



RIGENERA+

Siloxane photocatalytic paint with antiviral and air-purifying properties for the protection of exterior walls.

Siloxane photocatalytic emulsion paint with cleaning properties and high vapour permeability that, thanks to its special composition, has an anti-pollution, self-cleaning action and can effectively help to contain the spread of viruses on surfaces. Its antiviral properties have been proven by the tests performed by Virology Research Services Ltd as per standard ISO 21702. **Rigenera+** can also counteract the proliferation of moulds, algae and bacteria on the surface on which it is applied. Its antibacterial properties have been tested according to ISO 22196 by Eurofins Biolab srl.



Anti-pollution



Resistant to moulds, algae, viruses and bacteria



Self-cleaning



Long lasting protection

Coverage
10 – 17 m²/l
per coatDilution
20% with water

Exterior / Interior

DESCRIPTION

Rigenera+ 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". **Rigenera+** is a siloxane photocatalytic paint with silver ions with excellent vapour permeability that, thanks to its photocatalytic activity, is able, in the presence of natural or artificial light, to clean indoor air and reduce smog and pollutants in exterior. 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. Thanks to this process **Rigenera+** can counteract the proliferation of viruses, bacteria, microorganisms, moulds and algae. Its ability to reduce the viral activity has been proven by the tests performed by Virology Research Services LTD in compliance with **ISO 21702** standard "Measurement of antiviral activity on plastics and other non-porous surfaces". The test performed using human coronavirus NL63 has shown an elevated reduction of the viral activity in just 15 minutes of contact under the conditions set out in the test report below. 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.

Rigenera+ is composed of a resin obtained 100% from renewable sources.

Rigenera+ 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

Rigenera+ is ideal for the protection of exterior walls where it performs an effective anti-pollution, self-cleaning action. Particularly useful in city centres and all areas subject to traffic congestion, it is also recommended in residential areas and outdoor public places with a high concentration of people, to prevent the deterioration of surfaces and improve air quality. Thanks to its ability to counteract the deposit of viruses, microbes and other contaminants, it can also be applied indoors, in particular for schools, kindergartens, hospitals, clinics, beauty centres, restaurants, hotels, waiting rooms, swimming pools and wellness centres. In these cases, its effectiveness is conditioned by the amount of UV light present in the room.

PROPERTIES

- It creates a hostile environment to the proliferation of viruses and bacteria.
- It weakens the activity of viruses by degrading their protein barrier.
- Effective smog-eating, anti-pollution action.
- It prevents the deposit of moulds and algae and dirt on the surface.
- It prevents the deterioration of facades.
- Excellent vapour permeability
- It improves air quality making it cleaner and healthier.
- The aspect of the paint remains unaltered over time.



SUITABLE SUBSTRATES

Cement plaster, concrete, precast concrete (free of release agents), plasterboard and old paints.

SURFACE PREPARATION

Brush, scrape and remove old paints or non-adherent plaster parts. Make sure that the substrate is sound, dry and clean. Treat in advance any infiltration of water and humidity.

INTERIOR: Fill any hole and crack and smooth imperfections with PLASTUC TIPO A or STUCCO IN POLVERE MP. Surfaces contaminated by mould must be treated in advance with MUROSANO RISANANTE diluted with water in a 1:5 – 1:10 ratio. Apply by brush on the contaminated surface until full saturation. Let it act for at least 24 hours. Once the surface is dry, clean the surface with water and bleach. Make sure to air the room during the application. Rising damp should be treated in advance with ARCADIA® RISANANTE. On a solid, compact, dry substrate, apply a coat of PROTEXIL® ACQUA PRIMER diluted 1:1 – 1:3 with water, according to the absorbency rate and soundness of the plaster. Apply by brush until full saturation of the surface, then wait 4-5 hours before applying **Rigenera+**

EXTERIOR: erect the scaffolding so as to allow continuous application until an architectural interruption. Scrape, brush and remove any element that is not well-adherent to the substrate or that could compromise subsequent application of the system.

New substrate: remove any trace of dust and dirt, make sure that there is no humidity and that the plaster is perfectly cured in order to avoid development of stains or rings. Apply 1 coat of PROTEXIL® ACQUA PRIMER diluted 1:1 – 1:3 with water, according to the absorbency rate and soundness of the plaster. Apply by brush until full saturation of the surface, then wait 4-5 hours before applying **Rigenera+**

Renovation: in the presence of old paints and coatings, if the surface is particularly deteriorated or does not provide sufficient adhesion, remove it mechanically or by using a paint remover. For all exterior renovations, perform a high pressure washing and treat the surface from contaminants with MUROSANO RISANANTE. Let it act for at least 8 hours. Treat in advance any efflorescence and/or humidity and water infiltration with specific treatment. In case of cracks or micro-cracks and widespread substrate imperfections, we recommend to first apply INTOCEM PLUS or INTOCEM ETICS and wait until the material is perfectly cured. Apply 1 coat of PROTEXIL® PRIMER (solvent-based) diluted 0-30% with deaerated white spirit according to the absorbency rate and soundness of the plaster. Apply by brush until full saturation of the surface, then wait 4-5 hours before applying **Rigenera+**

APPLICATION

Rigenera+ is applied by brush or roller in 2 coats diluted 20% with water. Wait approximately 6 hours between coats.

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.
- Do not apply when rain is imminent, in full sunlight, when it is very windy or with persistent fogs.
- Protect surfaces against driving rain until the product is fully cured.
- Position scaffolding for continuous application as far as architectural interruptions so as to prevent the creation of joints, overlaps and colour differences.
- Wash the tools with water immediately after use.
- Due to its high alkaline nature of the product, it could irritate 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

COVERAGE PER COAT ON:

- Plasterboard and plaster	14-17 m ² /l – 0.060 – 0.070 l/m ²
- Cement render	10-13.5 m ² /l - 0,075 – 0,100 l/m ²
- Old paint	14-17 m ² /l – 0.060 – 0.070 l/m ²

DRYING AT 20°C Touch-dry 1 hour ca., in depth 8-12 hours

SPECIFIC WEIGHT 1.57± 0.05 kg/l

pH 8.5 - 9

VAPOUR PERMEABILITY UNI EN ISO 7783-2:2001 Class V₁ (high permeability) μ=145
Sd=0.0308 m for a thickness of 213 μm



LIQUID WATER PERMEABILITY (UNI EN 1062-3:2008)	Classe W ₁ (high permeability)
STORAGE	At least 12 months in original sealed packages at a room temperature between 5°C - 35°C.
COLOURS	White.
PACKAGES	10 l - 5 l

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

	TEST CONDITION	CONTACT TIME WITH VIRUS	% REDUCTION
Test performed according to ISO 21702 by Virology Research Services LTD on human coronavirus NL63. Full report available online	Sample were exposed to light source ULTRA VITALUX 300 W 230 for 1 h before contact with virus	15 minutes	99.9%

ISO 22196_ MISURAZIONE DELL'ATTIVITÀ ANTIBATTERICA SU SUPERFICI PLASTICHE O ALTRE SUPERFICI NON POROSE

	TEST CONDITION	CONTACT TIME WITH BACTERIA	% REDUCTION
Test performed according to ISO 22196 by Eurofins Biolab Srl . Full report available online.	Sample were exposed to light source ULTRA VITALUX 300 W 230 for 1 h before contact with Staphylococcus aureus (S. aureus ATCC6538P).	24 h	>99,97%
	Sample were exposed to light source ULTRA VITALUX 300 W 230 for 1 h before contact with Escherichia coli (E.Coli ATCC8729).	24 h	>99,96%

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: 0252 Rigenera+

Application of **Rigenera+**, siloxane photocatalytic paint with cleaning properties and good vapour permeability, that, thanks to the special raw materials of which it is composed, has an anti-pollution, self-cleaning action and can counteract the proliferation of viruses, as proven by the tests performed at Virology Research Services Ltd as per ISO21702 standard, and bacteria (test performed according to ISO 22196 standard by Eurofins Biolab srl). **Rigenera+** is applied in 2 coats by brush or roller diluted 20% with water, after application by brush or roller of PROTEXIL®ACQUA PRIMER or PROTEXIL® PRIMER, deep penetrating consolidating clear primer.