

How long can viruses or bacteria survive on a surface?

Repol

UBE Group



The requirement of clean and disinfected "high-touch" surfaces has become very relevant nowadays.

The persistence of different microorganisms on surfaces depends on their physical characteristics, environmental factors (such as humidity, temperature...) and the type of material where they can be found; they survive longer on hard smooth surfaces than on soft and porous ones.

In the case of viruses, **coronavirus SARS-CoV-2** may last until 72 hours on non-porous surfaces such as plastic.

On the other hand, **bacteria** generally keep their capacity of infection longer than viruses to the point that, on favourable conditions, bacteria can be infectious for days or even years.

As an example, common bacteria in skin infections such as *Staphylococcus aureus* can survive up to 7 months.

HOW LONG CAN CORONAVIRUS SURVIVE ON A COMMON SURFACE?

SURFACE TYPES



AIR/AEROSOLS

3 HOURS



COPPER

4 HOURS



CARDBOARD

24 HOURS



STAINLESS STEEL

2-3 DAYS



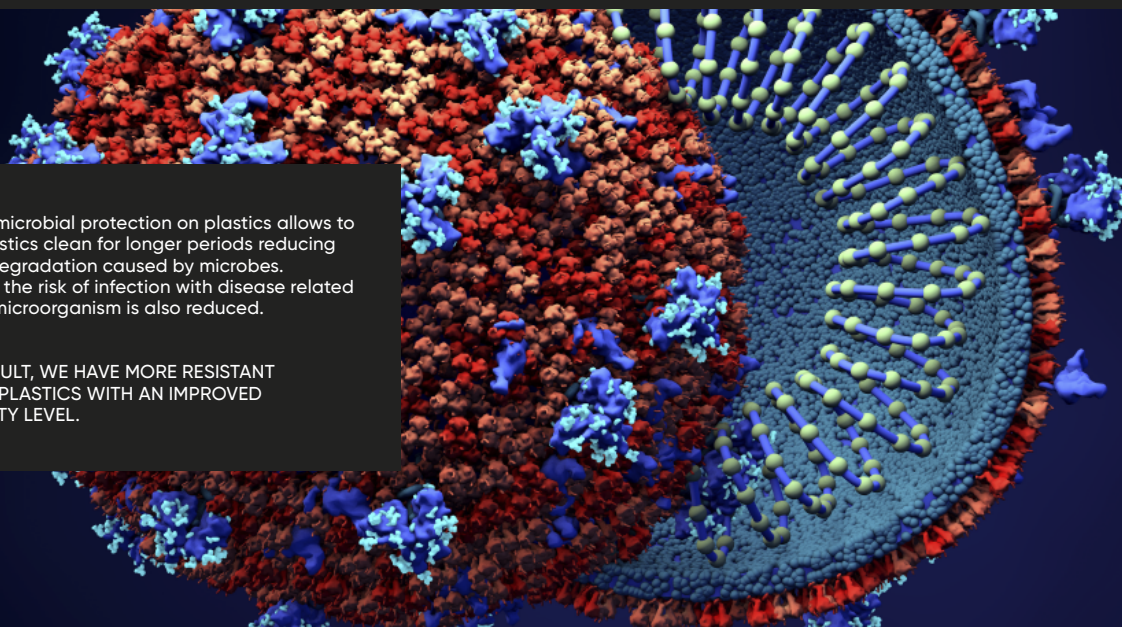
PLASTIC

3 DAYS

Adapted from The New England Journal of Medicine

The antimicrobial protection on plastics allows to keep plastics clean for longer periods reducing plastic degradation caused by microbes. Likewise, the risk of infection with disease related to such microorganism is also reduced.

AS A RESULT, WE HAVE MORE RESISTANT THERMOPLASTICS WITH AN IMPROVED BIOSAFETY LEVEL.



Repol, Development and Innovation in antimicrobial plastics



Antimicrobial Development.

In the recent past Repol has been developing thermoplastics with antimicrobial resistance in order to reduce bacteria and fungi proliferation. These microorganisms attack plastic, rubber and synthetic fibre creating the so-called biofilm, which causes sanitary, discoloration, patches and odour problems.



Antiviral Development.

Repol has recently included in its catalogue materials with antiviral properties, which reduce virus presence and infection level. Due to the fact that the impact of microbes depends on the type of plastic and that there is a wide range of antimicrobial agents, Repol's know-how is crucial to develop a customised solution for each necessity.



Sectors and Applications.

These improved grades are specifically recommended to sectors and applications where it is really important to reduce quickly and effectively the presence of germs: hospital beds and furniture, household products, sanitary instruments, public transport...



Certified materials.

The certification process of antiviral materials has been carried out by the [Valencian Institute of Microbiology \(IVAMI\)](#) according to new ISO 21702:2019 standard, aiming non-porous surfaces such as plastics proving their efficiency against different kind of viruses including Coronavirus 229E (ATCC VR-740).

With regard to [bacteria](#), essays haven been carried out applying standard tests for antimicrobial activity on surfaces JIS Z 2801 (JIS stand for Japanese Industrial Standard), the equivalent to the [international standard ISO 22196](#), worldwide known in plastic industry.



Brand-new antimicrobial projects

B1X25 B-0286

Antiviral PA6 Dinalon

This material made of PA6 and antimicrobial properties reduces **Coronavirus 3 times faster** than a plastic material made with the same characteristics without this treatment.

This improvement is really significant within the first two hours of virus presence on the material; its viral activity can almost be reduced by half.

3x

PPH1X15 G30 UVB-0007

PP Homopolymer Dinaplen, 30% Glass Fibre, UV stabilized, Antiviral

Our PPH grade reduces virus presence **4 times faster** in materials such as propylene, where virus resistance is even longer than in other plastics.

4x

B1S25 HI B-1149

PA6 Dinalon, Impact Modified, Antimicrobial

Tested on Staphylococcus aureus CECT 240, ATCC 6538P and Escherichia coli CECT 516, ATCC 8739, this material has proved a **high reduction of bacteria load on plastic surfaces**.



We keep working on new Solutions

Repol keeps working on developing new engineering plastics with antiviral and antimicrobial properties, expanding our antimicrobial products to more applications and sectors in order to adapt us to each particular need of every customers.

[Click here for more information](#)

More information