



Representative Microorganisms Tested A Partial Compendium

The Tile Doctor Shield Program is based on a unique antimicrobial technology which effectively controls a broad spectrum of bacteria, fungi, algae and yeasts on a wide variety of treated substrates. The antimicrobial active is registered with the U.S. Environmental Protection Agency and comparable regulatory bodies around the world. The antimicrobial has been used safely and effectively for more than thirty years.

This sheet has been prepared in response to numerous requests for a "list" of microorganisms against which the technology is effective. The list shows specific organisms that have been tested against the technology. They were selected to provide a test spectrum that is representative of all significant types and varieties of microorganisms.

These data are provided solely to assist you in understanding the capabilities of the technology and are not a warranty. Laboratory testing is performed in a controlled environment and may or may not be representative of real world conditions. Effectiveness against an organism should not be interpreted as eliminating, controlling, minimizing or otherwise affecting health conditions which may be associated with specific organisms.

Bacteria

<i>Acinetobacter calcoaceticus</i> ₁	<i>Mycobacterium tuberculosis</i>
<i>Bacillus cereus</i>	<i>Propionibacterium acnes</i>
<i>Bacillus subtilis</i>	<i>Proteus mirabillis</i>
<i>Brucella abortus</i>	<i>Proteus mirabillis</i> ₁
<i>Brucella cania</i>	<i>Proteus vulgaris</i>
<i>Brucella suis</i>	<i>Pseudomonas aeruginosa</i>
<i>Campylobacter jejuni</i>	<i>Pseudomonas aeruginosa PDR-10</i>
<i>Citrobacter diversus</i> ₁	<i>Pseudomonas aeruginosa</i> ₁
<i>Clostridium perfringens</i>	<i>Pseudomonas cepacia</i>
<i>Corynebacterium bovis</i>	<i>Pseudomonas fluorescens</i>
<i>Enterobacter agglomerans</i> ₁	<i>Salmonella choleraesuis</i>
<i>Escherichia coli</i> ATCC 23266	<i>Salmonella typhosa</i>
<i>Escherichia coli</i> ₁	<i>Shigella dysenteriae</i>
<i>Haemophilus influenzae</i>	<i>Staphylococcus aureus</i> (non-pigmented) ₁
<i>Haemophilus suis</i>	<i>Staphylococcus aureus</i> (pigmented) ₁
<i>Klebsiella pneumoniae</i> ATCC 4352	<i>Staphylococcus epidermidis</i> ₁
<i>Lactobacillus casei</i>	<i>Streptococcus faecalis</i>
<i>Leuconostoc lactis</i>	<i>Streptococcus mutans</i>
<i>Listeria monocytogenes</i>	<i>Xanthomonas campestris</i>
<i>Micrococcus sp.</i>	
<i>Mycobacterium smegmatis</i>	

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Fungi

<i>Aerobasidium pullulans</i>	<i>Penicillium albicans</i>
<i>Aspergillus flavus</i>	<i>Penicillium chrysogenum</i>
<i>Aspergillus fumigatus</i>	<i>Penicillium citrinum</i>
<i>Aspergillus niger</i>	<i>Penicillium elegans</i>
<i>Aspergillus terreus</i>	<i>Penicillium funiculosum</i>
<i>Aspergillus versicolor</i>	<i>Penicillium humicola</i>
<i>Chaetomium globosum</i>	<i>Penicillium notatum</i>
<i>Cladosporium herbarum</i>	<i>Penicillium variable</i>
<i>Fusarium nigrum</i>	<i>Rhizopus nigricans</i>
<i>Fusarium solani</i>	<i>Stachybotrys atra</i>
<i>Gliocladium roseum</i>	<i>Trichoderma flavus</i>
<i>Mucor sp.</i>	<i>Tricophyton interdigitalie</i>
<i>Oospora lactis</i>	<i>Tricophyton mentagrophytes</i>

Algae

<i>Anabaena cylindrica B-1446-1C</i>	<i>Pleurococcus sp. LB11</i>
<i>Chlorella vulgaris</i>	<i>Schenedesmus quadricauda</i>
<i>Gonium sp. LB 9c</i>	<i>Selenastrum gracile B-325</i>
<i>Oscillatoria borneti LB143</i>	<i>Volvox sp. LB 9</i>

Yeast

<i>Candida albicans</i> ¹	<i>Saccharomyces cerevisiae</i>
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Interpretive Note: Although the list of microorganisms against which a biocide has been shown to be effective is important for determining whether or not it may be used against specific types of organisms, it is only the starting point. Killing or controlling microorganisms (particularly in laboratory tests of the active ingredient) is relatively easy. Safety to man and the environment, cost effective use in real world situations, avoidance of creating resistant organisms, long term efficacy, potential damage to treated surfaces, and many other factors are normally much more important. Finally, the use of biocides is tightly regulated in the United States. They must be used in strict accordance with EPA accepted handling and use instructions and only for those end uses included in EPA accepted labeling. Misuse of a biocide may be dangerous. It is also illegal.

1. Clinical isolates