

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

| ORGANISM | TEST METHOD | TEST TYPE | CONDITIONS |
|-------------------------------|----------------------|-----------------------------------|---------------------|
| SPORICIDAL | | | |
| <i>Enterococcus hirae</i> | EN 13727 (P2, S1) | Suspension | Clean 1 and Dirty 1 |
| <i>Pseudomonas aeruginosa</i> | EN 16615 (P2, S2) | Surface with mechanical action | Clean 1 and 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>Clostridium sporogenes</i> | EN 14561/AOAC 966.04 | Carrier | Dirty 2 |
| <i>Bacillus subtilis</i> | Bespoke Test | Surface with mechanical action | Not Applicable |
| | | | Dirty 3 |
| <i>Bacillus cereus</i> | EN 16615 (P2, S2) | Surface with mechanical action | Clean 1 |
| MYCOBACTERIA | | | |
| <i>Mycobacterium terrae</i> | EN 14563 (P2, S2) | Carrier | Clean 1 and 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> | Bespoke Test | Surface with mechanical action | Dirty 3 |
| <i>Mycobacterium avium</i> | | | |
| <i>Mycobacterium tuberculosis</i> | | | |

| ORGANISM | TEST METHOD | TEST TYPE | CONDITIONS |
|--|--|--------------------------------------|---------------------|
| MYCOBACTERIA | | | |
| <i>Mycobacterium terrae</i> | Griffiths et al. (J. of Hosp. Inf. 1998 38:183–92) | Suspension | Not Applicable |
| VIRUSES | | | |
| Human Papillomavirus (HPV) Type 16 | Meyers et al (J Med Virol. 2020; 92: 1298–1302.) | Simulated-use Test | Dirty 2 |
| Human Papillomavirus (HPV) Type 18 | | | |
| Adenovirus Type 5 | EN 17111 (P2, S2) | Carrier | Dirty 1 |
| Murine norovirus | | | |
| Poliovirus Type 1 | ASTM E-1053 | Surface without mechanical action | Dirty 2 |
| Herpes Simplex Virus (HSV) Type 1 | | | |
| Murine norovirus | EN 16615 (P2, S2) | Surface with mechanical action | Clean 1 and Dirty 1 |
| Bovine Coronavirus | | | Dirty 1 |
| Hepatitis B Virus (HBV) | Bespoke Test | Suspension | Not Applicable |
| Hepatitis C Virus (HCV) | | | |
| Human Immunodeficiency Virus (HIV) | | | |
| Poliovirus Type 1 | DVV/RKI | Suspension | Clean 2 & Dirty 3 |
| Adenovirus Type 5 | | | |
| Murine norovirus | | | |
| Polyomavirus SV40 | | | |
| Vaccinia Virus | | | |
| FUNGI & YEASTS | | | |
| <i>Candida albicans</i> | EN 14562 (P2, S2) | Carrier | Clean 1 and Dirty 1 |
| <i>Candidozyma auris</i> (Formerly <i>Candida auris</i>) | | | Dirty 2 |
| <i>Trichophyton interdigitale</i> | AOAC 955.17 | Carrier | Dirty 2 |
| <i>Aspergillus brasiliensis</i> | EN 16615 (P2, S2) | Surface with mechanical action | Clean 1 |

| ORGANISM | TEST METHOD | TEST TYPE | CONDITIONS |
|--|----------------------|------------|---------------------|
| BACTERIA | | | |
| <i>Pseudomonas aeruginosa</i> | EN 14561 (P2, S2) | Carrier | Clean 1 and Dirty 1 |
| <i>Staphylococcus aureus</i> | | | |
| <i>Enterococcus hirae</i> | | | |
| <i>Escherichia coli</i> | | | Clean 1 |
| <i>Enterobacter cloacae</i> | | | |
| <i>Klebsiella pneumoniae</i> | | | |
| Vancomycin-resistant <i>Enterococcus faecium</i> (VRE) | EN 13727 (P2, S1) | Suspension | Clean 1 |
| <i>Escherichia coli</i> | | | |
| 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> | | | |
| <i>Staphylococcus aureus</i> | CDC Biofilm Reactor (ASTM E2871-22) | | Stainless steel & PVC |

KEY

| | | | |
|----------------|--|----------------|---------------------|
| Clean 1 | 0.3 g/l Bovine albumin | Dirty 3 | 3g/l Bovine albumin |
| Clean 2 | Aqua bidest | Dirty 4 | 10% 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 |