



# SOUTHRIDGE SCHOOL - CASE STUDY

## September/October 2020

### BACKGROUND:

Cleaning and disinfecting surfaces can remove/kill pathogens on surfaces, but studies have shown that more than half of the time surfaces are not adequately cleaned or are re-contaminated within minutes. A durable or persistent antimicrobial bonded to a facility's surfaces has the potential to reduce microbial load and facilitate better cleaning and sanitizing. A lower bacterial load can reduce student, faculty and staff's risk of cross-contamination and acquired infections.

### SOUTHRIDGE SCHOOL:

Southridge is a co-ed, K-12 independent day school located in South Surrey, BC. They develop well-rounded students with the love of learning, character, and confidence to make the world a better place.

Southridge has taken every step possible to ensure the safety of their students, faculty and staff, including infrared temperature screening, regular daytime cleaning and disinfection during school operating hours, staggered drop-off and pickup and detailed self-screening of all entrants to the campus.

In August of 2020, Jim McGarry, the Facilities Manager at Southridge began discussions with the school's janitorial services provider, Integral Services Group, about the Integral Surface Protection Program, utilizing AEGIS, by Microban. In September, with the go-ahead from Wendy Simpson, Jim engaged with Integral to do a school-wide application of the aforementioned program.

### OBJECTIVE:

Evaluate the ability of the AEGIS durable antimicrobial, across the campus, to reduce the growth of microorganisms on treated surfaces as an adjunct to existing cleaning and disinfecting protocols.

### METHOD:

The study was performed at the campus at 2656 160th Street in South Surrey, BC over the Labour Day weekend, September 4th, 5th, 6th, and 7th.

AEGIS Microbe Shield was applied using state-of-the-art Victory Electrostatic Sprayers, at their lowest setting. All touch surfaces across the campus received the application, with special attention paid to the bathrooms, cafeteria, staff rooms, meeting areas, lockers and recreational areas.

These surfaces were tested for presence of microbial growth after a full cleaning, prior to the application of AEGIS, and then again thirty days post-application (October 8th).

Consistent Test sites were identified and tested using a Hygiena ATP meter.

### MEASURE:

SystemSURE Plus ATP hygiene monitoring system was used to measure cleanliness of surfaces. The Hygiena system was set with a Pass and Fail limits of 60 and 100 respectively. Any score of 60 RLU or less is a Pass. Scores from 61 to 100 RLU are a Caution. Any score greater than 100 RLU is a Fail. These are the standards set out in the Integral Surface Protection Program for Educational Facilities.



## LOCATION

### Senior School

	Pre-Application (baseline)	Post-Application October 8 <sup>th</sup>
Locker #269	293	14
Cafeteria Table	566	9
Boys 1st Floor Bathroom, stall handle	1338	40
Southwest Exit Door Push-bar	607	44
Café Window Handle	365	19
Staff Photocopier Touchscreen	434	5

### Junior School

Boys 1st Floor Toilet Handle	857	10
Staff Refrigerator Handle	612	23
Room 151 Countertop	984	3

### Gymnasium

Exercise Mat	446	9
Basketball	1330	75
35lb Kettle Bell	266	5
Bench Press Bar	437	50
Bench Press Bench	712	26

### Exterior

School Bus Steering Wheel	1447	51
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## DATA SUMMARY:

	Baseline	Post Aegis Application October 8 <sup>th</sup>
# Sites Pass	0	14
% Sites Pass	0%	93%
# Sites Caution	0	1
% Sites Caution	0%	7%
# Sites Fail	15	0
% Sites Fail	100%	0%

## DISCUSSION:

Baseline measure on all surfaces was above the ISPP limits for 'Pass'. These results were seen despite full facility cleaning and disinfection, just hours before. This reinforces that 'clean' is not necessarily disinfected. For disinfection it is recognized that the right product, right concentration, right dwell time and correct application are all required for optimal effect and even optimal effect is not perfect. It is this relatively long list of variables which conspire to challenge the effectiveness of existing cleaning and disinfection protocols, everywhere.

Complicating the task is the ability of bacteria to form a biofilm. This is essentially a colony of bacteria that have adhered to the surface and created a barrier that is extremely resistant to chemical treatments. In fact, this biofilm is often composed of multiple strains of bacteria that are co-operating for their mutual survival. The AEGIS Microbe Shield does not utilize chemicals, instead physically punching through existing biofilms and preventing the formation of new colonies.

The simple addition of the AEGIS Microbe Shield applied via a spray-on system was shown to have a dramatic impact on the measurable growth of microbes on treated surfaces. It was demonstrated that 100% of sites exhibited either a pass or caution result only weeks after the initial application.

## CONCLUSION:

The addition of the AEGIS Microbe Shield can be seen as a valuable addition to all cleaning and disinfection efforts in an education setting, as measured by the ability to reduce the growth of microbes on treated vs untreated surfaces.

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