



MICROBIOLOGICAL EFFICACY SUMMARY



ESSENTIAL TEST DATA

Complies with European Standard EN 14885:2022 and the latest regulatory requirements for biocidal activity of high-level surface disinfectants applied with mechanical action (e.g., wiping).

A $\geq 5 \log_{10}$ reduction was achieved for bacteria, and a $\geq 4 \log_{10}$ reduction for viruses, fungi, yeasts, mycobacteria, and bacterial spores in the following tests. Additionally, the requirements of the 4-field tests EN 16615 and EN 17846 were met, with F2–F4 contamination levels being $< 50 \text{ CFU/cm}^2$.

ORGANISM	TEST METHOD	TEST TYPE	CONDITIONS
SPORICIDAL			
<i>Bacillus subtilis</i>	EN 17126 (P2, S1)	Suspension	Clean 1 & Dirty 1
<i>Bacillus cereus</i>			
<i>Clostridioides difficile</i>			
<i>Clostridioides difficile</i>	EN 17846 (P2, S2)	Surface with mechanical action	Clean 1 & Dirty 1
MYCOBACTERICIDAL			
<i>Mycobacterium terrae</i>	EN 14348 (P2, S1)	Suspension	Clean 1 & Dirty 1
<i>Mycobacterium avium</i>			
VIRUCIDAL			
Poliovirus Type 1	EN 14476 (P2, S1)	Suspension	Clean 1 & Dirty 1
Adenovirus Type 5			
Murine norovirus			
FUNGICIDAL/YEASTICIDAL			
<i>Aspergillus brasiliensis</i>	EN 13624 (P2, S1)	Suspension	Clean 1 & Dirty 1
<i>Candida albicans</i>			
<i>Candida albicans</i>	EN 16615 (P2, S2)	Surface with mechanical action	Clean 1 & Dirty 1
BACTERICIDAL			
<i>Pseudomonas aeruginosa</i>	EN 13727 (P2, S1)	Suspension	Clean 1 & Dirty 1
<i>Staphylococcus aureus</i>			



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BACTERICIDAL			
<i>Enterococcus hirae</i>	EN 13727 (P2, S1)	Suspension	Clean 1 & Dirty 1
<i>Pseudomonas aeruginosa</i>	EN 16615 (P2, S2)	Surface with mechanical action	Clean 1 & Dirty 1
<i>Staphylococcus aureus</i>			
<i>Enterococcus hirae</i>			

ADDITIONAL TEST DATA

Beyond essential testing, further studies have confirmed the product's effectiveness against key pathogens and demonstrated broader performance characteristics.

MICROORGANISMS

ORGANISM	TEST METHOD	TEST TYPE	CONDITIONS
BACTERIAL SPORES			
<i>Bacillus subtilis</i>	EN 13704 (P2, S1)	Suspension	Dirty 1
<i>Bacillus cereus</i>			
<i>Bacillus subtilis var niger</i>	Babb JR, Bradely CR & Ayliffe GAJ (J. of Hosp. Inf. 1980 1:63-75)	Suspension	Clean 1 & Dirty 3
PROTOZOA			
<i>Acanthamoeba castellanii</i> cysts	Bespoke Test	Suspension	Clean 1
MYCOBACTERIA			
<i>Mycobacterium terrae</i>	EN 14563 (P2, S2)	Carrier	Clean 1 & Dirty 2
<i>Mycobacterium avium</i>			
<i>Mycobacterium terrae</i>	EN 16615 (P2, S2)	Surface with mechanical action	Dirty 1
<i>Mycobacterium avium</i>			
<i>Mycobacterium terrae</i>	Griffiths et al. (J. of Hosp. Inf. 1998 38:183-92)	Suspension	Clean 1 & Dirty 4



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VIRUSES			
Adenovirus Type 5	EN 17111 (P2, S2)	Carrier	Clean 1 & Dirty 1
Murine norovirus			
Polyomavirus SV40			
Poliovirus Type 1	ASTM E-1053	Surface without mechanical action	Dirty 2
Adenovirus Type 5			
Feline Calicivirus			
Hepatitis B Virus (HBV)			
Herpes Simplex Virus (HSV) Type 1			
Human Immunodeficiency Virus (HIV)			
Influenza A Virus (H1N1)			
Adenovirus Type 5	EN 16615 (P2, S2)	Surface with mechanical action	Dirty 1
Murine norovirus			Clean 1 & Dirty 1
Bovine Coronavirus			Dirty 1
Influenza A Virus (H1N1)	EN 14476 (P2, S1)	Suspension	Dirty 1
Parvovirus (Using Minute Virus of Mice (MVM) surrogate)	DVV/RKI	Suspension	Dirty 3
Poliovirus Type 1			Clean 2 & Dirty 3
Adenovirus Type 5			
Murine norovirus			
Polyomavirus SV40			
Vaccinia Virus			
FUNGI & YEASTS			
Aspergillus brasiliensis	EN 14562 (P2, S2)	Carrier	Clean 1
Candida albicans			



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FUNGI & YEASTS			
<i>Candidozyma auris</i> (Formerly <i>Candida auris</i>)	EN 14562 (P2, S2)	Carrier	Dirty 2
<i>Aspergillus brasiliensis</i>	EN 16615 (P2, S2)	Surface with mechanical action	Clean 1 & Dirty 1
<i>Candida albicans</i>	AOAC Use-Dilution Method	Carrier	Dirty 2
<i>Candida albicans</i>	EN 13697 (P2, S2)	Surface without mechanical action	Clean 1
<i>Fusarium solani</i>	EN 13624 (P2, S1)	Suspension	Clean 1
<i>Aspergillus sydowii</i>			
BACTERIA			
<i>Pseudomonas aeruginosa</i>	EN 14561 (P2, S2)	Carrier	Clean 1
<i>Staphylococcus aureus</i>			
<i>Enterococcus hirae</i>			
Carbapenem-resistant <i>Klebsiella pneumoniae</i> (CRE)			
Vancomycin-resistant <i>Enterococcus faecium</i> (VRE)			Dirty 2
Multidrug-resistant <i>Acinetobacter baumannii</i> (MDRAB)			
Extended Spectrum Beta-Lactamase (ESBL) producing <i>Klebsiella pneumoniae</i>			
Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)			
<i>Pseudomonas aeruginosa</i>	EN 13697 (P2, S2)	Surface without mechanical action	Clean 1
<i>Staphylococcus aureus</i>			
<i>Enterococcus hirae</i>			
<i>Escherichia coli</i>			
<i>Proteus vulgaris</i>	EN 16615 (P2, S2)	Surface with mechanical action	Dirty 1
Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)			Clean 1
<i>Neisseria gonorrhoeae</i>			



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BACTERIA			
<i>Gardnerella vaginalis</i>	EN 16615 (P2, S2)	Surface with mechanical action	Clean 1
<i>Streptococcus agalactiae</i>			
<i>Streptococcus pyogenes</i>			
<i>Staphylococcus capitis</i>	EN 13727 (P2, S1)	Suspension	Dirty 1
Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)			

BIOFILM

ORGANISM	TEST METHOD	BIOFILM TYPE	SURFACE TYPE
<i>Pseudomonas aeruginosa</i>	MBEC assay (ASTM E2799-22)	Grown in moist conditions - aged for 72 hours	Polystyrene
<i>Staphylococcus aureus</i>	CDC Biofilm Reactor (ASTM E2871-22)		Stainless steel & PVC
<i>Staphylococcus aureus</i>	Modified CDC Biofilm Reactor	Dry (semi-hydrated) - aged for 12 days	Stainless steel & PVC

OTHER

CAPABILITY	TEST METHOD
DNA/RNA Degradation	Polyacrylamide gel electrophoresis (PAGE)

KEY

Clean 1	0.3 g/l Bovine albumin	Dirty 3	10% Blood Serum
Clean 2	Aqua bidest	Dirty 4	1% Blood Serum
Dirty 1	3g/l Bovine albumin + 3ml Blood erythrocytes	P2, S1	Phase 2, Step 1
Dirty 2	5% Blood Serum	P2, S2	Phase 2, Step 2