



Antimicrobial coatings and their use in educational establishments

Silver and copper have long been used for their antimicrobial properties. Dating back to the Roman age, they were used to purify water and in the modern era copper is still used as an anti-foul in the marine industry and silver ion technology is used in antimicrobial solutions. This document will explore the use of silver ions as antimicrobial protection against bacteria, viruses and super bacteria in educational establishments.

It is well documented that protection with silver ion technology creates an environment where bacteria and enveloped viruses, such as SARS-CoV-2, MRSA and COVID-19 cannot survive. Test results, like those conducted on **TOUCH Antimicrobial** (www.touchantimicrobial.com/data-files) clearly identify that these types of protective coatings work and actively protect treated surfaces.

Between 2015 and 2016 a test was conducted in a school in the UK where one classroom was treated with silver ion coatings and one was kept as a control. The classrooms were then used as normal and the number of days students took off for sickness was monitored. The rooms were also tested for pathogenic bacteria known to cause illness.

The treated classroom reported a reduction of 20% in absence due to illness vs the control classroom. A significant decrease as a result of antimicrobial protection. The treated classroom was also found to contain 96% less bacteria than the control classroom and more impressively no pathogenic bacteria, whereas the control classroom did.

The study highlighted that absence due to illness not only affects the quality of learning for the students, but it is estimated to cost the UK Economy £100 billion per year due to the knock-on effects it has on parents having to stay home from work. A 20% reduction could save the UK up to £20 billion per year.

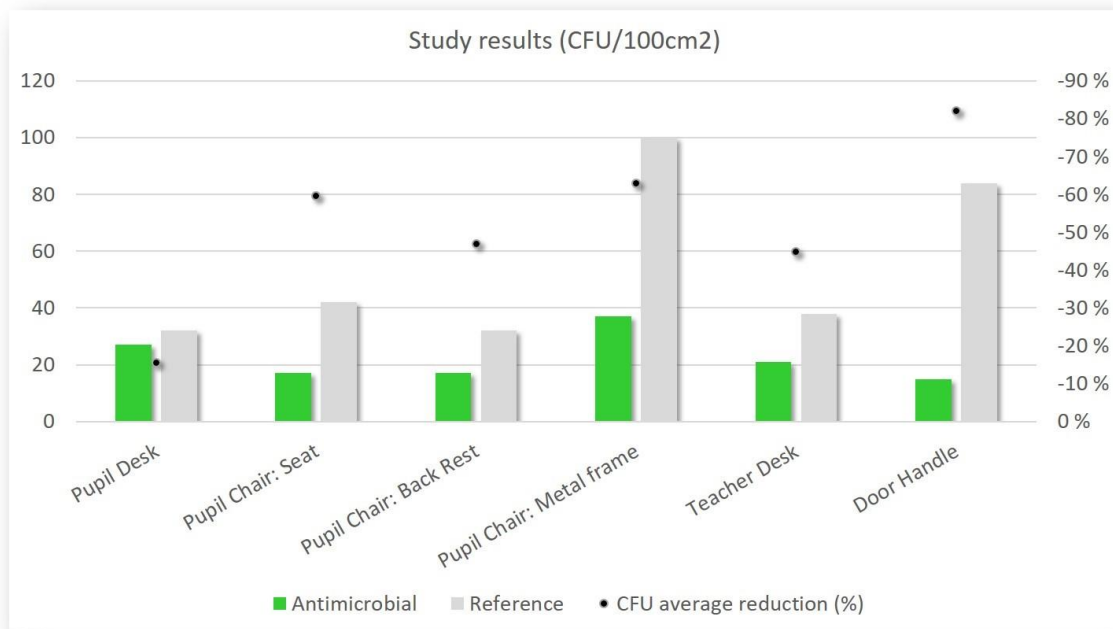
In 2018 a school in Finland conducted a study also using silver ion technology. In this instance the control classroom has the door handles, teachers' desk, students' desks and students' chairs protected with silver ion antimicrobial technology. Again, an identical control classroom was set up and the two were used as normal with samples taken from both rooms. The result was a measured reduction in bacteria present on all treated surfaces when compared to the control room.

The average decrease of bacteria found in the treated classroom was on average 52% lower than measured in the control classroom, with door handles showing the greatest reduction of over 80%.

Further to the tests, absence due to sickness was also measured from both classrooms with the treated classroom showing a reduction of 52% versus the control room.



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ISKU 2018 results

The evidence from these two case studies clearly shows that treating a classroom with antimicrobial protection creates a significant decrease in the transmission of sickness as well as the ability for bacteria and viruses to survive and spread. It also shows that silver ion technology is improving constantly with a drastic increase in the effectiveness of protection methods over a 2 year period.

TOUCH Antimicrobial coatings utilises this technology and has been in production and development since 2013. The latest version of the coating can be applied to any surface. It also forms a crystal clear, flexible, hard film with a hardness of H8 on the HB pencil scale. When you consider granite is H6 then you are left with a totally flexible, hard, permanent coating.

This makes **TOUCH** the world’s only permanent, crystal clear, retrofit coating available that protects against enveloped viruses, such as COVID-19. It has been tested against enveloped viruses that are far more resilient than COVID-19.

In conclusion, using silver ion based antimicrobial protection methods, such as **TOUCH Antimicrobial**, will have a positive impact on an education establishment. It will result in a reduction in the spread of illness. It will result in a reduction of absence due to illness for both students and staff, and it will help control the spread of enveloped viruses, such as COVID-19



References:

- 2014 - 2020 TOUCH Antimicrobial coatings test results (www.touchantimicrobial.com/data-files)
2018 ISKU – taatila school case study (<https://www.isku.com/global/en/taatila-school-case-study>)
2016 Biocote Ltd. Retrieved from Reducing school absenteeism with BioCote products (www.biocote.com/blog/school-absenteeism)



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