



**Maintenance Solutions**

## SUMMARY OF ANTIMICROBIAL ACTIVITY

### OXYPLUS PF

Disinfectant

#### Description

**7 OxyPlus PF** is a broad spectrum, acidic hard surface quaternary ammonium chloride based disinfectant cleaner containing hydrogen peroxide stabilized with phosphoric acid and an amine oxide surfactant. When used as directed, this product will deliver effective biocidal action against bacteria, fungi, and viruses. This formulation is a blend of a premium active ingredients and inerts: surfactants, phosphoric acid, hydrogen peroxide, and water. Biocidal performance is attained when this product is properly diluted at 2 oz. per gallon or 1:64. **7 OxyPlus PF** can be used to disinfect a wide variety of hard surfaces such as floors, walls, and countertops in hospitals, households, and institutions. Kills Pandemic 2009 H1N1 influenza A Virus (formerly called swine flu)

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#### Regulatory Summary

#### Physical Properties

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

<b>pH of Concentrate</b>	2.0 – 3.0
<b>Specific Gravity @ 25 °C</b>	1.021
<b>Pounds per gallon @ 25 °C</b>	8.52

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

## Summary of Antimicrobial Test Results

This product is a broad spectrum, acidic hard surface disinfectant. Listed below and in the following pages is a summary of the Antimicrobial Claims and a review of the Antimicrobial Test Results.

### Disinfection (at 2 ounces per gallon)

<b>Claim:</b> Disinfectant	<b>Contact Time:</b> 10 minutes	<b>Organic Soil:</b> 5%	<b>Water Conditions:</b> 200 ppm as CaCO <sub>3</sub>
<b>Test Method:</b> Testing is performed per the AOAC UDT/GST method (DIS/TSS-1). Sixty carriers are required on 3 separate lots, one of which must be > 60 days old against <i>Pseudomonas aeruginosa</i> , <i>Salmonella enterica</i> and <i>Staphylococcus aureus</i> . Killing of 59 out of 60 carriers is required (total carriers = 540).			

Organism	ATCC#	Use-Dilution Concentration	Hard Water Condition	Replicates	Results
<i>Pseudomonas aeruginosa</i>	15442	900 ppm (2.0 oz/gal)	200 ppm	60, 60, 60	0/60, 0/60, 1/60
<i>Staphylococcus aureus</i>	6538	900 ppm	200 ppm	60, 60, 60	0/60, 0/60, 0/60
<i>Salmonella enterica</i>	10708	900 ppm	200 ppm	60, 60, 60	1/60, 1/60, 0/60

**Supplemental Organisms** Testing is performed per the AOAC UDT/GST method (DIS/TSS-1). Sixty carriers are required on 3 separate lots, one of which must be > 60 days old against *Pseudomonas aeruginosa*, *Salmonella enterica* and *Staphylococcus aureus*. Killing of 59 out of 60 carriers is required (total carriers = 540).

<i>Escherichia coli</i>	11229	900 ppm	200 ppm	60, 60, 60	0/60, 0/60, 0/60
<i>Escherichia coli</i> 0157:H7	43895	900 ppm	200 ppm	60, 60, 60	0/60, 0/60, 0/60
<i>Staphylococcus aureus</i> , Methicillin Resistant <b>MRSA</b> )	33593	900 ppm	200 ppm	60, 60, 60	0/60, 0/60, 0/60
<i>Staphylococcus aureus</i> Community Associated Methicillin-Resistant ( <b>CA-MRSA</b> )	NRS123 USA300	900 ppm	200 ppm	60, 60, 60	0/60, 0/60, 0/60
<i>Staphylococcus aureus</i> Community Associated Methicillin-Resistant ( <b>CA-MRSA</b> )	NRS384 USA400	900 ppm	200 ppm	60, 60, 60	0/60, 0/60, 0/60

**Conclusion:** All lots of this product effectively killed the above listed bacteria as specified in the test performance standards. This product meets EPA requirements for hard surface disinfectant claims in hospital and medical environments when diluted to 900 ppm active concentration in 200 ppm synthetic hard water, and in the presence of 5% organic soil.

## Virucidal (at 2 ounces per gallon)

<b>Claim:</b> Virucide	<b>Contact Time:</b> Varies	<b>Organic Soil:</b> 5%	<b>Water Conditions:</b> 200 ppm as CaCO <sub>3</sub>
<b>Test Method:</b> Testing is performed per U.S. E.P.A. Pesticide Assessment Guidelines, Subdivision G: Product Performance, 1982, Section 91-30. Two separate lots are tested. Inactivation of virus must be demonstrated at all dilutions when no cytotoxicity is observed or at all dilutions above the cytotoxic level when it is observed. The data must demonstrate a 3-log reduction in viral titer for both lots.			

Organism	Dried Virus Control	Use-Dilution Concentration	Contact Time	Titer Reduction
HIV-1 (AIDS Virus)	HTLV-III <sub>B</sub>	900 ppm	1 minute	≥ 3.5 Log <sub>10</sub>
Influenza A virus	ATCC VR-544	900 ppm	10 minute	≥ 5.75 Log <sub>10</sub>
Pandemic 2009 (H1N1) Influenza A Virus	ATCC VR-1469	900 ppm	10 minute	See NOTE below

**Conclusion:** All lots of this product effectively inactivated the above listed viruses as specified in the test performance standards. This product meets EPA requirements for hard surface virucidal claims when diluted to 900 ppm in 200 ppm A.O.A.C. synthetic hard water and in the presence of 5% organic soil.

**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.

## Mold and Mildew Control (at 2 ounces per gallon)

<b>Claim:</b> Mildewstat	<b>Contact Time:</b> 10 minutes	<b>Organic Soil:</b> 5%	<b>Water Conditions:</b> 200 ppm as CaCO <sub>3</sub>		
<b>Test Method:</b> Mildewstat (Mold and Mildew Control) - EPA – TSD 6-201 Mildewstat on Hard Surfaces					
Organism	ATCC#	Contact Time	Untreated after 7 days	Sample A after 7 days	Sample B after 7 days
Aspergillus niger	6275	10 minutes	Growth 90%	No Growth 0%	No Growth 0%

**Conclusion:** All lots of **OxyPlus PF** were effective against *Aspergillus niger* under the test conditions outlined in the EPA test performance standards described above. **OxyPlus PF** is an effective mildewstat for non-porous inanimate hard surfaces.