

Pandemics and public health crises present the opportunity to reevaluate the products we use and processes we practice in striving toward safer environments. While cleaning and maintenance have always been important in maintaining healthy and safe spaces, it's more vital than ever to review these fundamental actions and make improvements where possible.

Our position is that thorough cleaning and routine maintenance, in addition to handwashing, is the best way to prevent the spread of any disease. Due to the lack of measurable, documented results in real-world testing coupled with proven environmental concerns, we do not recommend antimicrobial additives to help prevent the spread of bacteria or viruses (see more [here](#)) and we believe there are many factors that contribute to product performance.

While disinfectants have been proven effective in preventing the transmission of COVID-19, research also shows that the use of mild soap and water have been proven equally effective in disabling the virus by destroying its outer lipid layer. Research has also shown that, in addition to proper cleaning and maintenance, airflow, personal hygiene (i.e. hand washing and mask wearing) and increased social distancing measures may have an equal or even greater impact on the spread of the virus.

It is natural to assume that the stronger concentration and greater quantity one uses of a cleaner or disinfectant, the more effective it will be. However, because the liberal and regular use of disinfectants can also compromise indoor air quality, which puts those with existing and underlying health issues at greater risk for contracting COVID-19, it is important to use disinfectants only when necessary. Disinfection is most often necessary for high-touch surfaces such as door handles and light switches but if it's deemed necessary for textiles, a variety of disinfectants can be used on a growing number of our textiles.

This document outlines proper maintenance protocols for most of our textiles.

Definitions

Cleaning involves the removal of visible soil from objects and surfaces using water with detergents or enzymatic products. A form of decontamination, cleaning renders a surface safe to handle or use by removing organic matter, salts, and visible soil, all of which interfere with microbial inactivation.

Disinfecting refers to killing a high percentage of the bacteria on a surface or rendering them incapable of reproducing. Disinfecting is less extreme than sterilization, which is a physical and/or chemical process that kills all types of life. According to the Centers for Disease Control and Prevention, disinfection is the most extreme process necessary to kill the COVID-19 virus.

It is important to note that disinfection and sterilization are only effective on surfaces that have been cleaned. It is critical to rinse cleaning agents and disinfectants after use as their residue might negatively impact the aesthetics and performance of the textile and may cause the textile to degrade.

Cleaning Codes

Prior to cleaning, it is important to identify the cleaning code assigned to your product. Our most common cleaning codes across product categories are below:

W - Clean with water-based cleanser.

S - Clean with mild, water free dry-cleaning solvent.

W/S - Clean with water-based cleanser or mild, water-free dry-cleaning solvent.

W + Steam - Clean with water-based cleanser or steam clean.

W/B - Clean with water-based cleanser or diluted household bleach.

W/S/B - Clean with water-based cleanser; mild, water-free dry-cleaning solvent, or diluted household bleach.

W/B + Steam - Clean with water-based cleanser, diluted household bleach, or steam clean.

As mentioned, research shows that the regular use of mild soap and water has proven effective in destroying the COVID-19 virus. For products whose cleaning codes contain a 'W,' such as W, W/S, and W + Steam, a mild soap like Dawn®, Ivory®, or Palmolive® can be used. We always recommend testing an inconspicuous area of the textile and avoiding spot-cleaning when possible as this might lead to residual water marks.

Application of solvent-based cleansers have a similar effect to soap and water, and these are compatible with products whose cleaning codes contain a 'S' such as S, W/S, and W/S/B.

Products with cleaning code W/B, W/S/B, or W/B + Steam can be treated with common disinfectants, such as diluted household bleach and other quaternary cleaners. The disinfectants most broadly approved on our textiles can be found on maharam.com under the Cleaners filter. These disinfectants have been cross-referenced with the EPA's list of COVID-19-approved disinfectants resulting in an easy-to-reference [matrix](#) of approved products.

We continue to test additional cleaners and disinfectants on our textiles. For the most up-to-date information, or to inquire about a specific cleaner or disinfectant, contact your Maharam sales representative.

Types of Cleaners

Solvent-Based

A solvent is a chemical compound that can be used to dissolve, soften, melt, or extract another compound. Solvents work by solvating the soil—breaking it down into a solution—which has the general advantage of quick activity so the soil dissolves and flows off the substrate. Solvents are divided into two main categories: organic and inorganic. Organic solvents are commonly used to lift stains, dry clean fabrics, dissolve paint, or remove glue. Inorganic solvents are rarely used outside professional research facilities. As a portion of all solvents evaporate during use, solvent-based cleaning materials result in large amounts of VOC emissions. Examples of solvent-based cleaner are Fantastik®, Naptha®, or mineral spirits.

Water-Based

Water-based cleaners use water as their main ingredient however many water-based cleaners can contain solvents. Water-based cleaners are non-flammable, offer low toxicity, and have little to no VOC's. Because water-based cleaners work differently than solvents, there is a common perception that water performs adversely to solvents when in fact, water can be just as effective, depending on the stain. Dawn®, Ivory® and Palmolive® are good examples of water-based cleansers.

Types of Disinfectants

Alcohol-Based

Alcohol, usually ethanol or isopropyl is sometimes used as a disinfectant. Alcohol is non-corrosive but has limited residual activity due to evaporation. A mixture of 70% ethanol or isopropyl diluted in water is effective against a wide spectrum of bacteria. Higher concentration mixes have been proven to deactivate viruses such as HIV, Hepatitis B and Hepatitis C. Common branded examples of alcohol-based disinfectants are CaviWipes® and Lysol®. Alcohol-based disinfectants are suitable for use on wool textiles.

Chlorine-Based

Chlorine is the basic chemical component of most bleaches. Bleaches have a broad spectrum of antimicrobial activity, do not leave toxic residues, are effective regardless of water quality, and are inexpensive and fast-acting. However, bleach presents specific hazards in that concentrations as low as .04% have been shown to compromise indoor air quality and elicit positive skin contact sensitivity responses in clinically sensitized individuals.

Phenol-Based

Phenol is an aromatic compound found in many household and hospital-grade cleaners (also known as phenolic cleaners). A by-product of the petroleum industry, phenol and its vapors are corrosive to the eyes, skin, and respiratory tract after repeated or prolonged contact. Engineered for hard surfaces, phenolic cleaners are extremely abrasive and their impact on upholstery textiles varies greatly by brand. Some phenol-based disinfectants have been classified as carcinogens. Examples of phenol-based disinfectants are Wex-cide®, ProSpray®, and Birex®.

Quaternary Amine-Based

The salts of quaternary ammonium cations, also known as "quats," are used as disinfectants, surfactants, fabric softeners, and antistatic agents. Engineered for hard surfaces, quats are extremely abrasive and their impact on upholstery textiles varies greatly by brand. Examples of quaternary amine-based disinfectants are EnviroSafe®, Coverage HB®, Ascend®, and Cavicide® and Virex®.

UV Light

UV light technology has recently been suggested as an alternative to liquid disinfectants. Though research is still emerging on the effects of UV light on disinfecting in general (and more specifically in terms of COVID-19) our solution-dyed and indoor/outdoor textiles achieve high lightfastness results and can be suggested as viable options when UV light disinfection is necessary.

For more information on chemical disinfectants, please reference the Center for Disease Control and Prevention's [Guideline for Disinfection and Sterilization in Healthcare Facilities](#).

Proper Maintenance

For proper maintenance of all textiles:

- Verify that the cleaner and/or disinfectant is approved for use on the specified textile.
- Remove all dirt, soil, or other impurities from the surface before disinfecting.
- Always pre-test any cleaner or disinfectant in an inconspicuous area before application.
- Follow the manufacturer's recommended protocol for application of the cleaner. Do not allow the solution to puddle on the surface of the textile.
- After cleaning or disinfecting, rinse repeatedly with cool, clean water to ensure complete removal of all cleaning solution residue. Left over residue can discolor or dry out both woven and nonwoven textiles and can cause damage to the textile.

To view product-specific maintenance guidelines, visit maharam.com or contact your sales representative for additional information.