

SilvaClean® Hospitality FAQs

What are the benefits of using SilvaClean® in hotels?

In addition to killing and providing constant protection against harmful pathogens, SilvaClean® improves the hygiene of fabrics and the surrounding environment. As a natural antimicrobial, SilvaClean is a sustainable, green technology. And, by effectively eliminating odors, it keeps guest rooms smelling clean. SilvaClean also reduces static, eliminating the need for dryer sheets. In addition, SilvaClean is color-safe for textiles and has been proven to extend the life of fabrics.

Do hotels need to have on-premises laundry facilities to install SilvaClean?

SilvaClean can be installed at on-premises laundry facilities or commercial laundry facilities. Applied Silver can work with any commercial laundry facility to implement the SilvaClean system. The commercial laundry facility may have multiple customers, but they can selectively apply the SilvaClean product only to those who opt for the service. Throughout the United States, the SilvaClean system is currently implemented in commercial laundry facilities, which service multiple healthcare and hospitality properties.

What role do textiles play in the spread of infections?

Hospitality textiles such as bed linens, duvet covers, towels, robes, cleaning mops, and curtains can become contaminated with pathogens in four ways:

1. *Microbial shedding from guests and staff personnel within the hospitality venue (hotel, resort, cruise ship)*
2. *Contact of textiles with humans and other contaminated surfaces during storage and handling*
3. *Contact of textiles with humans and other surfaces within the laundry facility and during transportation*
4. *Improper reprocessing of textiles*

The guest represents a primary epicenter of microbial spread with the textiles being the barrier between the guest and the entire hospitality environment. Similarly, housekeeping and other staff can also carry and shed pathogenic microbes onto clothing and other surfaces.

What scientific data exists about textile contamination?

Textiles in the hospitality environment become easily contaminated with bacteria, mold, and mildew from the environment. A recent publication has demonstrated high viral load shedding in presymptomatic coronavirus patients on sheets, duvet covers, pillow covers, and towels in hotels (Jiang et. al., Detection of Severe Acute Respiratory Syndrome Coronavirus 2 RNA on Surfaces in Quarantine Rooms. Emerging Infectious Diseases., 2020, Volume 26, Number 9).

What is the impact of SilvaClean treatment on textiles?

It is widely accepted that textiles are surfaces capable of harboring microorganisms for extended periods of time. This occurrence results in two potential outcomes that SilvaClean has a direct impact on:

1. **Spread of microorganisms from this source to other surfaces.** *These microorganisms, when pathogenic or infectious in nature, can potentially lead to community acquired infections. As a critical measure to close the gap around hygiene and cleanliness protocols, SilvaClean aids in controlling environmental sources of microbial contamination.*
2. **Deterioration of fabric over time due to metabolic activities of the microorganisms.** *SilvaClean reduces the amount of stain- and odor-causing bacteria, mold, and mildew on the fabrics, protecting them and extending the life of use. And, adding silver ions with a positive charge to fabrics reduces the potential for static.*



Is SilvaClean approved by the EPA?

SilvaClean is EPA-approved and registered. It is the only residual antimicrobial solution for soft surfaces/linens with both public health claims (kills disease-causing pathogens) and non-public health claims (protects fabrics from growth of stain and odor causing bacteria, mold, and mildew) that meet the EPA's stringent efficacy and safety standards.

See approved label on EPA website:

https://www3.epa.gov/pesticides/chem_search/ppls/090335-00001-20190308.pdf

What type of antimicrobial is SilvaClean?

SilvaClean is a broad-spectrum antimicrobial with antibacterial, antiviral, and antifungal capabilities.

Does SilvaClean work on viruses?

Independent 3rd party academic laboratories recently completed SilvaClean efficacy studies against Norovirus and SARS-CoV-2. Applied Silver is working on expedited EPA approval for antiviral claims against SARS-CoV2 and Norovirus. The data packet has been submitted and the EPA is fast-tracking approvals for residual efficacy products of which SilvaClean is the only one in the category for soft surfaces. The technical data sets for Norovirus and SARS-COV-2 are included in this data packet. Key points are below:

1. *SilvaClean kills 99.9% of SARS-CoV-2 within 6 hours and 87.2 % within 2 hours*
 - a. *Independent studies done by the Laboratory of Infectious Diseases, University of South Alabama (Dr. Jin Kim and Dr. Jonathan Rayner)*
2. *SilvaClean kills 99.9% of norovirus within 2 hours*
 - a. *Independent studies done by North Carolina State University (Dr. Lee-Ann Jaykus and Dr. Rebecca Goulter)*

Does SilvaClean change the way a fabric looks or feels?

SilvaClean antimicrobial treatment does not change the way fabric looks, nor does it change the way it feels. In fact, SilvaClean will improve the cleanliness of the fabric and reduce any odor attributed to microorganisms.

Can it be applied on all surfaces or just linens?

SilvaClean can be applied to all launderable soft surfaces. Essentially, any item that can be laundered, can be treated with SilvaClean. In fact, SilvaClean can be particularly helpful in reducing pathogen loads on items that are not as frequently laundered, such as curtains, shower curtains, and comforters. SilvaClean is safe for use on all fabric colors and easily applied to a wide range of textiles, including blankets, robes, towels, pillowcases, table linens, mops, curtains, uniforms, and PPE.

Is there a risk of an allergic reaction to the silver used in SilvaClean?

SilvaClean is composed of pure ionic silver, which does not cause allergic reactions. Allergic reactions that occur are from silver alloy, which is silver mixed with nickel or other metal(s). Customers have been using SilvaClean for multiple years in healthcare, including immunocompromised and pediatric patients with sensitive skin, with no allergic reactions.

How long does SilvaClean last after it is applied?

For your regularly laundered items, SilvaClean is dosed during every wash, so your linens are always protected. The product is seamlessly added to your normal laundry rinse cycle and treated linens maintain their high level of efficacy between washes. For items that are in storage, for example excess or safety stock, SilvaClean's efficacy is very stable. Research shows that linens treated with SilvaClean and placed in storage have shown efficacious levels of SilvaClean for over four years after treatment.

How does SilvaClean compare to other antimicrobial textiles?

Antimicrobial textiles typically have silver or copper threads woven into the textile. This presents multiple disadvantages:

1. **High cost of implementation:** New inventory is required to be purchased, with average threaded linen cost being up to 2-3X higher than standard linen. Additionally, maintenance cost is also high. Copper/silver threaded linens are efficacious for only a limited number of uses after which a loss of efficacy is observed (e.g. 30 laundry cycles) and the linens have to be routinely replaced. Special inventory will also have to be purchased to replace lost linens. SilvaClean can be applied to all existing linen inventory, and re-applied each time the linen is laundered, making it a cost-effective solution that is easy to implement.
2. **Reduced efficiency:** For threaded antimicrobial textiles to work efficiently, microbes are required to come in contact with the silver ions as they are released from the threads. This process requires moisture and is uncontrolled, making the antimicrobial killing action less efficient. In contrast, SilvaClean is delivered as pure ionic silver onto textiles, and is active under wet or dry conditions and provides a highly efficient killing action against microbes.
3. **Loss of efficacy over time:** The re-laundering process of threaded textiles results in a loss of the metal threads over time, resulting in a reduction in efficacy. In contrast, SilvaClean is applied during each re-laundering step, so efficacy levels are always consistently maintained.
4. **Discoloration:** Copper-threaded textiles in particular undergo visible discoloration with repeated washes. The rate of discoloration varies with individual pieces of linens.

How does SilvaClean compare to other cleaning and infection control technologies?

SilvaClean differs from traditional disinfectants (e.g., disinfecting laundry detergents, disinfectants used in electrostatic sprayers, etc.) in three primary aspects.

1. Traditional disinfectants and detergents provide a one-time kill of germs – after application and typically a required contact time of 5-7 minutes, they stop working. In contrast, SilvaClean continuously kills.
2. Traditional disinfectants are often corrosive and cause surfaces to breakdown with high use and repeated application. In contrast, ionic silver from SilvaClean remains on fabrics throughout use, with no adverse effects.
3. Traditional laundry processes use high temperature and harsh chemicals, resulting in linen breakdown over time. Inclusion of SilvaClean helps extend the lifespan on linens.

What are the potential environmental impacts of SilvaClean?

SilvaClean is the only EPA-approved residual antimicrobial solution for soft-surfaces to address post-laundry contamination. As part of the EPA's due diligence, they carefully look at all aspects of SilvaClean/silver, including effluent data. The silver run-off levels for businesses and properties that use SilvaClean are well below the alert limits, set by departments of public works. Any residual silver ions in the wastewater are at levels significantly below the EPA's and the city Publicly Owned Treatment Works (POTW) requirements.

How does SilvaClean impact downstream water?

SilvaClean has minimal impact on downstream water. Businesses and properties using SilvaClean are regularly audited by the EPA without issue, because SilvaClean is composed of pure silver, and your linens only require a small amount of SilvaClean to reach desired levels of efficacy.

Is SilvaClean compatible with all laundry detergents and formulas?

Yes, SilvaClean is compatible with all brands of detergent, bleach, sours, softeners, breaks, etc.



What is the return on investment in the hospitality industry?

Applied Silver market research data (October 2020) indicates that guests are more likely to stay in hotels that offer antimicrobial technology, a potential pathway for increasing occupancy rates. Furthermore, textiles treated with SilvaClean provide residual control of pathogens, meaning the textiles are self-cleaning. Paired with a hard-surface program, this holistic approach allows rooms to be turned over promptly with the opportunity to save on labor and water, with less laundering required.

This all sounds great, but what is the cost?

The cost of SilvaClean is comparable to current hard surface disinfectants currently being used. SilvaClean is [recognized by the EPA as a practical and inexpensive way to aid infection control programs](#). (see Marketing Claims on SilvaClean EPA product label 90335-1).