

Volume 8 No. 5**Silver Release[™] Silver and Copper Ion Carpet Treatment**

The use of silver and copper ion resins in textile coatings, including carpet because of its biocide, bacteria growth inhibiting, and odor-neutralizing properties is a relatively new practice. However, silver products have been used for centuries in the medical field and was one of the many items that could be found in doctor's treatment bags during the time when home visits by the family physician was a common practice. Today, naturally safe silver and copper ion treatments are used in a wide range of healthcare, industrial, and consumer products.

The use of silver, which is obtained as a by-product of copper, zinc, gold and mining, dates back to ancient Greece, where it was used as an infection preventative. In the 19th century, it was a common practice for sailors to place silver coins in barrels of water and wine because of its preservative properties. Silver water purification systems are still used by today's explorers, including astronauts onboard NASA Space Shuttle flights.

In 1920 the United States Food and Drug Administration approved silver solutions as an anti-bacterial agent. In medical treatments, early silver treatment included silver nitrate and silver sulfadiazine products. Today, the use of silver for medical treatments is an everyday practice in leading major hospitals throughout the U.S.

Until recently, modern-day antibiotics had largely usurped the use of silver in the medical field. However, there is growing interest in the use of silver again in the medical field because of its broad-spectrum antibiotic properties. Silver's antiseptic properties still make it useful in the prevention of infections caused by antibiotic-resistant microorganisms such as MSRA, as well as in the treatment of Streptococcus, Salmonella, Legionella, Norwalk, and H5N1. It is also used as a bactericide to treat the life-threatening infection cellulites, as part of wound dressings and wound packing strips, in urinary bladder catheters, medical facemasks, in foot powders, and in topical creams to prevent infection and reduce scarring associated with burns. Other current uses of silver today include copper/silver water ionization treatments, electrical contacts and conductors, mirror and optic products, in photographic films and in clothing. Some countries allow for the use of silver as a food additive.

When used in carpet, negatively charged silver and copper ions attract, hold and neutralize positively charged malodor ions associated with bacteria common to the presence of mold and mildew. Silver ions inhibit bacterial growth. Copper ions inhibit fungal growth. As a textile additive, non-leaching silver and copper ion treatments have demonstrated to provide an environmentally friendly, natural and effective combination in antimicrobial protection.

The microbial and fungal inhibiting protection provided by silver and copper ions is derived as a result of its ability to enter the walls of microorganisms and disrupt vital cell functions necessary to promote microbial growth. By doing this, they destroy bacteria, fungi and microbes upon contact with these growths, and help prevent the onset and continuation of odors associated with their presence.

The ever-expanding use of silver and copper ions to inhibit mold and bacteria growth holds significant potential. Because of its versatility, silver and copper ions are suitable for a wide range of applications, included, but not limited to various use in the health and medical field, carpet, wall coverings, automobile interiors, air and water filtration systems, clothing, footwear, linen and home furnishings. By reducing destructive odor and stain-causing microbial growths, silver and copper ions help extend the useful life cycle of a product. Silver and copper ions can either be integrated into textile yarns or applied as a separate topical coating. Because soil inhibits the functional properties of silver and copper ions, textiles and other material surfaces must be properly and systematically maintained in order to benefit from the anti-microbial protection these treatments offer.

Beaulieu's Silver Release™ silver and copper ion additive used in our line of Healthy Homes™ carpets is added to these carpets to help keep them naturally fresh and free from mold, mildew, and odor-causing bacteria. Another significant feature of Silver Release™ is obtained by its durability. Although silver and copper ion additives are known for their steadfastness when used as a topically applied anti-microbial, anti-fungal after treatment, because non-polluting and safe Silver Release™ utilizes a built-in technology, its effectiveness in our line of Healthy Home™ carpets is not degraded by traffic and routine maintenance. Our studies revealed that the wash fastness durability of Silver Release™ continued to maintain a consistently lower bio-burden after repeated deep carpet cleaning cycles that numbered well beyond the normal and expected deep cleaning cycles typically required during the useful life cycle of most carpets.

Because most people today spend approximately 90% of their time indoors, today's consumers are concerned about maintaining a healthy indoor environment that radiates a sense of physical, mental and social well being. Silver Release™ used in our line of Healthy Homes™ carpets is designed to provide very attractive, healthy and inviting carpets that enhance the environmental quality of the home by helping to keep it in a clean, sanitary state.