

## Antimicrobial Material Preservatives Make the World Stronger

Communities across the United States and around the world are striving to reduce waste and extend the functionality and use of the products we rely on daily. Antimicrobial material preservatives help increase the durability of goods and prevent them from prematurely breaking down, reducing the need for replacement. By increasing the longevity of products, antimicrobials play a critical role in promoting sustainability and reducing waste.

## Antimicrobial Material Preservatives Help Prevent Odors and Deterioration of Fabrics and Textiles

Fabrics and textiles form the clothing, bed sheets, blankets, mattresses, and other products used to keep us outfitted, warm, and comfortable. Because we closely and physically interact with these items daily, they can be particularly vulnerable to odors, stains, and deterioration caused by attacking mold, bacteria, and fungi. For this reason, antimicrobial material preservatives are often used in the manufacture of fabrics and textiles to help protect the fabric and textile from destructive microbes. The antimicrobial preservative thus extends the durability and usefulness of these products. Without these preservatives, clothes and linens could become rancid with odors and stains and could quickly deteriorate.

## Applications across Textile and Fabric Products



### Clothing

Left unprotected, fabrics can become breeding grounds for bacteria or fungi that cause odors, stains, and premature deterioration of our garments, especially those intended for exercise, heavy labor, or used in damp environments. Antimicrobial material preservatives can prevent damaging microbes from infesting these products, particularly natural fibers like cotton, wool, or silk.



### Shoes

Like clothing, shoes can develop odors after a short time without antimicrobial material preservatives. Footwear is especially susceptible to microbial growth caused by moisture, dirt, and sweat, and untreated shoes can deteriorate quickly without antimicrobials. Common production materials such as leather, nylon, and cotton retain their form, appearance, and integrity much longer if treated with material preservatives.



### Bedding

Antimicrobials help to protect bedsheets, pillowcases, and blankets found in homes, hotels, and hospitals. These linens are often used daily on beds and furniture where we sleep, eat, drink, and lounge, sometimes with children and pets. As a result, bacteria can collect and spread, leading to fabrics that do not look or smell fresh. Antimicrobial material preservatives incorporated in the bedding materials help prevent this spoilage.



### Shower Curtains

Synthetic fabrics like plastics, rubber, and vinyl are also susceptible to microbial degradation, particularly mildew and mold. Shower curtains are constantly exposed to moisture, which often lingers long after use. The addition of antimicrobial material preservatives to materials used to produce products like these help to fend off this growth, thus reducing the frequency in which they must be replaced.

## Antimicrobial Benefits to Economic and Environmental Sustainability



Prevents deterioration and spoilage of textile and fabric products



Helps fabrics stay fresh and remain productive for an extended duration



Extends the life cycle of clothing, footwear, and linens



Reduces the need to replace and manufacture new textile products



Prevents the development of odors and stains in clothing and bedding



Prevents the growth of mold in products typically used in damp environments

