



Maintenance Solutions

SUMMARY OF ANTIMICROBIAL ACTIVITY

OXYPLUS PF

Disinfectant

Description

OxyPlus PF is a one step disinfectant that is effective against a broad spectrum of bacteria, is *virucidal (including HIV-1, HBV, and HCV) and inhibits the growth of mold and mildew and their odors when used as directed. **OxyPlus PF** is a quaternary ammonium chloride based disinfectant cleaner containing hydrogen peroxide stabilized with phosphoric acid and an amine oxide surfactant to aid cleaning. Kills Pandemic 2009 H1N1 influenza A Virus (formerly called swine flu).

Regulatory Summary

Physical Properties

EPA Registration No.	1839-224-
Sub-registrant No.	8325
USDA Authorization	None
California Status	No
Canadian PCP#	None
Canadian Din #	None

pH of Concentrate	1.0 – 3.0
Specific Gravity @ 25°C	1.00 – 1.04
Pounds per gallon @ 25°C	8.52

Flash Point (PMCC)	>185°F
% Quat (mol. wt. 343)	5.76-6.05
% Volatile	90.0-93.0

DISINFECTION DATA:

Test Method: AOAC Use Dilution

Test Conditions: 2 oz/gal dilution in 200 ppm (as CaCO₃) hard water, 5% organic soil load, 10 minute contact time, 20±1°C exposure temperature, stainless steel carrier substrates

Results:

Organism	Sample	Carriers Exposed	Carriers Positive
<i>Staphylococcus aureus</i> (ATCC 6538)	A	60	0
	B	60	0
	C	60	0
<i>Salmonella (choleraesuis) enterica</i> (ATCC 10708)	A	60	0
	B	60	0
	C	60	0
<i>Pseudomonas aeruginosa</i> (ATCC 15442)	A	60	0
	B	60	0
	C	60	1
Community Associated Methicillin resistant <i>Staphylococcus aureus</i> (CA-MRSA) Genotype USA 300	A	10	0
	B	10	0
Community Associated Methicillin resistant <i>Staphylococcus aureus</i> (CA-MRSA) Genotype USA 400	A	10	0
	B	10	0
<i>Escherichia coli</i> (ATCC 11229)	A	10	0
	B	10	0
<i>Escherichia coli</i> O157:H7 (ATCC 43895)	A	10	0
	B	10	0
Methicillin resistant <i>Staphylococcus aureus</i> (MRSA) (ATCC 33593)	A	10	0
	B	10	0

Conclusion: Under the conditions of these investigations, **OxyPlus PF** demonstrated **disinfectant** activity against *Staphylococcus aureus*, *Salmonella (choleraesuis) enterica*, *Pseudomonas aeruginosa*, Community Associated Methicillin resistant *Staphylococcus aureus* (CA-MRSA) Genotype USA 300, Community Associated Methicillin resistant *Staphylococcus aureus* (CA-MRSA) Genotype USA 400, *Escherichia coli* (ATCC 11229), *Escherichia coli* O157:H7 and Methicillin resistant *Staphylococcus aureus* (MRSA) according to criteria established by the U.S. Environmental Protection Agency for registration and labeling of a disinfectant product as a bactericide.

VIRUCIDAL DATA:

Test Methods:

* U.S. E.P.A. Pesticide Assessment Guidelines, Subdivision G: Product Performance, Section 91-2(f), and Section 91-30 (d), (e), November, 1982.

† Protocols for Testing the Efficacy of Disinfectants against Hepatitis B Virus (HBV) (EPA, Federal Register, Vol. 65, No. 166, 8/25/2000, p. 51828).

‡ Protocol for Testing Disinfectants against Hepatitis C Virus using Bovine Viral Diarrhea Virus as approved by the U.S. EPA on August 15, 2002.

Test Conditions: 2 oz/gal¹ dilution in 200 ppm (as CaCO₃) hard water, 5% organic soil load, room temperature, glass slide substrates

Results:

Test Organism	Sample	Titer Reduction	Contact Time
*Human Immunodeficiency Virus, HTLV-III _{RF} , strain of HIV-1 (associated with AIDS)	A	≥3.5 log ₁₀	1 minute
	B	≥3.5 log ₁₀	
*Influenza A Virus (ATCC VR-544)	A	>5.75 log ₁₀	10 minutes
	B	>5.75 log ₁₀	
‡Hepatitis C Virus (HCV) (Bovine Viral Diarrhea Virus-BVDV)	A	>5.09 log ₁₀	10 minutes
	B	>5.09 log ₁₀	
†Hepatitis B Virus (HBV) (Duck Hepatitis B Virus-DHBV)	A	>5.22 log ₁₀	10 minutes
	B	>5.22 log ₁₀	
Pandemic 2009 H1N1 Influenza A Virus	(Refer to NOTE below.)		

Conclusion: Under the conditions of this investigation, **OxyPlus PF** demonstrated **virucidal** activity against Human Immunodeficiency Virus (HIV), Influenza Type A, Hepatitis C, Hepatitis B, and Pandemic 2009 H1N1 Influenza A Virus, according to criteria established by the U.S. Environmental Protection Agency for registration and labeling of a disinfectant product as a virucide.

¹**Note:** Treatment dose for Hepatitis B was 6oz/gal dilution in 200 ppm hard water, 5% organic soil load, room temperature.

Note: Per the EPA guidance document dated October 21, 2009, disinfectant products that bear label claims against human, avian, or swine influenza A virus, and have submitted and received approval of efficacy data to support these label claims, may include a label claim against the Pandemic 2009 H1N1 Influenza A Virus.

NON-FOOD CONTACT SANITIZATION DATA:

Test Method: Sanitizer Test for Inanimate, Hard, Nonporous Non-Food Contact Surfaces (ASTM E1153-14)

Test Conditions: 2 oz/gal dilution, 5% organic soil load, 30 second contact time, 200 ppm hard water, room temperature

Results:

<u>Test Organism</u>	<u>Contact Time</u>	<u>Sample</u>	<u>% Kill</u>
<u>Staphylococcus aureus</u> (ATCC 6538)	30 seconds	A	>99.9
	30 seconds	B	>99.9
	30 seconds	C	>99.9
<u>Enterobacter aerogenes</u> (ATCC 4532)	30 seconds	A	>99.9
	30 seconds	B	>99.9
	30 seconds	C	>99.9

Conclusion: Under the conditions of these investigations, **OxyPlus PF** demonstrated **sanitizing** activity against *Staphylococcus aureus* and *Enterobacter aerogenes* according to criteria established by the U. S. Environmental Protection Agency for registration and labeling of a disinfectant product as a sanitizer.

MILDEWSTAT:

Test Method: AOAC Use Dilution (Mildew-Fungistatic Test)

Test Organism: *Aspergillus niger* (ATCC 6275)

Test Conditions: 2 oz/gal dilution, 5% organic soil load, 200 ppm hard water, room temperature, ceramic tile carriers

Results:

<u>Sample</u>	<u>No. of Carriers Exposed</u>	<u>Positive</u>
A	10	0
B	10	0

Conclusion: Under the conditions of this investigation, **OxyPlus PF** demonstrated **mildewstatic** activity against *Aspergillus niger* according to criteria established by the U.S. Environmental Protection Agency for registration and labeling of a disinfectant product as a mildewstat.