

Efficacy Bulletin

HDQ Neutral[®]

EPA Reg. 10324-155-5741

Disinfection

This product is bactericidal according to the EPA Test Guideline 810.2200: AOAC Use Dilution Test method on hard inanimate surfaces modified in the presence of 5% organic serum and 200 ppm hard water. All tests are completed under Good Laboratory Practice (GLP) conditions.

Organism	Sample	Carriers showing growth	Contact Time	Dilution
<i>Pseudomonas aeruginosa</i> (ATCC 15442)	A	3/60	10 minutes	1 oz./gal
	B	6/60		
	C	4/60		
<i>Staphylococcus aureus</i> (ATCC 6538)	A	2/60	10 minutes	1 oz./gal
	B	3/60		
	C	2/60		
<i>Salmonella enterica</i> (ATCC 10708)	A	1/60	10 minutes	1 oz./gal
	B	1/60		
	C	0/60		
<i>Acinetobacter baumannii</i> (ATCC 19003)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Acinetobacter Iwoffii</i> (ATCC 9957)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Acinetobacter Iwoffii</i> (ATCC 15309)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Bordetella bronchiseptica</i> (ATCC 10580)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Citrobacter freundii</i> (ATCC 8090)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Enterobacter aerogenes</i> (ATCC 13048)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Enterobacter agglomerans</i> (ATCC 27155)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Enterobacter cloacae</i> (ATCC 13047)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Enterococcus faecalis</i> (ATCC 19433)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Enterococcus faecalis</i> Vancomycin Resistant (VRE) (ATCC 51299)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Enterococcus hirae</i> (ATCC 10541)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Escherichia coli</i> (ATCC 11229)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Escherichia coli</i> Spectrum B-Lactamase (ESBL) (ATCC BAA-196)	A	0/10	10 minutes	1 oz./gal
	B	0/10		

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<i>Escherichia coli</i> Tetracycline Resistant (ATCC 47041)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Escherichia coli</i> O157:H7 (ATCC 35150)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Fusobacterium necrophorum</i> (ATCC 27852)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Klebsiella oxytoca</i> (ATCC 13182)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Klebsiella pneumoniae</i> (ATCC 13883)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Klebsiella pneumoniae</i> Carbapenem-resistant NDM-1 (ATCC BAA-2146)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Listeria monocytogenes</i> (ATCC 19117)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Micrococcus luteus</i> (ATCC 14452)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Micrococcus luteus</i> (ATCC 4698)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Pasturella multocida</i> (ATCC 12947)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Proteus vulgaris</i> (ATCC 13315)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Proteus vulgaris</i> (ATCC 9920)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Pseudomonas aeruginosa</i> Tetracycline Resistant (ATCC 27853)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Pseudomonas cepacia</i> (ATCC 25416)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Salmonella enterica</i> (ATCC 23564)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Salmonella enterica</i> serotype pullorum (ATCC 19945)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Salmonella typhi</i> (ATCC 6539)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Salmonella typhimurium</i> (ATCC 23564)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Serratia marcescens</i> (ATCC 14756)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Serratia marcescens</i> (ATCC 9103)	A	0/10	10 minutes	1 oz./gal
	B	0/10		

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<i>Shigella flexneri</i> (ATCC 12022)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Shigella flexneri</i> (ATCC 9380)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Shigella sonnei</i> (ATCC 25931)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Staphylococcus aureus</i> (ATCC 14154)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Staphylococcus aureus</i> (ATCC 25923)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Staphylococcus aureus</i> Methicillin Resistant (MRSA) (ATCC 33592)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Staphylococcus aureus</i> (ATCC 33586)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Staphylococcus aureus</i> Community Associated Methicillin Resistant (CA-MRSA) (Genotype USA400)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Staphylococcus aureus</i> Community Associated Methicillin Resistant (CA-MRSA) (Genotype USA300)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Staphylococcus aureus</i> Vancomycin Intermediate Resistant (VISA) (HIP 5836)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Staphylococcus epidermidis</i> (ATCC 14990)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Staphylococcus epidermidis</i> MDR (ATCC 51625)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Staphylococcus haemolyticus</i> (ATCC 29970)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Staphylococcus agalactiae</i> (ATCC 13813)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Staphylococcus mutans</i> (ATCC 25175)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Streptococcus pyogenes</i> Penicillin Resistant (ATCC 51915)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Streptococcus pyogenes</i> (ATCC 19615)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Vibrio cholera</i> (ATCC 11623)	A	0/10	10 minutes	1 oz./gal
	B	0/10		

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<i>Yersinia enterocolitica</i> (ATCC 23715)	A	0/10	10 minutes	1 oz./gal
	B	0/10		

Virucidal

This product is virucidal according to the EPA Test Guideline 810.2200: Virucidal Hard Surface Efficacy Test, in the presence of 5% organic serum. All tests are completed under Good Laboratory Practice (GLP) conditions.

Organism	Log Reduction	Contact Time	Dilution
Avian Influenza A Virus (H5N1) (CDC 20067 19965)	≥3.50	10 minutes	1 oz./gal
	≥3.50		
Avian Influenza A Virus (H3N2) (VR-2072)	≥4.25	10 minutes	1 oz./gal
	≥4.25		
	≥4.25		
Cytomegalovirus (AD-169)	≥3.00	10 minutes	1 oz./gal
	≥3.00		
Hepatitis B Virus (HBV) (Duck Hepatitis B Virus)	4.79	10 minutes	1 oz./gal
	4.79		
	4.79		
Hepatitis C Virus (HCV) (Bovine Viral Diarrhea Virus)	5.88	10 minutes	1 oz./gal
	5.88		
	5.93		
Herpes Simplex Virus Type 1 (VR- 733)	≥5.00	10 minutes	1 oz./gal
	≥5.00		
Herpes Simplex Virus Type 2 (VR-734)	≥5.50	10 minutes	1 oz./gal
	≥5.50		
HIV-1 (AIDS Virus)	≥3.75	10 minutes	1 oz./gal
	≥3.75		
Human Coronavirus (VR-740)	≥4.00	10 minutes	1 oz./gal
	≥4.00		
Influenza A Virus (H1N1) (Strain A/PR/8/34)	≥3.50	10 minutes	1 oz./gal
	≥3.50		
Influenza A Virus (H3N2) (VR- 544)	≥6.00	10 minutes	1 oz./gal
	≥6.00		
Respiratory Syncytial Virus (VR- 26)	≥4.00	10 minutes	1 oz./gal
	≥4.00		
SARS associated Coronavirus (CDC 200300592)	≥4.00	10 minutes	1 oz./gal
	≥4.00		
Vaccinia Virus (VR-119)	≥6.25	10 minutes	1 oz./gal
	≥6.25		

Animal Virucidal

This product is virucidal according to the EPA Test Guideline 810.2200: Virucidal Hard Surface Efficacy Test, in the presence of 5% organic serum. All tests are completed under Good Laboratory Practice (GLP) conditions.

Organism	Log Reduction	Contact Time	Dilution
Avian Infectious Bronchitis Virus (Strain Beaudette IB42)	≥5.92	10 minutes	1 oz./gal
	≥5.92		
Avian Influenza A Virus (H5N1) (CDC 20067 19965)	≥3.50	10 minutes	1 oz./gal
	≥3.50		
Avian Influenza A Virus (H3N2) (VR-2072)	≥4.25	10 minutes	1 oz./gal
	≥4.25		
	≥4.25		
Canine Parvovirus CPV (Type 2b)	4.00	10 minutes	4.5 oz/gal
	4.00		
Canine Coronavirus (VR-809)	≥4.00	10 minutes	1 oz./gal
	≥4.00		
Canine Distemper Virus (VR-128)	≥5.75	10 minutes	1 oz./gal
	≥5.75		
Feline Picornavirus (VR-649)	≥4.00	10 minutes	1 oz./gal
	≥4.00		
Infectious Bovine Rhinotracheitis Virus (VR-188)	≥4.00	10 minutes	1 oz./gal
	≥4.00		
Pseudorabies Virus (VR-135)	≥5.75	10 minutes	1 oz./gal
	≥5.75		
Rabies	≥3.25	10 minutes	4.5 oz/gal
	≥3.25		
Swine Influenza A Virus (H1N1) (Strain A/Swine/1976/31)	≥3.25	10 minutes	1 oz./gal
	≥3.25		
Transmissible Gastroenteritis Virus TGE (Clinical Isolate)	≥4.25	10 minutes	1 oz./gal
	≥4.25		

Fungicidal

This product is fungicidal according to the EPA Test Guideline 810.2200: AOAC Use-Dilution method modified for fungicidal activity on hard inanimate surfaces modified in the presence of 5% organic serum. All tests are completed under Good Laboratory Practice (GLP) conditions.

Organism	Sample	Carriers showing growth	Contact Time	Dilution
<i>Candida albicans</i> (ATCC 10231)	A	0/10	10 minutes	1 oz./gal
	B	0/10		
<i>Trichophyton mentagrophytes</i> (ATCC 9533)	A	0/10	10 minutes	1 oz./gal
	B	0/10		

Mildewcidal

This product is mildewcidal according to the EPA Hard Surface Mildew Fungistatic Test. All tests are completed under Good Laboratory Practice (GLP) conditions.

Organism	Title	Untreated (% covered)	7 days Post Treatment (% covered)
<i>Aspergillus niger</i> (ATCC 16404)	1	90%	0%
	2	70%	0%
	3	90%	0%
	4	80%	0%
	5	80%	0%
	6	90%	0%
	7	80%	0%
	8	70%	0%
	9	90%	0%
	10	70%	0%