



mPale™ Antimicrobial with ÆGIS Microbe Shield® Technology

Representative Microorganisms Tested:  
A Partial Compendium

The mPale Microbe Shield Program is based on a unique antimicrobial technology which effectively controls a broad spectrum of bacteria, fungi, algae and yeast on a wide variety of treated substrates. The antimicrobial ingredient is registered with the U.S. Environmental Protection Agency (EPA) and comparable regulatory bodies around the world. The antimicrobial has been used safely and effectively since 1976.

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 which have been tested against the technology. They were selected to provide a test spectrum which is representative of all significant types and varieties of microorganisms.

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

Fungi

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

Algae

<i>Oscillatoria borneti</i>	<i>Schenedesmus quadricauda</i>
<i>Anabaena cylindrica</i>	<i>Gonium</i> sp.
<i>Selenastrum gracile</i>	<i>Volvox</i> sp.
<i>Pleurococcus</i> sp.	<i>Chlorella vulgarus</i>

Yeast

<i>Saccharomyces cerevisiae</i>	<i>Candida albicans</i>
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1. Clinical isolates

**Interpretive Note:** Although a 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 the creation of 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 strictly regulated in the United States. Biocides 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.