

Note: This document has been translated from a part of the Japanese original for reference purposes only.

February 24, 2022

Nippon Paint Automotive Coatings Co., Ltd.
President and Representative
Director of the Board / Shinji Takedagawa

Release of PROTECTON® Car Interior VK Coat, Anti-viral Coating for Car Interiors To Meet Antiviral Demand in the Next-Generation Automotive Industry

Nippon Paint Automotive Coatings Co., Ltd. (Headquarters: Hirakata-city, Osaka, "NPAC"), a group company of Nippon Paint Holdings Co., (Headquarters: Chuo-ku, Tokyo), which engaged in automotive business, will start sales* of * PROTECTON® Car Interior VK Coat, an antiviral coating for car interiors, on Friday, February 25, 2022 in Japan to meet the demands of customers in the next-generation automotive industry.

*The product will be available through Nippon Paint Co., Ltd.'s sales channels.



The necessity for antiviral and antibacterial products in the automotive industry has increased with the development of car rentals, taxis, and car sharing businesses. Those functions are expected to become standardized in the future with the transformation of CASE and MaaS. PROTECTON® Car Interior VK Coat" is a new product that can achieve a high level of antiviral properties, high appearance, and durability by applying the technology that has been cultivated in automotive coatings to overcome the issues of existing antiviral products, such as the inability to maintain the appearance of car interiors, the decline in effectiveness

after friction, and low antiviral performances. This new product is suitable for automobile interiors such as instrument panels and steering wheels as an antiviral and antibacterial coating agent.

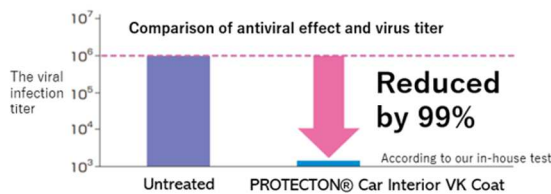
[Product Features]

1) Excellent antiviral and antibacterial properties

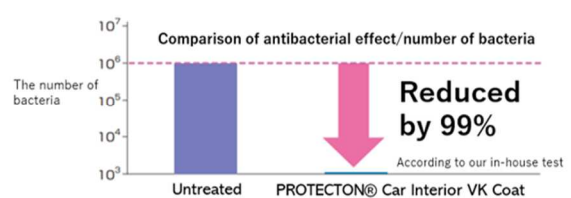
Excellent antiviral and antibacterial properties by applying visible light responsive hybrid photocatalyst as an antiviral agent.

Antiviral/Antibacterial Performances

The visible light responsive hybrid photocatalyst functions to inhibit viruses and bacteria attached to the surface.



[Antiviral test conditions]
In accordance with JIS R1756, viruses were dropped onto the coated specimen.
The virus titer was measured after 4 hours of irradiation at an illumination level of 500 lk.
Virus species: Bacteriophage Qbeta



[Antiviral test conditions]
In accordance with JIS Z 2801, viruses were dropped onto the coated specimen.
The number of bacteria was measured after 24 hours.
Virus species: Staphylococcus aureus

(2) High appearance compliant with automotive interior requirements

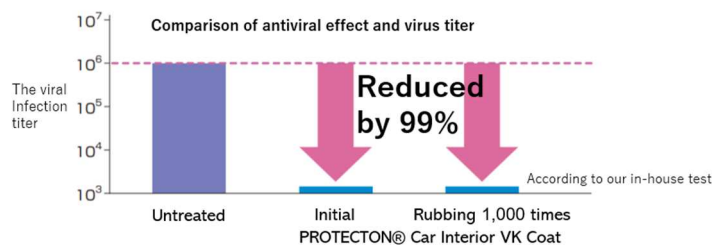
The use of a binder with dispersing ability enables the photocatalyst to be dispersed evenly, resulting in an excellent coating appearance.

3) High durability and sustainability

Using both organic and inorganic binders enable to immobilize photocatalyst on various substrates, resulting in excellent durability and sustainability.

Durability/Sustainability (test equivalent to one year)

The immobilization technology of inorganic and organic binders maintains the antiviral effect.



[Antiviral test conditions]
In accordance with JIS R1756, viruses were dropped onto the coated specimen.
The virus titer was measured after 4 hours of irradiation at an illumination level of 500 lk.
Virus species: Bacteriophage Qbeta

The number of rubbing: 500g load x 1000 times
Refers 6 times of wiping x 3 times a week x 52 weeks (Abrasives: Nell)
(Assumed to rub strongly with the cloth with fingernails on the coated surface)
Abrasives: Nell

Taking advantage of above features, NPAC will vigorously promote the product to the automotive aftermarket and automotive manufacturers. In addition, leveraging the collective strength of the Nippon Paint Group to deliver safety to people's lives through our coating technologies, while considering prospects for applications in other fields than automotive coatings with those superior performances.

Nippon Paint Co., Ltd., one of the Nippon Paint Group companies that handles architectural paints, will also release two antiviral water-based coatings for architectural use from its anti-viral and anti-bacterial brand, PROTECTON®, on the same day: PROTECTON® Floor VK Clear (for floors) and PROTECTON® Interior Wall VK Coat (for architectural interiors).

[Overview of the product]

Name: PROTECTON® Car Interior VK Coat

Manufacturing company: Nippon Paint Automotive Coatings Co., Ltd.

Sold by: Nippon Paint Co., Ltd.

Release date: February 25, 2022

Properties: 1) Anti-viral and anti-bacterial

2) High appearance

3) Durability

Sales route: Car dealers and others (in Japan)

Product Website URL: <https://www.nipponpaint.co.jp/products/automotive/117>



* Test results in accordance with JIS R 1756 and JIS Z 2801

- Antiviral property: One type of bacteriophage virus

Testing method: A culture solution of the virus is placed on the paint film surface. The test surface is exposed to light for four hours. Efficacy: The virus was reduced by 99.9%.

- Antibacterial property: One type of gut microbiota

Testing method: A culture solution of the bacteria is placed on the paint film surface. The test surface is exposed to light for eight hours. Efficacy: The bacteria were reduced by 99.9%.

* This will not guarantee effectiveness against all or specific viruses or bacteria.

* The paint does not suppress indoor airborne viruses or bacteria.

* The anti-viral and anti-bacterial performance will continue as long as the paint film is not damaged, peeled off, or excessively stained on its surface. Damaged paint film includes peeling of the paint film due to normal aging deterioration.

* The product is not designed for medical purposes. The product is intended to inhibit viruses attached to surfaces, and does not guarantee the effectiveness of infection prevention.

* The performance may vary depending on the shape of the object to be coated, the conditions of the base material, weather conditions, and applying conditions.

[Profile of Nippon Paint Automotive Coatings Co., Ltd.]

- Headquarters : Hirakata-city, Osaka
- Representative: President and Representative Director of the Board Shinji Takedagawa
- Website URL : <https://www.nipponpaint-automotive.com/>

References

[Profile of the PROTECTON® brand]

PROTECTON® is a paint technology brand offering new technology and value to add functions by harnessing proprietary cutting-edge technology derived from the Group's paint and coating technology.

Brand logo



Brand concept

A paint technology brand that continues to evolve to protect people's health and create a safe and pleasant future aiming to achieve advanced anti-viral and anti-bacterial functionality.

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