronounced aging by exposure to UV and infrared radiation in a special climate chamber.

- o Aging tests according to ASTM G / 155/13 with color variation analysis according to ISO 772 / 3-1984.
- o Artificial rain test via special machinery which simulates the rain in extreme operating conditions and with thermal shock from -40 ° C + 80 ° C. according to- UNI EN ISO 11507 of 2002.
- o UNI-EN-ISO-14476 - Antiviral analysis on SARS-CoV-2
- o UNI-EN-ISO-14476 - Antiviral analysis on H1N1 influenza A.
- o EN-ISO-1276 - Antibacterial activity.
- o UNI-EN-ISO-11247 - Degradation of nitrogen oxides in air.
- o UNI-EN-ISO-20645 - Antibacterial analysis on cloth.
- o UNI-EN-ISO-20645 - Antibacterial analysis on paints.
- o UNI-EN-ISO-15457 - Anti mold analysis.
- o UNI-EN-ISO-27447 - Antibacterial analysis on tile.
- o UNI-EN-ISO 6330 - Resistance to washing.

## Contact

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