



# PURIFICA+

*Mineral photocatalytic paint for interior with air-purifying and antiviral properties.*

Eco-friendly silicate paint with cleaning and purifying properties with high vapour permeability. **Purifica+** can effectively help to contain the spread of viruses on surfaces thanks to the photocatalytic activity generated by the special raw material of which it is composed. Its antiviral properties have been proven by the tests performed by Virology Research Services Ltd and its antibacterial properties have been tested according to ISO 22196 standard by Eurofins Biolab Srl. **Purifica+** promotes the decomposition of pollutants and guarantee clean walls, hygiene and an improved indoor air quality. Purifica+ is also resistant to moulds.



Air-purifying



Antiviral and antimicrobial properties



Effective against bed smell



Decomposes pollutants and eliminates dirt



Coverage 12 – 17 m<sup>2</sup>/l per coat



Dilution 10 – 15%



Interior

## DESCRIPTION

**Purifica+** is a highly innovating paint and is the result of an intense research project developed with the Technopole of Rimini – CIRI Frame of the University of Bologna and supported by the Regional Tender DGR342/2020 "Research and innovation projects for the development of solutions to contain the spread of the pandemic COVID-19". Thanks to its photocatalytic activity, Purifica+ can hinder the proliferation of viruses, bacteria, microorganisms, moulds on the surfaces on which it is applied. Its antiviral properties have been demonstrated by the tests performed by Virology Research Services Ltd according to **ISO 21702** standard "Measurement of antiviral activity on plastics and other non-porous surfaces". The tests performed using human coronavirus NL63 have shown an elevated reduction of the viral activity in just 15 minutes of contact using a LED lamp (20 W 6500K 2200 lumen) for its activation. The human coronavirus NL63 belongs to the same family of Sars-CoV-2, the main differences are at a genomic level, while their protein structure is very similar. The photocatalytic titanium contained in the paint is excited under light radiation and reacts with oxygen and water (air humidity) leading to the formation of radicals with high oxidating power able to degrade organic matter that comes in contact with the surface. At the end of the process the photocatalytic titanium goes back to its initial state, it is not consumed in the process, and can be further activated, making the product effective over time. The main special feature of **Purifica+** is that, thanks to the combination of highly innovative substances, the photocatalysis is activated by wavelengths of light in the visible light range. This means that **Purifica+**'s photocatalytic activity can be activated by solar light coming through the window or **traditional lamp**, making the paint effective in real indoor conditions. Traditional photocatalytic paints require UV light for their activation, which is not usually available indoor. Thanks to the photocatalytic activity, **Purifica+** degrades organic and inorganic matter that comes in contact with the surface. Not only viruses, but also bacteria, mould, dirt, and other pollutants and it consequently keeps the treated surfaces clean and unaltered over time. The cleaning and purifying action of Purifica+ also provides an improved indoor air quality.

**Purifica+** is an eco-friendly paint, compliant with DIN18363 standard for mineral paints.

**Purifica+** is not a biocidal nor a sanitising product as regulated by BPR, Regulation (EU) 528/2012, but in combination with them, it can be an effective tool for preventing the spread of infections, reducing the risk of transmission by contact with infected surfaces. Its potential is not limited to the containment of Sars-CoV-2, in fact it has a potential usefulness in contrasting other similar and non-similar viruses.

## USE

Thanks to its characteristics, **Purifica+** is ideal for the decoration and protection of walls and ceilings in schools, kindergartens, hospitals, clinics, beauty centres, restaurants, hotels, offices, waiting rooms, public places, pools, wellness centres, and all those places where the presence of microorganisms is particularly persistent and absolutely to be avoided. Highly recommended for private houses too, for the protection and health of the whole family.



## PROPERTIES

- Helps in protecting the surfaces from viruses and bacteria.
- Reduces the viral activity by degrading their protein barrier.
- Resistant to the proliferation of moulds and fungi.
- Improves indoor air quality making it cleaner and healthier.
- Effective against bed smell.
- High vapour permeability.
- Does not allow dirt to deposit on the wall.
- Effective in real indoor conditions.
- The appearance and activity of the paint does not wear-off over time.

## SUITABLE SUBSTRATES

Lime plaster, cement plaster, dehumidifying plaster, walls skimmed with INTOCALCE or INTOCEM PLUS, old mineral paints; after adequate surface preparation, **Purifica+** can be also applied on gypsum substrates and old paint provided that the substrate is compact, sound and well-adherent.

## SURFACE PREPARATION

Make sure that the surface is dry and cured, perfectly anchored to the substrate, free from dirt, grease, mould, bacteria, fungi, efflorescence or anything that could compromise adhesion or the successful outcome of the work. Treat beforehand any potential mould by applying MUROSANO RISANANTE diluted 1:5 – 1:10 with water. Apply by brush on the contaminated surface until full saturation. Let it act for at least 24 hours. When the surface is dry proceed with an adequate cleaning with a solution of water and bleach. Air the room during application of treatment. Non-absorbent paint, old enamels or synthetic paints, must be removed and the original substrate restored. On old deteriorated, chalky or non-homogeneous substrates or old paints, carefully brush the surface, scrape and remove any detaching part then apply 1 coat of ACCADEMIA SILIK PRIMER diluted 2:1 – 1:1 with water or PRIMER A diluted 1:4 – 1:5 with water in order to consolidate the substrate and regulate the absorption rate. Smooth and even any irregularity in the substrate with PLASTUC TIPO A or STUCCO IN POLVERE MP. Wait until the substrate is perfectly cured before proceeding with the application. Presence of efflorescence in the substrate must be neutralized with the adequate treatment. In the case of rising damp preventively treat the surface with ARCADIA® RISANANTE. On a solid, compact and dry substrate, proceed with the application of **Purifica+**.

## APPLICATION

Apply **Purifica+** by brush or roller in 2 coats, by diluting it 10 – 15% with water. Wait approximately 6 hours between one coat and the other.

## IMPORTANT NOTES

- Surface must be perfectly dry and cured and well-adherent to the substrate, free from dirt, grease, mould, bacteria, fungi, efflorescence or anything that could compromise adhesion or the successful outcome of the work.
- Store away from frost (minimum + 5°C).
- Store in a cool, dry place away from sunlight.
- Use the product at room and substrate temperature between + 8°C and + 35°C and with relative humidity < 75%
- Avoid drying when room and substrate temperature is below +5°C.
- Avoid contact with glass or aluminium surfaces.
- Wash the tools with water immediately after use.
- Due to its highly alkaline nature, the product is irritating to the skin and eyes, avoid contact.
- For any issue not covered by TDS, please refer to the relevant safety sheet and/or contact our Technical Office.

## TECHNICAL DATA

<b>COVERAGE</b>	12 – 17 m <sup>2</sup> /l per coat = 0.06 – 0.08 l/m <sup>2</sup>
<b>DRYING AT 20°C</b>	Touch dry 1 hours ca., in depth 8-12 hours
<b>SPECIFIC WEIGHT</b>	1.44 ± 0.05 kg/l
<b>pH</b>	11.2
<b>VAPOUR PERMEABILITY UNI EN ISO 7783-2:2001</b>	Class V1 (high permeability) μ=21 Sd=0.0044m for a thickness of 212 μm
<b>STORAGE</b>	At least 12 months in sealed original package at room temperature between 5°C – 35°C
<b>COLOUR</b>	White.
<b>PACKAGES</b>	10l – 5l



**ISO 21702\_ MEASUREMENT OF ANTIVIRAL ACTIVITY ON PLASTICS AND OTHER NON-POROUS SURFACES**

	TEST CONDITION	CONTACT TIME WITH VIRUS	% REDUCTION
Test performed according to <b>ISO 21702</b> by <b>Virology Research Services LTD</b> on human coronavirus NL63. Full report available online	Samples were exposed to a cold white light source (LED lamp 20W 6500K 2200lm) for 1 hour prior to contact with virus and during the 15 minutes of contact.	15 minutes	99%
	Samples were exposed to light source ULTRA VITALUX 300 W 230 for 1 h before contact with virus	15 minutes	99.9%

**ISO 22196\_ MEASUREMENT OF ANTIBACTERIAL ACTIVITY ON PLASTICS AND OTHER NON-POROUS SURFACES**

	TEST CONDITION	CONTACT TIME WITH BACTERIA	% REDUCTION
Test performed according to <b>ISO 22196</b> by <b>Eurofins Biolab Srl</b> . Full report available online.	Samples were exposed to a cold white light source (LED lamp 20W 6500K 2200lm) for 1 h before contact with <b>Staphylococcus aureus</b> (S. aureus ATCC6538P) and in the 4 h of contact.	4 h	>99,57%
	Samples were exposed to a cold white light source (LED lamp 20W 6500K 2200lm) for 1 h before contact with <b>Escherichia coli</b> (E. Coli ATCC8729) and in the 4 h of contact.	4 h	>99,20%

**Emission limits of Volatile Organic Compounds (VOC) according to directive 2004/42/CE:**

a) matt paint for interior walls and ceilings.  
 Limit value since 01.01.2010 = 30 g/l  
 Max. VOC value in the product: 30 g/l in mixed product.

*The above information has been obtained from scrupulously controlled tests, and represents our best and most recent knowledge. This information is provided for reference purposes only. It is not binding upon the manufacturer, and neither may it constitute grounds for any kind of complaint whatsoever associated with the use of the products described, also considering that the conditions of use are beyond our control.*

**SPECIFICATION: 0153 Purifica+**

Application of **Purifica+**, silicate photocatalytic paint, highly vapour permeable, that, thanks to its special composition, has an air-purifying, cleaning action indoor, with antiviral properties proven by the tests performed by Virology Research Services LTD according to ISO 21702 standard and antibacterial ones proven by the test performed according to ISO 22196 by Eurofins Biolab s. **Purifica+** does not foster the proliferation of moulds. Apply **Purifica+** by brush or roller in 2 coats, diluting it 10-15% with water. Wait approximately 6 hours between coats.