



ULTRA-FRESH ANTIMICROBIAL TECHNOLOGY

FREQUENTLY ASKED QUESTIONS

What is an antimicrobial treatment?

An antimicrobial treatment is applied to a material during manufacturing to make it resistant to the growth of unwanted bacteria and fungi that can cause staining, odor and product degradation. Such treatments are applied to:

1. Products that are exposed to severe environments such as outdoor gear and materials
2. Consumer goods such as socks, cutting boards or bathtubs to control bacteria that can cause odors and staining
3. Products to differentiate them from others on the market, such as phone cases, flooring, food storage containers, etc.

How does an Ultra-Fresh antimicrobial treatment work?

Ultra-Fresh antimicrobial treatments work at a cellular level to continually disrupt the growth and reproduction of microorganisms. The treatment attacks microbes, damaging the protein, cell membrane, DNA and internal systems of a microbe. Once infused into a product, Ultra-Fresh antimicrobial treatments will start to work as soon as a bacteria, mold or mildew come into contact with the treated surface.

What is the difference between the terms antimicrobial, antibacterial and antifungal?

Antimicrobial is a general term that refers to an agent or treatment that has either antibacterial or antifungal properties or both.

Antibacterial specifically refers to an agent or treatment that prevents the growth of bacteria.

Antifungal specifically refers to an agent or treatment that prevents the growth of mold and mildew.

What types of products can I treat with Ultra-Fresh?

Ultra-Fresh antimicrobial treatments have been formulated for use in a diverse range of products. View some common antimicrobial applications.

How is the antimicrobial treatment applied?

Ultra-Fresh antimicrobial products are applied using standard equipment and normal manufacturing processes. For textiles this could be exhaust, pad (foulard), spraying, coating or foaming. In polymers it could be coating, extrusion, injection molding etc.

Will the antimicrobial treatment affect the characteristics of a product?

Ultra-Fresh antimicrobial products are formulated to have minimal effect on the other properties of a treated surface. All antimicrobial treatments undergo thorough testing and technical validation to ensure optimal performance and aesthetic soundness.

How long does the antimicrobial treatment last?

Ultra-Fresh works closely with manufacturers to ensure that the correct treatment, procedures and level of Ultra-Fresh are applied so that it will last for the life of the treated article. Once the treatment is applied to a material during manufacturing, it will become a permanent part of the product for its useful lifetime.

How do Ultra-Fresh antimicrobial treatments differ from disinfectants?

Unlike disinfectants which provide a limited residual activity once the treated surface dries, integrated Ultra-Fresh antimicrobial treatments work to continuously inhibit the growth of bacteria and fungi throughout the entire life cycle of a product.



Are there any health or environmental concerns when using products that are treated Ultra-Fresh?

Ultra-Fresh antimicrobial products are registered with the United States Environmental Protection Agency (EPA) for their intended use. Registration is granted by the EPA only after chemical, toxicological and environmental fate data has been reviewed. The EPA requires this information under its mandate to protect the public and the environment. SDS information is available to our partners upon request.

What is antimicrobial resistance and will treating my product with Ultra-Fresh contribute to it?

Antimicrobial resistance usually occurs when organisms are continually exposed to lower than recommended levels of an antibiotic. The most common occurrences for such conditions are the use of antibiotics at low levels in animal feed to encourage the growth of the animal, taking less than the recommended amount of a prescription over time, or improper disposal of unused medication. These circumstances create conditions where a few bacteria may survive initial exposure, then offers an advantage for these organisms to survive over the general non-resistant population, i.e., better suited to survive an ongoing exposure.

The use of the antimicrobial additives present in Ultra-Fresh products should not result in the development of resistance to antibiotics for several reasons:

- As mentioned, antibiotics function by blocking a specific cellular function. For example, penicillin inhibits bacterial cell wall synthesis by binding and inactivating proteins specific to the transpeptidation reaction, preventing cross-linking within the cell wall. Antimicrobials that do not function in such a particular manner should not be at risk of inducing resistance to antibiotics
- The use of antimicrobials in a material such as a wall covering will not create the conditions necessary for the development of resistance, i.e., continual exposure of the same population of organisms to a low level of antimicrobial. Therefore, there is no selective advantage to an organism that might have developed a reduced susceptibility to an antibiotic versus the general population.
- A product such as Ultra-Fresh DW-30 has the added advantage of containing two different actives that function in entirely different manners (one works by interfering with the process of cell division, the second by preventing the transfer of nutrients into the cell). Therefore, any mutation limiting the sensitivity to one of the two actives would not affect the second active.

