

AIRDAL Rationale:

Registration in Switzerland:

In Switzerland, Airdal is officially registered as a biocide. The registration covers surface disinfection as well as the protection of the underlying materials.

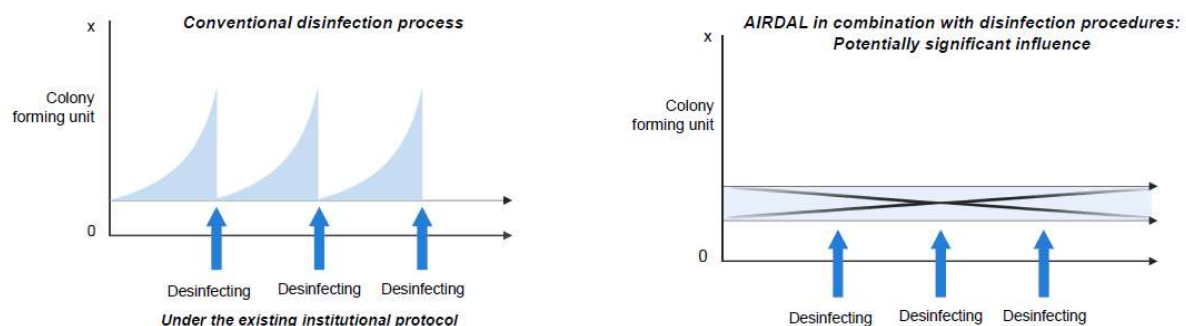
<https://www.gate.bag.admin.ch/rpc/ui/products/675852-36/summary>

Furthermore, a biocide registration in Switzerland is bound to a person. Meaning that only the applicant (PR Retail AG) is allowed to distribute the product or issue distribution rights to a third party.

Protection against viruses and bacteria:

Airdal is an antimicrobial coating which eliminates viruses and bacteria, that get in touch with the coated surface, for at least 12 months. An Airdal coated surface can be imagined as an area consisting of tiniest spikes against microbial infestation. The positively charged nitrogen molecules contained in the Airdal layer attract the negatively charged cell walls of viruses and bacteria and destroy them on the spikes of the nitrogen molecules. This is an ongoing process which not only inactivates viruses and bacteria but effectively destroys them. Here it is important to highlight, that the Airdal coating works not only against COVID-19 but in general against numerous viruses and bacteria.

If a surface is cleaned and disinfected with a conventional disinfectant, it is free of viruses and bacteria only right afterwards. Already a few seconds later, the viruses and bacteria can settle down at the surface again, which can either happen via an infected person or via aerosols. Until the next disinfection process, those viruses and bacteria can multiply considerably.



In contrast to that, Airdal is working on a continuous basis, meaning it is functioning also between those disinfection-cycles. It is important to note, that an Airdal coating does not substitute traditional cleaning. If the viruses and bacteria cannot get in touch with the Airdal coating due to a layer of dirt, then they also cannot be eliminated.

On an Airdal coated surface, viruses and bacteria get eliminated 10 times faster than compared to an uncoated surface. Hence, the Airdal coating significantly reduces the risk of a germ transmission.

According to a study in Austria, which investigated the infectiousness and the spreading of SARS-CoV-2 (COVID-19), an average of around 1000 virus particles are needed for a person to fall sick with

COVID-19. Thereby, only a small number of virus particles can be critical for a person to fall sick because of the virus or not. Furthermore, it was proven that the severity of the course of the disease correlates with the number of viruses absorbed. Those findings were also confirmed by several other doctors during the last few months.

Consequently, it can be said that due to the permanent functioning of the Airdal layer and the resulting reduction of bacteria, Airdal significantly contributes to the prevention of a spreading and helps to alleviate the effects of the disease.

Another outcome of the above-mentioned study was, that especially the two factors a) amount of individual contacts and b) number of transferred virus particles determine over time if a superspreading will occur or not. Again, the main parameter determining a superspreading event is the number of virus particles, which can significantly be reduced by Airdal and hence helps to prevent any superspreading.

The study can be found under the following link:

<https://stm.sciencemag.org/content/early/2020/11/20/scitranslmed.abe2555>

And a shortened version in Blick:

<https://www.blick.ch/schweiz/forscher-haben-gute-und-schlechte-nachrichten-1000-virenpartikel-fuehren-zu-corona-infektion-id16216193.html>

Protection of materials:

Airdal builds on the coated surface an ultrathin glass-layer. This layer does not only eliminate viruses and bacteria but also protects the underlying material. When it comes to mechanical abrasion, first the layer is affected before the coated material gets damaged. The same reasoning is applicable to disinfection. Frequent disinfection is detrimental to most materials. They often get matte and dry out. Since Airdal builds an additional layer on top of the coated material, this layer gets firstly affected by any disinfectant. Consequently, coated materials and surfaces experience a higher durability and stay longer in their original condition. Another important aspect hereby is, that the effect of Airdal is only a physical one and not a chemical one like it is the case for most of the other coating solutions. Due to this physical effect, Airdal protects the coated surface without damaging the underlying material.

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