



**Improving Cleanliness and Customer
Satisfaction by Reducing Bacterial
Exposure on Public Transit.**



“Don’t touch that, its dirty”

- A common perception is that public surfaces are dirty or covered in germs and it is a top reason for people NOT to ride public transit
- There is truth, in fact, that the surfaces around us are covered in germs and often exposed to potentially harmful bacteria including Coronavirus, *Staphylococcus* infections, MRSA, VRE, *Clostridium difficile*, H1N1 and so on
- Reducing the risk on public transit can increase customer satisfaction and ridership



PROTECT Technologies

Exclusive distributor of 

- Protect Technologies executive has an extensive healthcare background and have a deep understanding of infection control and bacteria
- Our technical advisor has worked with the AEGIS molecule for over 20 years.
- Microban has authorized Protect as the **exclusive distributor** of AEGIS in Canada
- AEGIS is the only durable antimicrobial approved by health Canada (PMRA PCP # 15133)
- Green technology US EPA #64881-2
- With Protect technologies and our partners, you will be assured that the product being applied is the Aegis Microbe Shield, which is the only chemistry approved for application on surfaces such as those at risk in the TTC. Our product is backed by Microban so you can be assured of product performance.

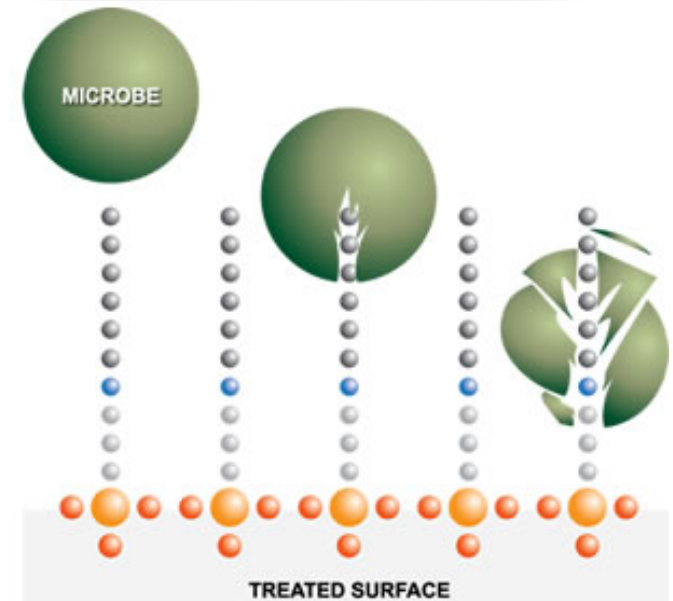


Surface Modification

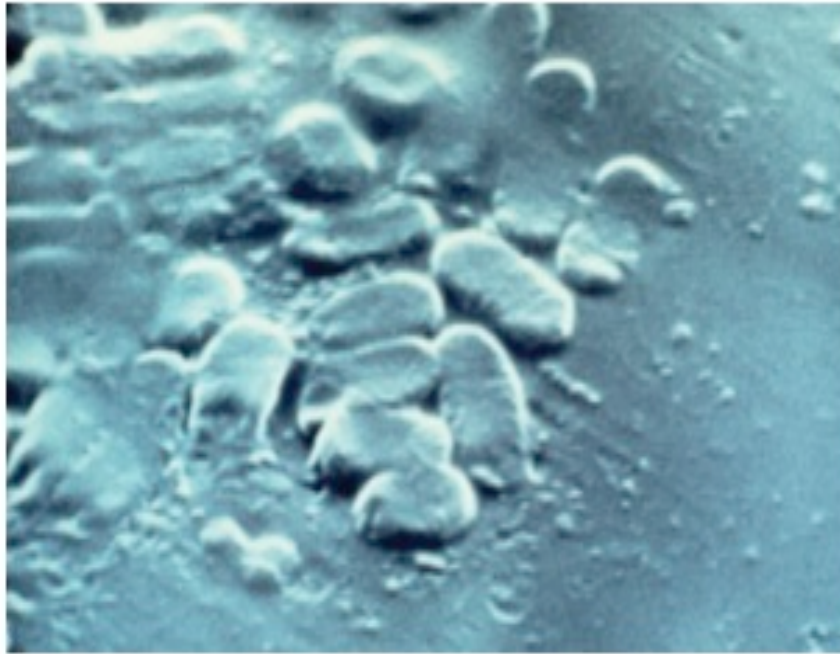
- Improve customer satisfaction through Surface modification that protects all surfaces from germs with AEGIS Microbe Shield
- Protect employees and customers by protecting surfaces from harmful microorganisms and related odours
- AEGIS stops bacteria from surviving on surfaces preventing person to surface to person transmission.
- Application lasts two years on hard and soft surfaces

How it works

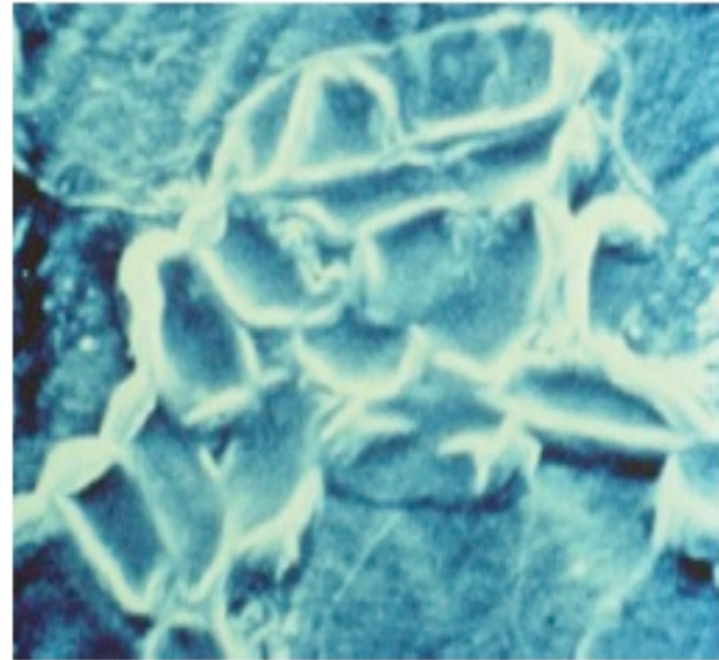
- Globally registered the AEGIS Microbe Shield is the most commonly used antimicrobial in the world. From socks to medical equipment, the AEGIS Microbe Shield has been used in a wide range of industries and on a broad and diverse set of materials. In each application the general concept is the same: **provide long lasting antimicrobial efficacy.**
- The AEGIS Microbe Shield is the only Health Canada registered bonding antimicrobial surface treatment approved for commercial applications.
- It can kill up to 99 % of germs on contact with its unique mode of action and remains on guard to control and prevent the growth of harmful microorganisms between traditional cleaning and disinfection practices.



The Result – Destroyed Microorganisms



Normal *E. coli* cells on untreated surface.



E. coli cells ruptured after contact with treated surface.

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Surface Defense Objectives:

1. Protect Staff
2. Protect Customers
3. Increase ridership with a protected system



Technologies



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Surface Defense Strategy:

Plan "High
touch"
Application
Strategy

Clean and
Protect



PR Strategy

Protect Professional Application with AEGIS

- We have the experience and capability to apply AEGIS to all transit surfaces.
- Trained applicators that can meet the requirements of your organization

Staff/Operators Repeated High Touch Areas

- Confined spaces
- Staff often eat and drink (water, coffee, pop) on the job
- Rotation of staff during shifts



Asset Protection: Extending Fabric Life

- Fabric degrades as a result of mold and bacteria colonization.
- AEGIS protects the fabric fibers (hydrophobic and oliophobic – resists water and oil based stains) making cleaning easier and extends life of the fabric.
- Makes cleaning easier and reduces harsh chemical use (aligned with green initiatives) resulting in savings in product and time



Transit Customer High Touch Areas

- Seats
- Benches
- Handrails
- Poles
- Stanchions



Transit Customer High Touch Surfaces

- Ticket Booths
- Turn-styles
- Token Machines



Customer High Touch Areas

- Elevators and buttons
- Public bathrooms
 - Bacteria
 - Mould
 - Related odours



Effectiveness – Recent Applications

- SEPTA (Philadelphia)
- New Jersey Transit
- Metrolinx (Toronto Ontario)
- Oakville Transit
- Brantford Transit
- Bombardier – BART (Bay Area Rapid Transit San Francisco)
- Sarnia Transit
- Washington DC, NY Transit– testing underway

AEGIS Benefits

AEGIS Protects surfaces to provide:

- A new level of infection control and related customer confidence
 - Public health implications
 - Employee health implications
- Reduced odors related to mold and or bacteria
- Extended life of surfaces (e.g. textiles) that are effected by mold or bacteria

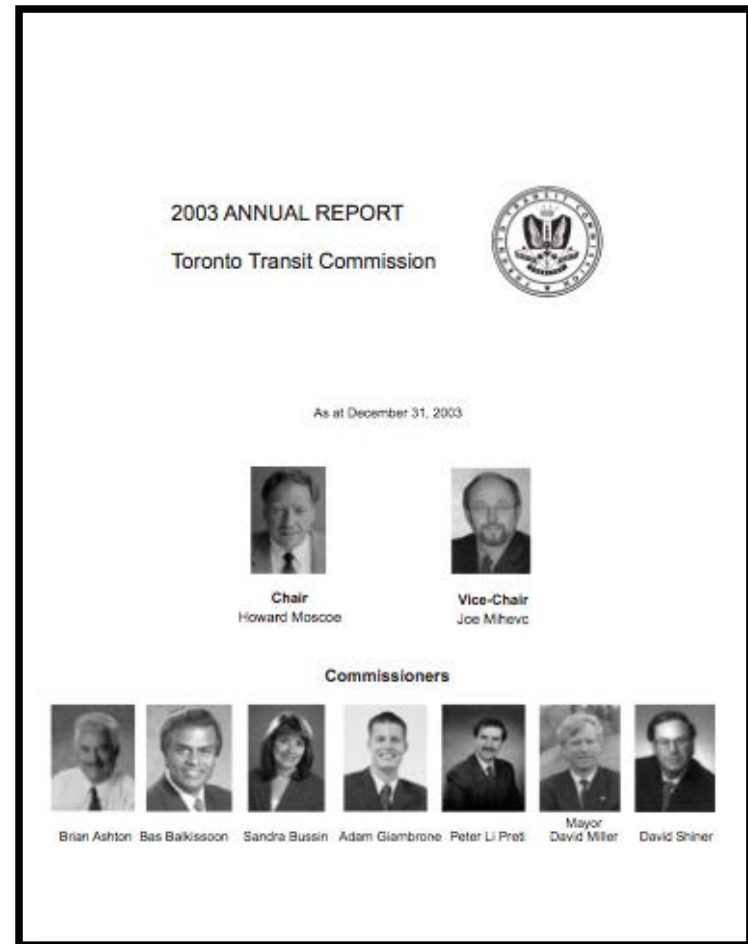
CASE STUDY 1

Infectious Disease Impact on Ridership

TTC 2003 Annual Report

Letter from the Chair

- “In March 2003 the SARS crisis caused a significant drop in Ridership. The commission estimated loss at 3.5 million riders.”



Solution: A New level of surface protection with AEGIS

- TTC can say that a transit system treated with AEGIS has all surfaces protected from harmful bacteria reducing the risk of transmission.
- The TTC can promote they are doing everything they can to not only keep surfaces clean, but protected with a microbe shield.
- These messages can be incorporated into promotional programs and press releases.

TTC - results

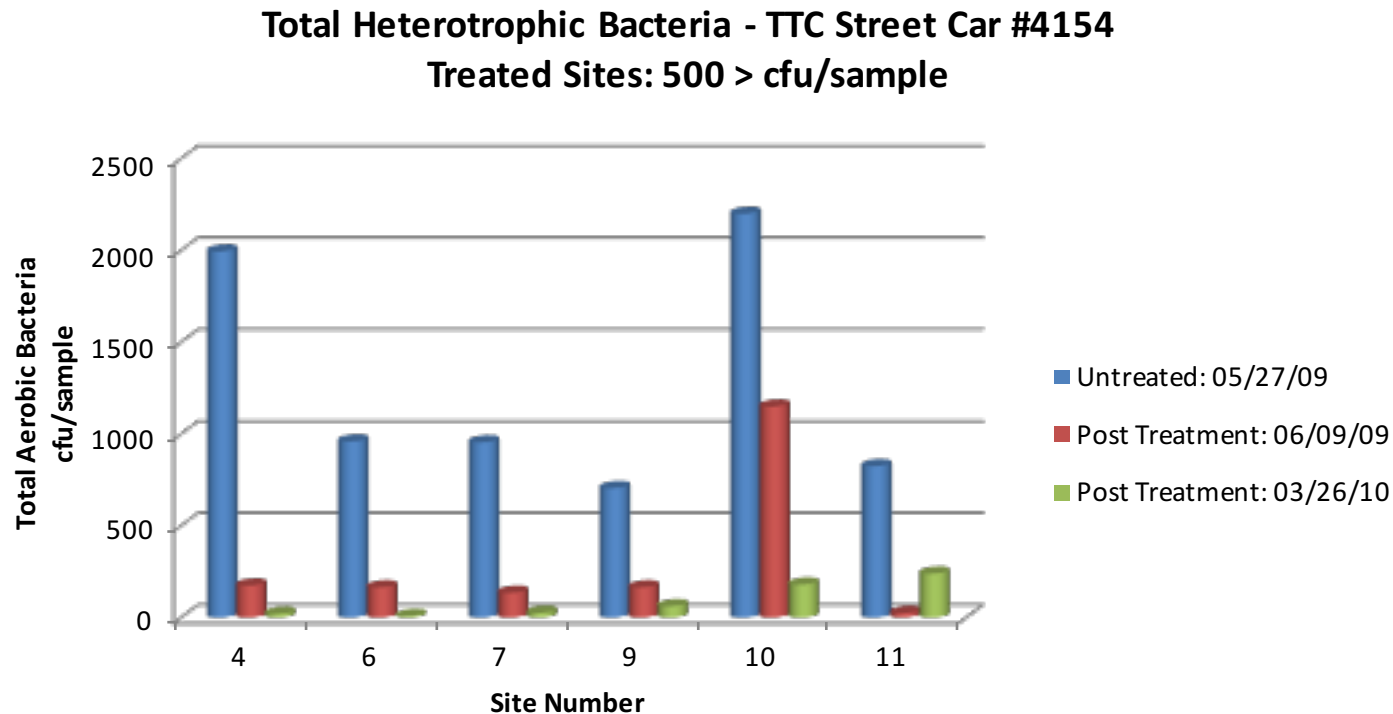


Figure 1: Results for the enumeration of Total Heterotrophic Bacteria on various surfaces of the Street Car #4154 before (May 27, 2009) and after (June 9, 2009) treatment with Aegis Microbe Shield Technology. Follow up March 26, 2010 Sites showing > 500 cfu initially.

Case Study 2

Metrolinx, Toronto Canada

Situation:

- Treated a 12 bilevel car
Consist with AEGIS
- Measured bacterial load
after two weeks and
compared to an
untreated Consist

• Results:

Gross Total CFU all sites by consist	438	2633
Pass raw number	21	3
pass percentage	84.00%	12.00%
% Reduction	-501.14%	

		Treated	Control
		% Pass	% Pass
"n"	Surface Types		
11	Stanchions/handrails	72.73%	0.00%
4	Headrest	100.00%	50.00%
3	Seats	100.00%	0.00%
2	Washroom	100%	0%

Case Study 3

Via Rail



- VIA rail had two coaches that had been taken out of service due to musty odors. The coaches has carpeted floors and upholstered chairs and the carpets were getting moldy due to foot traffic. Cleaning the carpets got rid of dirt but only served to stimulate mold growth. We treated the carpets in the two coaches with Aegis to control mold growth and moldy odors. The following day the odors were gone and VIA put the cars back in services on the second day.

Case Study 4

Winnipeg Transit

- 10 bus test over 6 months
- Textile seats treated with AEGIS
- After 6 months, the treated seats were noticeably cleaner and easier to clean
- All bus seats scheduled for treatment



Case Study 5: SEPTA



- Urination in hallways and stairwells
- Challenge to keep odors away & keep stations clean
- AEGIS tested in multiple problem locations
- Success led to AEGIS being incorporated into SEPTA's jan san program

Reference: *"My staff has tested the product and the results were favorable. We would like to move forward on purchasing the product."*

Robert Toomer

Director of Station Operations

rtoomer@septa.org

[215-580-5621](tel:215-580-5621)

[Office 215-580-5626](tel:215-580-5626)



Application

- We offer turnkey application
- Training for your team to complete the application

Product Availability and Estimate

- Contact us for more information

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1-800-565-3509