DURABILITY STUDY

The Microbe Shield is applied to impart enduring antimicrobial protection to porous and nonporous non food contact surfaces to control and prevent the growth of microbes.

The duration of effect is largely dependant upon the traffic of abrasive activity that could be expected to be applied to the treated surface. A high touch surface like a doorknob will likely last a shorter duration than a wall or board room table. As a general rule, Protect Technologies will support that the treated surface will continue to be protected from the growth of microbes for a period of 12 months.

STUDIES:

Fungal Remediation and Protective Antimicrobial Treatment of a Grossly Contaminated Ten Story Hospital. Kumar et al. Environmental, Midland MI.

- Fungal infestation, entire 10 story hospital.
- Treatment with Microbe Shield. 5 Month follow up

RESULTS:

Location	Pre-treatment CFU/m³	2005		2006		
		November	December	January	February	March
Total Average	791.4	48.1	56.1	72.2	101.4	96.6
Building Sites	307	307	307	307	307	307

Significant reduction in growth of microorganisms across 307 sites over 5 months

- Pre-treatment retrievals were in the range of 35-4730 CFUs/M3 with an average of 791.4 CFU/M3
- Post treatment during first month following restoration produced an average of 48 CFU/M3 at 307 sites. 24% of sites had 0 CFUs/M3
- Testing of the facility at five months following restoration showed 12% of the indoor environment to be free of airborne fungi, 53% with <100 CFU/M3 of air, and 35% with 100 - 200 CFU/M3. This represented an on average reduction from the 307 sampling sites of 88% or almost nine times.

Improved Control of Microbial Exposure Hazards in Hospitals: A 30-Month Field Study R.A. Kemper et al.

- Catastrophic loss due to 500,000 gallon water pipe failure
- Treatment of entire hospital with Microbe Shield
- Follow up for 30 Months

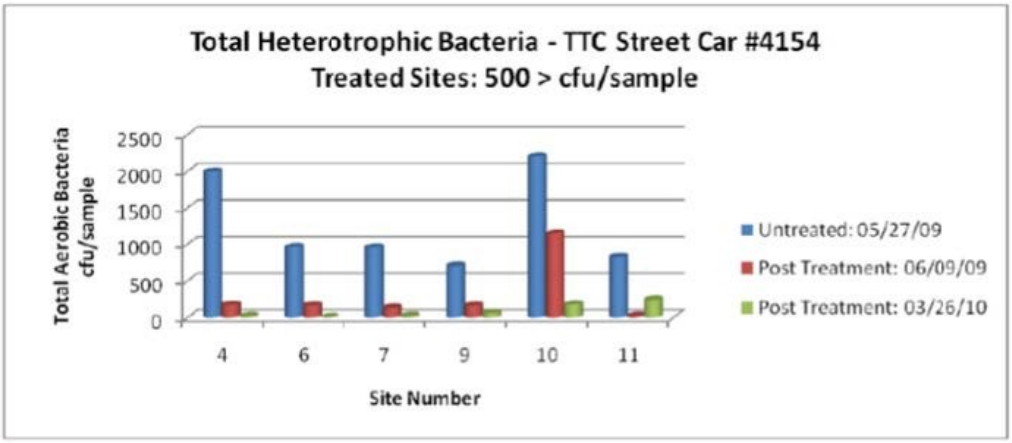
RESULTS:

Location	Pre-treatment CFU/m³	1990	1991		1992	
			M-1 01[1]	M-3 03[2]	M-1 01	M-1 03
Total Average	2,655.2	4.1	1.8	0.8	0.7	0.4
Building Sites	209	643	83	82	105	86

- 30 month follow up
- Pre-treatment CFU retrievals were in the range of 721 – 2800 CFUs/M3 with an average of 2,655 across 209 sites
- Post treatment sampling at 7 months following restoration produced an average of 4.1 CFUs/M3 at 643 sites
- Post treatment sampling at 30 months produced an average of 0.4 CFUs/M3

Street Car Transit Vehicle Follow-up Study –/ Bombardier 2009-2010

- 9 month follow up
- Significant, enduring reductions in CFUs over 9 months



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Building Forensics
BUILDING RELATED ILLNESS