
KYTIN

Protect

2-PART POLYURETHANE



2-part zero-VOC polyaliphatic urethane coating contains proprietary biocide that protects the coating from a broad range of organisms including bacteria, algae, fungi, and viruses.

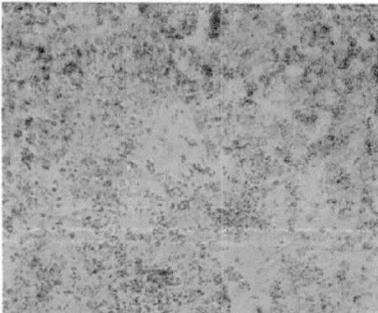
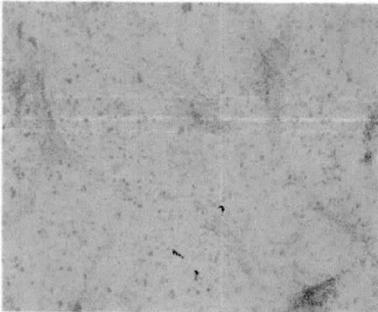
Superior solvent resistance for alcohol, bleach, and other chemical disinfectants

Broad-based Biocide

Bacteria	Fungi	Algae	Viruses
Staphylococcus aureus	Auerobasidium pullulans (ATCC 9348)	Chlorella sp.	H1N1 Flu A
Streptococcus faecalis	Aspergillus niger (ATCC 9642)	Chlorella vulgaris (ATCC 16487)	
Escherichia coli	Aspergillus niger (ATCC 6275)	Stichococcus bacillaris (BIUC K-150)	
Pseudomonas aeruginosa	Cladosporium cladosporioides (ATCC 16022)	Ulothrix gagas (B174)	
Klebsiella pneumoniae	Aspergillus flavus (ATCC 9643)	Oscillatoria lutea (B1814)	
A. baumannii	Penicillium species (ATCC 12667)		
E. cloace	Chaetomium globosum (ATCC 6205)		
C. Difficile	Penicillium funiculosum (ATCC 11797)		
MRSA			
Acinetobacter			
Enterobacter			

Anti-Viral Protection

Influenza A (H1N1)



Influenza A virus is an enveloped, minus-stranded member of the family *Orthomyxoviridae*, and causative agent of the illness influenza (which is more widely recognized by the term 'flu'). Influenza is more serious than other seasonal mild, respiratory tract infections (e.g. the common cold) with symptoms that can last for upwards of several weeks. Young children and the elderly are particularly susceptible to severe illness and death due to infection. Influenza is readily transmitted via infective aerosols direct contact with infective respiratory secretions. Potential transmission by contaminated environmental surfaces (fomites) has increasingly become of interest, and influenza virus is highly vulnerable to inactivation by drying and exposure to a variety of disinfectant actives.

Permissive Host Cell Line Selected for Influenza A (H1N1): MDCK (Madin Darby Canine Kidney Cells), ATCC CCL-34

Anti-Viral Protection

Method:	JIS Z 2801
Host Cell Line:	MDCK (ATCC CCL-34)
Assay Medium:	Influenza Infection Medium
Incubation Conditions	34°C, 5% CO ₂
Contact Conditions	24°C, 48% RH
Enumeration Incubation Period	7 Days

Results: 98.2% reduction after 4-hour contact time



Anti-Bacterial Protection 24 Hour Contact Time

Organism Test	Log Reduction
S. aureus	5.29 (>99.999%)
P. aeruginosa	3.95 (>99.98%)
A. baumannii	2.54 (>99.7%)
E. cloace	4.24 (>99.99%)
E. coli	4.20 (>99.99%)
C. difficile	0.84 (>85%)

Test Method: JIS Z 2801



Length of Time of Biocide Activity

Accelerated Aging: Coated aluminum sheets were artificially aged for a period of 28, 42, and 70 days at 70°C. The following table correlates aging time with predicted activity time.

Aging Time	Real Time Equivalent
28 days	2 Years
42 days	3 Years
70 days	5 Years

24 Hour Contact Time – Antimicrobial Activity

Organism Test	Accelerated Aging	Log Reduction
MRSA	2 Years	5.88 (>99.999%)
Pseudomonas	3 Years	5.52 (>99.999%)
Acinetobacter	3 Years	5.50 (>99.999%)
Enterobacter	3 Years	3.60 (>99.97%)

** Five year aging had negligible reduction.

Lifetime of biocide activity is estimated
to be between 3 and 5 years



Kytin Protect Anti-microbial/Anti-viral Coating

- Durable anti-microbial and anti-viral protective coating for high contact surfaces
- Chemically resistant for solvent based cleaning
- High adhesion
- Multi-year protection
- Zero-VOC and environmentally compliant
- Can be applied to virtually any surface: wood, metal, plastic, etc.