



**DUAL-BLEND® #24**  
**Healthcare Disinfectant Cleaner #5094**  
**EPA Registration Number: 10324-154-2296**

**DISINFECTION PERFORMANCE:**

This product kills the following bacteria in 10 minutes at 2 oz. per gal. of 400 ppm hard water (660 ppm active) and 5% soil on hard, non-porous surfaces:

| Organism  | Carrier Population (Log <sub>10</sub> ) | # Positive Carriers |
|---|---|---------------------|
| <i>Pseudomonas aeruginosa</i><br>(ATCC 15442)                 | 6.41                                    | 3/60                |
|   | 6.42                                    | 6/60                |
|   | 6.41                                    | 4/60                |
| <i>Salmonella enterica</i><br>(ATCC 10708)                    |   | 1/60                |
|   | 6.01                                    | 1/60                |
|   |   | 0/60                |
| <i>Staphylococcus aureus</i><br>(ATCC 6538)                   | 6.48                                    | 2/60                |
|   | 6.41                                    | 3/60                |
|   | 6.56                                    | 2/60                |
| <i>Acinetobacter baumannii</i><br>(ATCC 19003)                |   | 0/10                |
|   | 6.71                                    | 0/10                |
| <i>Acinetobacter lwoffii</i><br>(ATCC 9957)                   |   | 0/10                |
|   | 5.60                                    | 0/10                |
| <i>Acinetobacter lwoffii</i><br>(ATCC 15309)                  |   | 0/10                |
|   | 5.76                                    | 0/10                |
| <i>Bordetella bronchiseptica</i><br>(ATCC 10580)              |   | 0/10                |
|   | 6.97                                    | 0/10                |
| <i>Citrobacter freundii</i><br>(ATCC 8090)                    |   | 0/10                |
|   | 5.59                                    | 0/10                |
| <i>Enterobacter agglomerans</i><br>(ATCC 27155)               |   | 0/10                |
|   | 5.59                                    | 0/10                |
| <i>Enterobacter cloacae</i><br>(ATCC 13047)                   |   | 0/10                |
|   | 7.52                                    | 0/10                |
| <i>Enterococcus faecalis</i><br>(ATCC 19433)                  |   | 0/10                |
|   | 5.79                                    | 0/10                |
| <i>Enterococcus faecalis</i> (VRE)<br>(ATCC 51299)            |   | 0/10                |
|   | 7.11                                    | 0/10                |
| <i>Enterococcus hirae</i><br>(ATCC 10541)                     |   | 0/10                |
|   | 4.38                                    | 0/10                |
| <i>Escherichia coli</i> (Carbapenem Resistant)<br>(CDC 81371) |   | 0/10                |
|   | 5.88                                    | 0/10                |
|   | 5.52                                    | 0/10                |



|   |      |              |
|---|------|--------------|
| <i>Escherichia coli</i><br>(ATCC 11229)                                       | 7.11 | 0/10<br>0/10 |
| <i>Escherichia coli</i> (ESBL)<br>(ATCC BAA-196)                              | 6.90 | 0/10<br>0/10 |
| <i>Escherichia coli</i> (Tetracycline Resistant)<br>(ATCC 47041)              | 5.49 | 0/10<br>0/10 |
| <i>Escherichia coli</i> O157:H7<br>(ATCC 35150)                               | 6.90 | 0/10<br>0/10 |
| <i>Fusobacterium necrophorum</i><br>(ATCC 27852)                              | 5.76 | 0/10<br>0/10 |
| <i>Klebsiella aerogenes</i><br>(ATCC 13048)                                   | 7.37 | 0/10<br>0/10 |
| <i>Klebsiella oxytoca</i><br>(ATCC 13182)                                     | 6.03 | 0/10<br>0/10 |
| <i>Klebsiella pneumonia</i> (Carbapenem-Resistant)<br>(NDM-1) (ATCC BAA-2146) | 6.80 | 0/10<br>0/10 |
| <i>Klebsiella pneumonia</i><br>(ATCC 13883)                                   | 6.05 | 0/10<br>0/10 |
| <i>Listeria monocytogenes</i><br>(ATCC 19117)                                 | 6.89 | 0/10<br>0/10 |
| <i>Micrococcus luteus</i><br>(ATCC 14452)                                     | 5.04 | 0/10<br>0/10 |
| <i>Micrococcus luteus</i><br>(ATCC 4698)                                      | 5.68 | 0/10<br>0/10 |
| <i>Mycoplasma gallisepticum</i><br>(ATCC 19610)                               | 4.00 | 0/10<br>0/10 |
| <i>Pasturella multocida</i><br>(ATCC 12947)                                   | 7.12 | 0/10<br>0/10 |
| <i>Proteus vulgaris</i><br>(ATCC 13315)                                       | 4.28 | 0/10<br>0/10 |
| <i>Proteus vulgaris</i><br>(ATCC 9920)  | 5.09 | 0/10<br>0/10 |
| <i>Pseudomonas aeruginosa</i> (Tetracycline Resistant)<br>(ATCC 27853)        | 6.54 | 0/10<br>0/10 |
| <i>Pseudomonas cepacia</i><br>(ATCC 25416)                                    | 6.21 | 0/10<br>0/10 |
| <i>Salmonella enterica</i><br>(ATCC 23564)                                    | 4.96 | 0/10<br>0/10 |
| <i>Salmonella enterica</i> serotype <i>pullorum</i><br>(ATCC 19945)           | 5.85 | 0/10<br>0/10 |
| <i>Salmonella enteritidis</i><br>(ATCC 4931)                                  | 5.11 | 0/10<br>0/10 |
| <i>Salmonella typhi</i><br>(ATCC 6539)  | 6.92 | 0/10<br>0/10 |
| <i>Salmonella typhimurium</i><br>(ATCC 23564)                                 | 5.75 | 0/10<br>0/10 |
| <i>Serratia marcescens</i><br>(ATCC 14756)                                    | 6.79 | 0/10<br>0/10 |
| <i>Serratia marcescens</i><br>(ATCC 9103)                                     | 6.78 | 0/10<br>0/10 |



|  |      |                |
|--|------|----------------|
| <i>Shigella flexneri</i><br>(ATCC 12022)                               | 4.41 | 0/10<br>0/10   |
| <i>Shigella flexneri</i><br>(ATCC 9380)                                | 6.30 | 0/10<br>0/10   |
| <i>Shigella sonnei</i><br>(ATCC 25931)                                 | 6.02 | 0/10<br>0/10   |
| <i>Staphylococcus aureus</i><br>(ATCC 14154)                           | 5.96 | 0/10<br>0/10   |
| <i>Staphylococcus aureus</i><br>(ATCC 25923)                           | 5.82 | 0/10<br>0/10   |
| <i>Staphylococcus aureus</i> (CA-MRSA)<br>(Genotype USA 400)           | 6.80 | 0/10<br>0/10   |
| <i>Staphylococcus aureus</i> (CA-MRSA)<br>(Genotype USA 300)           | 5.01 | 0/10<br>0/10   |
| <i>Staphylococcus aureus</i><br>(ATCC 33586)                           | 4.86 | 0/10<br>0/10   |
| <i>Staphylococcus aureus</i> (MRSA)<br>(ATCC 33592)                    | 6.73 | 0/10<br>0/10   |
| <i>Staphylococcus aureus</i> (VISA)<br>(HIP 5836)                      | 6.51 | 0/10<br>0/10   |
| <i>Staphylococcus epidermidis</i><br>(ATCC 14990)                      | 6.19 | 0/10<br>0/10   |
| <i>Staphylococcus epidermidis</i> (MDR)<br>(ATCC 51625)                | 5.93 | 0/10<br>0/10   |
| <i>Staphylococcus haemolyticus</i><br>(ATCC 29970)                     | 5.98 | 0/10<br>0/10   |
| <i>Streptococcus agalactiae</i><br>(ATCC 13813)                        | 6.75 | 0/10<br>0/10   |
| <i>Streptococcus mutans</i><br>(ATCC 25175)                            | 4.11 | 0/10<br>0/10   |
| <i>Streptococcus pneumoniae</i> (Penicillin Resistant)<br>(ATCC 51915) | 4.98 | 0/10<br>0/10   |
| <i>Streptococcus pyogenes</i><br>(ATCC 19615)                          | 4.67 | 0/10<br>0/10   |
| <i>Vibrio cholera</i><br>(ATCC 11623)                                  | 6.00 | 0/10<br>0/10   |
| <i>Yersinia enterocolitica</i><br>(ATCC 23715)                         | 7.08 | 0/10<br>0/10   |
| <i>Chlamydia psittaci</i> *<br>(VR-125)                                | 7.25 | ≥6.75<br>≥6.75 |

\*Note – *Chlamydia psittaci* evaluated by ASTM E1053. Results shown are in Log<sub>10</sub> bacterial reduction.



**VIRUCIDAL PERFORMANCE:**

This product kills the following viruses in 10 minutes at 2 oz. per gal. of 400 ppm hard water (660 ppm active) and 5% soil on hard, non-porous surfaces:

| Organism  | Virus Population (Log <sub>10</sub> ) | Log Reduction (Log <sub>10</sub> ) |
|---|---------------------------------------|------------------------------------|
| Avian Influenza A Virus (H5N1)<br>(CDC 2006719965)                              | 5.60                                  | ≥3.50<br>≥3.50                     |
| Avian Influenza A Virus (H3N2)<br>(VR-2072)                                     | 4.75                                  | ≥4.25<br>≥4.25<br>≥4.25            |
| Cytomegalovirus<br>(AD-169)   | 5.10                                  | ≥3.00<br>≥3.00                     |
| Coronavirus (SARS-associated)<br>(CDC 200300592)                                | 6.10                                  | ≥4.00<br>≥4.00                     |
| Hantavirus (PHV)  | 5.00                                  | ≥3.50<br>≥3.50                     |
| Hepatitis B Virus (HBV)<br>(Duck Hepatitis B Virus)                             | 4.79<br>4.79                          | 4.79<br>4.79<br>4.79               |
| Hepatitis C Virus (HCV)<br>(Bovine Viral Diarrhea Virus)                        | 5.88<br>5.93                          | 5.88<br>5.88<br>5.93               |
| Herpes Simplex Type 1 Virus<br>(VR-733)   | 5.50                                  | ≥5.00<br>≥5.00                     |
| Herpes Simplex Type 2 Virus<br>(VR-734)   | 6.00                                  | ≥5.50<br>≥5.50                     |
| Human Coronavirus<br>(VR-740)   | 4.50                                  | ≥4.00<br>≥4.00                     |
| Human Immunodeficiency Virus Type 1***<br>(AIDS Virus) (HTLV-III <sub>B</sub> ) | 5.00                                  | ≥4.50<br>≥4.50                     |
| Influenza A Virus (H1N1)<br>(Strain A/PR/8/34)                                  | 5.60                                  | ≥3.50<br>≥3.50                     |
| Influenza A Virus (H3N2)<br>(VR-544)  | 6.50                                  | ≥6.00<br>≥6.00                     |
| Norovirus<br>(ATCC VR-782)  | 5.89                                  | 4.39<br>3.92                       |
| Respiratory Syncytial Virus<br>(VR-26)  | 4.50                                  | ≥4.00<br>≥4.00                     |
| SARS-CoV-2 (COVID-19 virus) (2019-nCoV)***<br>(USA-WA1/2020)                    | 5.75                                  | ≥5.25<br>≥5.00<br>≥5.25            |
| Vaccinia Virus<br>(VR-119)  | 6.75                                  | ≥6.25<br>≥6.25                     |

\*\*\* Indicates a 2-minute contact time is required for this claim.



**ANIMAL PREMISE VIRUCIDAL PERFORMANCE:**

This product kills the following viruses in 10 minutes at 2 oz. per gal. of 400 ppm hard water (660 ppm active) and 5% soil on hard, non-porous surfaces:

| Organism  | Virus Population (Log <sub>10</sub> ) | Log Reduction (Log <sub>10</sub> ) |
|---|---------------------------------------|------------------------------------|
| Avian Infectious Bronchitis Virus (Strain Beaudette IB42) | 6.42                                  | ≥5.92<br>≥5.92                     |
| Avian Influenza A Virus (H5N1) (CDC 2006719965)           | 5.60                                  | ≥3.50<br>≥3.50                     |
| Avian Influenza A Virus (H3N2) (VR-2072)                  | 4.75                                  | ≥4.25<br>≥4.25<br>≥4.25            |
| Canine Coronavirus (VR-809)                               | 4.50                                  | ≥4.00<br>≥4.00                     |
| Canine Distemper Virus (VR-128)                           | 6.25                                  | ≥5.75<br>≥5.75                     |
| Canine Influenza Virus (H3N8) (Cornell University)        | 6.00                                  | ≥5.50<br>≥5.50                     |
| Feline Calicivirus (VR-782)                               | 5.89                                  | 4.39<br>3.92                       |
| Feline Picornavirus (VR-649)                              | 4.50                                  | ≥4.00<br>≥4.00                     |
| Infectious Bovine Rhinotracheitis Virus (VR-188)          | 4.50                                  | ≥4.00<br>≥4.00                     |
| Pseudorabies Virus (VR-135)                               | 6.25                                  | ≥5.75<br>≥5.75                     |
| Swine Influenza A Virus (H1N1) (Strain A/Swine/1976/31)   | 5.35                                  | ≥3.25<br>≥3.25                     |
| Transmissible Gastroenteritis Virus (TGE)                 | 4.75                                  | ≥4.25<br>≥4.25                     |



**NON-FOOD CONTACT SANITIZING PERFORMANCE:**

This product is an effective one-step sanitizer in 3 minutes at 2 oz. per gal. of 400 ppm hard water (660 ppm active) and 5% soil on hard, non-porous surfaces:

| Organism                                    | Average Population (Log <sub>10</sub> ) | Log Reduction (Log <sub>10</sub> ) |
|---|---|------------------------------------|
| <i>Klebsiella pneumonia</i><br>(ATCC 4352)  | 6.04                                    | >4.56                              |
|   |   | >4.17                              |
|   |   | >4.56                              |
| <i>Staphylococcus aureus</i><br>(ATCC 6538) | 6.69                                    | >5.21                              |
|   |   | >5.21                              |
|   |   | >5.21                              |

**MILDEWSTATIC PERFORMANCE:**

This product controls the following mold at 2 oz. per gal. of 400 ppm hard water (660 ppm active) and 5% soil on hard, non-porous surfaces for up to 7 days:

| Organism                                 | Tile | Untreated (% Covered) | 7 days Post Treatment (% Covered) |
|--|------|-----------------------|-----------------------------------|
| <i>Aspergillus niger</i><br>(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%                                |

**FUNGICIDAL PERFORMANCE:** This product kills the following fungi in 10 minutes at 2 oz. per gal. of 400 ppm hard water (660 ppm active) and 5% soil on hard, non-porous surfaces:

| Organism  | Carrier Population (Log <sub>10</sub> ) | # Positive Carriers |
|---|---|---------------------|
| <i>Candida albicans</i><br>(ATCC 10231)           | 5.75                                    | 0/10<br>0/10        |
| <i>Trichophyton mentagrophytes</i><br>(ATCC 9533) | 4.78                                    | 0/10<br>0/10        |