

Carnegie

MAINTENANCE MANUAL FOR UPHOLSTERY AND UPHOLSTERED WALLS

TECHNICAL SERVICES DEPARTMENT

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INTRODUCTION

This manual has been designed to provide an overview of our cleaning instructions, and stain removal guides for the ongoing maintenance of our fabrics.

Additionally, the concept of “green cleaning” has been gaining momentum in the marketplace. However, there currently is no standard definition of the term that is agreed upon across the industry, leaving it open to misinterpretation or even abuse by marketing hype. Buyers are generally on their own to deduce its meaning and significance. As a result, many assume that green cleaning is solely an issue of chemistry. However, Carnegie Fabrics believes that green cleaning encompasses a number of other aspects as well, such as indoor air quality, end of life disposal, cleanliness, productivity, and safety.

The overall goal of “green cleaning” is to protect the health and safety of a building’s occupants and workers without harming the environment. Regardless of definition, Carnegie Fabric’s goal is to provide products that have been designed from the start to be serviced through the use environmentally friendly cleaning methods and products as alternatives to many of the toxic products available on the market. It is important to seek out credible sources for specific products with third party certifications (Green Seal, Green Blue, Design for Environment, etc), and we are actively investigating environmentally friendlier alternatives to harmful cleaning solutions.

Basic Information

The cleaning and maintenance of upholstery fabrics are of great concern to designer and customers alike, and we have arranged this manual for easy reference. As such, we have outlined the keys steps needed for the proper care our fabrics:

- 1) Regular maintenance**
- 2) Basic Cleaning Code**
- 3) Care needed for specific fiber contents, topical finishes, etc.**
- 4) Miscellaneous sections covering stain and spots treatments**

Customers are encouraged to read the product specification for all reagents or products mentioned in this manual. The information is provided without warranty or inducement of any kind, including the implied warranties of suggested products and merchandise and their suitability for a particular use or purpose.

Please contact Carnegie Fabrics Technical Services team @ 516-678-6770 for additional information regarding the maintenance of our fabrics

ROUTINE MAINTANENCE

Regular care and proper maintenance will help prolong the long of your upholstery fabric. This is achieved by regular cleaning to prevent dirt build-up on the surface of the fabric. It extremely important to promptly treat all spots and stains as they occur.¹ We recommend the following basic principles:

- 1) Do not expose furniture to strong sunlight or extreme changes in temperature.
- 2) Vacuum the entire upholstered piece weekly to prevent dust from settling into the fibers
- 3) Rotate and turn cushions regularly to evenly distribute wear
- 4) Wipe up spills immediately. Do not let spills dry.
- 5) Check with the cleaning code of your fabric to determine whether to use a water-based or solvent- based solution for additional cleaning.
- 6) Blot! Do not rub! Use a clean, dry and very absorbent cloth

NEVER APPLY CLEANING SOLUTIONS TO VISIBLE AREAS OF YOUR UPHOLSTERY

ALWAYS PRETEST A SMALL HIDDEN AREA WITH THE RECOMMENDED CLEANING METHOD.

¹ Note: Stains should be treated immediately to avoid oxidation or the total hardening of the stain. One study confirms the detrimental effects of letting a stain age, when it could have easily been removed, it treated promptly. Stains left to age over 1 week more before increasingly difficult to remove. Stains should be treated immediately to avoid oxidation or the total hardening of the stain. Once the stain becomes insoluble, and can not be removed.

Standard Cleaning Codes

Cleaning codes are only applicable to the outside of the fabric. It is extremely important not to **over-wet the fabric**. Over wetting may damage the upholstery's filling materials.

Special finishes like Teflon, Nano-Tex Resists Spills® or topical flame retardant treatments, may modify a fabrics designated code.

- W-** Cleaning only with water-based shampoo or foam upholstery Cleaner²
 - Do not over saturate fabric
 - Do not use solvents
 - Pile fabrics may need brushing to restore its appearance
 - Always remove cushion to launder

- S-** Clean only with water-free solvent
 - Do not saturate
 - Do not use water
 - Always remove cushion to launder

- WS-** Clean with a mild detergent shampoo, foam or water-free solvents.
 - Do not saturate with fabrics
 - Pile fabric may need brushing to restore its appearance.
 - Always remove cushion to launder

- X-** Do not clean with either water or solvent based cleaner.
 - Use only vacuuming or light brushing

² Water-based cleaning agents are often sold as upholstery shampoo, concentrated liquids and dry compounds. „Simple Green" Carpet & Upholstery cleaner locally found throughout the US and Canada for a water-based solution

Spot and Stain Removal Basics

Cleaning clean up any spot, spill or stain as it occurs. The longer the stain sets, the more difficult it will be to remove.

- Water-Soluble (water-based stains), which include coffee, tea, beverage, urine, fruit juice and vomit.
- Solvent-Soluble (oil-based stains), which include oils, greases, tar, crayon, lipstick, shoe polish, butter.
- Combination Stains, Chocolate, gravy, mustard, grass stains

Treatment for Stain Removal

To remove water-soluble stains:

- You will first need to make a detergent solution. Mix 1 teaspoon of mild detergent of lukewarm water.
- Do not use bleach.
- Sponge the detergent mixture onto the water-soluble stain, and work the solution from the outer edges toward the center of the stain.
- Lather will form. Gently sponge off this lather with clear, cold water until all visible signs of the suds have disappeared.
- Hydrogen Oxide-based spot may be used directly from the container - just follow the directions on the bottle.
- NEVER use chemical color brighteners.
- Follow with a neutralizing rinse of cold water and vinegar (1 tablespoon vinegar to 1 pint of cold water)
- You may need to repeat this process until the stain is gone.

To remove solvent-soluble stains:

- Use solvent based cleaners. Also, Soy-based solvents / spotter or degreasers can be used as “Green” alternatives to replace Methyl Ethyl Ketone, Acetone, toluene, glycol ethers³.
- Apply the solvent to the stain by gently blotting with a cloth.
- NEVER pour a solvent directly from the container onto the fabric.
- Let solvent stand for 2-5 minutes (up to 10 minutes on tougher stains)

³ SoyClean (www.soyclean.biz) and Soy Technology LLC (www.soytek.com) offers a line of non-toxic soy based cleaners.

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- Solvents, if poured on the stain, may cause the backing to become loose.
 - After the solvent-soluble stain has been removed, follow with the detergent solution procedure outlined above.

To perform a neutralizing rinse:

- Mix 1 tablespoon of WHITE vinegar into 1 pint of cold water.
- Sponge this mixture lightly onto the affected area.
- The vinegar will neutralize detergent residue that may remain in the carpet or that may wick to the surface during the drying process.
- Blot as much of the moisture out of the area as possible by using absorbent white cloth toweling or plain paper towels.
- Finally, lay a dry white absorbent towel over the area and weight with a heavy object, at least overnight.
- After the area is dry, brush lightly to restore the normal pile for raised surface fabrics.

PRETEST: ALWAYS PRETEST A SMALL HIDDEN AREA WITH THE RECOMMENDED CLEANING METHOD.

Cleaning Fabrics in Healthcare settings

In the case of disinfectants and sanitizers, many find it difficult to locate natural substitutes that have been approved by the EPA. Therefore, most healthcare facilities still use currently available germicides. However, there are a few EPA approved hospital grade disinfectants on the market. For an example, Bio-Launch Strategies LLC has an EPA approved Non-toxic antimicrobial Disinfectant called **Bio-Guard Bacterial Disinfectant**(TM).⁴

Generally speaking, the use of an appropriate germicide when cleaning in the presence of certain fabrics is extremely important. In healthcare settings, there are five general categories of germicides used for cleaning:

1) PHENOLICS

Examples: Benzyl-4-chlorophenol, Amylphenol, Phenylphenol

Advantages and disadvantages: good general purpose disinfectants, not readily inactivated by organic matter, active against wide range of organisms (including mycobacteria), but not sporicidal.

2) HALOGENS

Examples: hypochlorites, bleach

Advantages and disadvantages: cheap, effective, act by release of free chlorine, active against viruses and therefore recommended for disinfection of equipment soiled with blood (because of HIV and hepatitis risk), but rapidly inactivated by organic material and corrosive to metals.

3) ALCOHOLS

Examples and usage: ethyl alcohol (ethanol), isopropyl alcohol (isopropanol).

Comments: good choice for skin disinfection and for cleaning surfaces, sometimes used in combination with iodine or chlorhexidine. Water must be present for bacterial killing. Isopropanol is preferred for skin and articles in contact with patient.

⁴ Bio Launch Strategies, LLC, Contact: Dean P. Erhardt Bio Launch Strategies LLC St. Peters, MO 63376 Phone 636.281.3711
questions@biolaunchstrategies.com

4) ALDEHYDES

Example: glutaraldehyde (brand names: Cidex[®], Sonacide[®], Sporidicin[®], Hospex[®], Omnicide[®], Metricide[®], Rapicide[®] and Wavicide[®].)

Advantages and disadvantages: kills vegetative organisms including mycobacteria slowly but effectively. More active, less toxic than formaldehyde, sporicidal (within 6 hours when fresh), nose, throat, and lung irritant⁵, used in alkaline solution which is stable 1-2 weeks, expensive, limited use (e.g., disinfection of endoscopes).

5) QUATERNARY AMINES

Example: Alkyl dimethyl benzyl ammonium chloride, Alkyl dimethyl ethylbenzyl ammonium chloride

Advantages and disadvantages: effective at low concentrations. Inexpensive broadly effective surface disinfectant.

Note: The five categories were noted as part of the Medical Industry Waste Disposal Roundtable sponsored by Medical Industry Round Table (MIRT)⁶

It is very important to understand that most hospital disinfectants are designed to be used on hard, non-porous surfaces, and require a minimum dwell time of 30 seconds or more to insure that germs and bacteria are killed on a given surface. Therefore, it is critically important to use in proper concentrations recommended by the manufacturer, and always review manufactures instructions before use. Failure to do so may results in permanent harm to the fabric.

There are many brands and manufacturer of germicides that are used in healthcare facilities. However, we have chosen to list a small sampling of the most popular germicidal products commonly is use:

⁵ National Institute for occupational health and Safety Topic; <http://www.cdc.gov/niosh/topics/glutaraldehyde>;

⁶ King County Medical Industry Roundtable; <http://www.pprc.org/mirt/meetings/medmin2.cfm>. 4/6/2000

COMMON DISINFECTANTS BRANDS ON MARKET

TRADE NAME	TYPE	MANUFACTURE
Alcide LD	Chloride Oxide	Alcide
Beaucoup	Phenolic	Huntington
Galahad	Phenolic	Puritan/Churchill
LPH	Phenolic	Calgon Vestal
Matar	Phenolic	Huntington
A33	Quaternary	Airkem
Absolute	Quaternary	Walton-March
Blue Chip	Quaternary	S.C Johnson Corp.
Coverage	Quaternary	Calgon-Vestal
El Dorado Plus	Quaternary	Puritan/Churchill
Elimstaph	Quaternary	Water G. Legge
Forward DC	Quaternary	S.C Johnson Corp.
Franklin Sentinel	Quaternary	Purex
Hi-Tor Plus	Quaternary	Huntington
Insurance	Quaternary	CalgonVestal
Omega	Quaternary	Airkem
Pro-Tech RDI-36B	Quaternary	Central Solutions, Inc.
Quanto	Quaternary	Huntington
Sanikleen	Quaternary	West Chemical
Sanimaster III	Quaternary	Service Master
Surfacide	Quaternary	Walton-March
Tri-Quat	Quaternary	Calgon Vestal
Vespsphere III	Quaternary	Caldon Vestal
Virex 128	Quaternary	S.C Johnson Wax

Note: A complete list of all EPA registered Disinfectant go to Selected EPA Registered Disinfectants at: <http://www.epa.gov/oppad001/chemregindex.htm>



Normal Care Instructions for NANO-TEX™ Resists Spills Fabrics: WS

Spills and stains should be removed from fabrics as soon as possible. While staining will be minimized on NANO-TEX enhanced fabrics, cleaning may still be necessary. If spills are removed immediately, there will be minimal to no staining on the fabric. If spills go unnoticed for a period of time and staining occurs, the NANO-TEX enhanced fabric will clean easily and quickly with proper cleaning procedures.

Upholstery Fabrics

- ◆ Clean liquid spills quickly with a dry clean cloth.
 - For liquid spills, gently blot (don't rub) spill immediately with an absorbent cloth while spill is still fresh.
 - Wipe off with clean water and a dry clean cloth if needed.

- ◆ For semi-solid spills, try to lift the spot off of the fabric.
 - Working in a circular motion or removing the spill from the side is often the best means to lift spills from the fabric.
 - Change towel surface frequently until spot has been transferred off of the fabric and onto the absorbent cleaning cloth. (Try to avoid pressing the spill or spreading the stain.)
 - Wipe off with clean water and a dry clean cloth if needed.

- ◆ For stubborn spills:
 - If a spill does not come off with water and a dry clean cloth, add a mild detergent mixed with water and repeat circular motion. (Mild detergents such as Sport Wash, Tide Free, or Cheer Free)
 - If a stain remains, a solvent may be needed to remove the stubborn stain. It is recommended to use odorless mineral spirits, dry cleaning fluid or alternative⁷ or Fantastik orange action degreaser. Seventh Generation Free and Clear™ Natural All Purpose Cleaner.⁸

⁷ [Http://www.dtsc.ca.gov/PollutionPrevention/upload/Alternatives-to-PERC.pdf](http://www.dtsc.ca.gov/PollutionPrevention/upload/Alternatives-to-PERC.pdf); many drycleaners are moving away from Perchloroethylene.

⁸ Seventh Generation Free & Clear™ Natural All Purpose Cleaner effectively cleans and degreases are made in USA. Contact information: Seventh Generation Inc.; 212 Battery Street, Suite A; Burlington VT 05401-5281.

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- Wipe off with water and a dry clean cloth. (Do not rub harshly. The harder you rub when cleaning a spill, the deeper the soil can penetrate between the fibers.)
 - Remove all soap residues from the surface with clean water.

NANO-TEX enhanced fabrics offer superior liquid and stain repellency. The application is permanently attached to the fibers and will not affect the color or feel of the fabric. Since the NANO-TEX attachment is not a topical coating or backing to fabric, the fabric remains breathable and comfortable.

Always check for manufacturer's cleaning codes. This is important to determine the proper type of cleaners to use. Each fabric has a cleaning code indicated from the manufacturer recommending specific cleaning instructions. The cleaning code is usually found under the cushions, on the product label or the hang-tag of the newly purchased upholstered furniture. Please follow the recommended cleaning instructions.

NOTE:

- If the wrong type of cleaner is used, the fabric could be permanently damaged.
- Some stains may require a second cleaning to achieve satisfactory results.
- If there is detergent residue causing re-soiling, remove it using a hot water extraction method using clear water.
- Certain cleaners or germicides should not be used, and could cause permanent damage for fabrics. When using germicides on treated fabrics
- **ALWAYS TEST ON SMALL INCONSPICUOUS AREA, AND EVALUATE LOOK BEFORE FULL CLEANING.**

GORE™ Seating Protection cleaning instructions

The following guidelines for fabrics with GORE™ Seating Protection will help you determine the best method for your particular cleaning requirement.

Keeping your furniture in high-traffic areas clean is the first step to maintaining and extending the life of your furniture investments. As with any textile, frequent vacuuming to remove the dirt and dust build-up from regular use will help prolong the life of your furniture fabric. Every type of stain recommends a water flush at some point, and since water does not penetrate the GORE™ moisture barrier, the foam cushion below the fabric will remain dry during this process.

We recommend the following cleaning procedures for various types of spills:

Liquid spills

The topical soil/stain-resistant treatment in GORE™ Seating Protection allows most liquid spills, such as coffee, soda, juice, and wine, to bead up on the fabric's surface. If cleaned before they dry, these spills can easily be removed using a paper towel to absorb the liquid. Flush the area with water and apply a clean rag, then blot dry.

If necessary, treat the spill with an upholstery spot cleaner or fabric-safe detergent solution and let it sit for one minute. Flush the detergent or spot cleaner with water and apply a clean rag, then blot dry.

Thick, moist spills

Some spills, such as catsup, mustard, and relish, have a thicker consistency than liquids. First, lift as much of the spill as possible with a damp rag, rotating the rag as you wipe without pressing it into the fabric. Repeat this process with a clean rag. The more spill you can pick up from the surface of the fabric without pressing it into the fabric, the easier it will be to remove any residue. If residue remains, flush the area with water and apply a clean rag. Repeat this process as needed, then blot the fabric dry.

If residue still remains, treat the stain with an upholstery spot cleaner or fabric-safe detergent solution and let it sit for one minute. Flush the detergent or spot cleaner with water and apply a clean rag, then blot dry.

Solid or dried spills

Sometimes a spill dries before it is noticed. Other times, a spill such as mustard has been allowed to dry to make it easier to clean. We recommend the first picking off any dried solids and then removing as much of the spill as possible with a soft brush and/or vacuum.

If residue still remains, treat the stain with an upholstery spot cleaner or fabric-safe detergent solution and let it sit for one minute. Flush the detergent or spot cleaner with water and apply a clean rag, then blot dry.

Greasy or oily spills

Spills like salad dressing and mayonnaise that contain grease or oil should be cleaned as soon as they happen. While these spills can be more challenging to remove, we recommend the following process: First, lift as much of the spill as possible with a dry rag, rotating the rag as you wipe without pressing into the fabric. Repeat this process with a clean rag. The more you can pick up from the surface of the fabric without pressing it into the fabric, the easier it will be to remove any residue.

Treat the stain with an upholstery spot cleaner or fabric-safe detergent solution with a grease-cutting agent and let it sit for one minute. Flush the detergent or spot cleaner with water and apply a clean rag, then blot dry.

If residue still remains, treat the stain with a solvent-based cleaner or a fabric degreaser to help break down the grease or oil. Flush the cleaner with water and apply a clean rag, then blot dry.

Blood and body fluids

While stains involving blood and body fluids can be removed using the above procedures, healthcare providers should follow safety protocols for biological hazards and/or anti-viral treatments during the cleaning process. Then flush the area with water and apply a clean rag, and blot dry.

NOTE: Some cleaners contain bleach or other chemicals that discolor fabrics. Prior to their use, we recommend spot testing in an inconspicuous area of the furniture with the cleaning solution mixed to the proper dilution. You may also want to consult the fabric specifications from the fabric manufacturer before applying an aggressive or bleach-type cleaner.

CRYPTON® CLEANING AND MAINTENANCE GUIDE: W

General Maintenance: Like any other fabric, please be sure to include Crypton Green® in a regular cleaning maintenance program. Vacuum regularly to remove dirt and dust.

Liquid Spills: For best results, remove all spills as quickly as possible. Most spills can be cleaned with a clean cloth or fabric towel. Simply wipe up spill before it dries. We recommend cleaning with a clean, fabric cloth vs. paper towel as paper may fall apart and leave pieces on

the fabric. If paper does not fall apart, just brush or vacuum the area. If stain has dried or residue remains, follow instructions below.

Solid or Dried Stains: Remove as much of the dried stain or staining agent as soon as possible prior to introducing cleaning solutions. This will reduce the possibility of rubbing the stain into the fabric as it is being cleaned

Salad Dressing, Mayonnaise, Ketchup, and 'Heavy Liquids': Slide a dull, flat edge under the staining agent, hold a clean cloth in the opposite hand and 'lift' the staining agent from the fabric onto the clean cloth. If 'heavy liquid' has completely dried, try 'peeling' the stain off with your fingers. If stain does not 'peel' off completely, continue to try to remove as much of the staining agent as possible prior to introducing cleaning solutions. Vacuum or brush to remove any loose stain particles. If stain is oil-based, pre-treat the area with rubbing alcohol. Liberally apply the alcohol and rub into stain. Allow alcohol to sit on the stain for 1 to 2 minutes, blot with a clean cloth. Be certain to rinse thoroughly with clean water.

Wet Cleaning Procedures: Crypton® is best cleaned with a 50% enzyme powder detergent, 50% water mixture. Apply the mixture and rub it into the stain. Allow cleaning mixture to remain on the stain for up to 5 minutes. Scrub the area with a clean, nylon brush. Rinse thoroughly with a clean water rinse leaving no soap residue. After rinsing the area, dry with a clean cloth.

Do not use Solvent-Based Cleaners or Bleach: To be totally safe, do not use solvent-based cleaners as they may harm the fabric. The use of bleach solutions to clean Crypton® is not recommended, as bleach that is not completely removed could eventually fade the fabric.

Note: Always test any stain-removing product or mixture on a hidden area of the furniture to make sure that the fabric's structure and color won't be damaged. Use all cleaners in accordance with manufacturer's instructions. After cleaning, always rinse with fresh water to remove any detergent or cleaning agent residue from the surface of the fabric.

TYPICAL CLEANING BY FIBER CONTENT

Solution Dyed Fibers

Fabrics containing **100% solution dyes fibers** (e.g. Zeftron Nylon) are extremely colorfast⁹, and are designed to look beautiful longer with proper cleaning methods. Refer to the following guidelines to establish an adequate maintenance program and select the best treatment for each cleaning situation

⁹ The pigment colorant is added to the polymer prior to extrusion, thus making it part of the overall polymer mixture.

Solution dyed fabrics carry a “WS” cleaning code, and when appropriate, can be cleaned with both water-based and solvents based cleaning systems. Diluted bleach solution or peroxide base bleach alternative can be used for more difficult stains.

For removal of difficult stains:

Step 1 - Remove as much of the stain as possible with detergent or spot cleaner, blotting with absorbent cotton cloth. If possible, place a clean tissue over stain and Weight down. Allow to dry.

Step 2 - Some persistent stains may be removed as follows:

Colored stains – Spray or blot with a solution of 4 parts water to 1 part bleach (5.25%) or ready to Use Peroxide based bleach alternative (e.g. Focus Safe2Clean®, EnvirOX®, H2Orange2®¹⁰)

Oily stains – Spray or blot with a volatile dry solvent.

Food stains – Spray or blot with an enzyme spot remover.

Step 3 - Rinse thoroughly with detergent/water solution. Follow with three additional rinses with water only, blotting after each application.

Step 4 - If trace remains, repeat steps 2 and 3.

Step 5 - A final rinse of the entire area with plain water using a hot water extraction machine should be performed to remove any detergent or bleach residue and reduce the likelihood of ringing.

If stain is still present after treatment, you should consults with professional upholstery cleaner.¹¹

Avora and Trevira CS Polyester:

Fabrics of **Avora¹² and Trevira CS polyester fiber** have many inherent stain resistant properties and with proper attention, they should retain their attractive appearance and remain stain free. As with all quality fabrics, proper care, spot and stain removal, plus overall cleaning and maintenance on annual or semi-annual basis are necessary. Customary care procedures include quick response by blotting fresh spills, basic spot and stain removal and overall professional cleaning when a soiled condition is reached.

¹⁰ EnvirOx is a hydrogen peroxide based all purpose cleaner that is EPA Registered Green Seal Certified. Envirox LLC; 1938 E. Fairchild Street; Danville FL 61832. Phone: 217-442-8596

¹¹ Industry studies have shown that some typical stains are difficult to remove. These tough stains include: ballpoint pen, shoe polish, and latex paint. Professional cleaner should be consulted.

¹² Avora Polyester is used primarily for our cubicle products, not upholstery.

Fabrics with 100% Avora and 100% Trevira CS fiber contents can be washed use “WS” cleaning code. They can be serviced using water-based and solvent-based cleaning system.

SPECIAL TIPS

- Scrape, vacuum or brush up any dried powdery residues (mud, talk, powder, etc.).
- When using water, detergent or solvent, work from outer edge of stain towards center to avoid ring marks.
- If using wet extraction or wet/dry vacuum, use overlapping strokes to avoid cleaning marks.
- Do not over wet or over use cleaning solutions
- Never mix ammonia and bleach during any cleaning procedures
- Contact professional cleaner to remove stain

Recommended Machine washing for Cubicles and Draperies

Drapery can be washed at 105F for Drapery, and Cubicles from 120F- 160F degrees, **DO NOT EXCEED 160F** (Disinfecting wash 131-140F). Commercial laundry facilities often use water temperatures of at least 160F and 50-150ppm of chlorine bleach to remove significant quantities of micro organisms from grossly contaminated linens. Studies have shown that a satisfactory reduction of microbial contamination can be achieved at water temperatures lower than 160 F if laundry chemicals suitable for low temperature washing are used at proper concentrations. All non-commercial normal washing and drying cycles include "hot" or "cold" cycles that are adequate to ensure patient safety.

Additives

Use non-ionic detergent. Non-Chlorine bleach products can be used for disinfecting

Treatment time

Approximately 10 minutes

Spinning

Light spin with residual moisture content of approximately 50%.

Drying / pressing

Hang out to dry immediately after machine washing. Tumble-drying is also permissible. Load ratio mix 1:40, or one third of usual load. Dry with expelled air temperature of 176 F and ventilate in a rotary drum until cool. When dry, the curtain should be hung or spread out. If stored for longer periods, damping and pressing may be necessary. Ironing at low temperatures is adequate.

General

It may be necessary to adapt these instructions to the specific conditions of the laundry and the equipment.

Dry Cleaning

Use only commercial dry cleaners only.

Cellulosic Fibers (Cotton, Rayon, Linen, Ramie, Jute, etc)

Fabrics with cellulose in the content require **‘S’ solvent-based cleaning system only**. Customers choosing to self-clean must be aware that for fabrics with majority cellulosic fibers content that water-based cleaning is not recommended. Cellulosic fibers absorb water and may leave a stain, cause excessive shrinkage and bleeding of color. Only a mild pure water-free dry cleaning solvent may be used. After applying cleaner, do not rub or scrub, instead vacuum fabric. **Persistent stains require specialized treatment by professionals.**

MOHAIR

Mohair carries an **“X” cleaning code**. Mohair is derived from the hair of the Angora goat. The hair is extremely long, strong and lustrous. These characteristics carry over to the finished pile. When pressure is applied to the pile, the fibers crush and the fabric can appear to be shaded, much as footprints crush and appear to shade a deep pile carpet. This shaded appearance is not a defect in the fabric, but a result of light reflecting differently off the repositioned fibers. Footprints disappear when a carpet is vacuumed. Likewise, occasional light brushing, vacuuming or steaming will restore and help maintain appearance of mohair pile. Because mohair has a high resistance to abrasion and releases soil easily, it is often used in heavy duty traffic areas such as theater and transportation seating. With proper maintenance, this upholstery will perform for years.

SUGGESTED MAINTENANCE

- Occasional brushing, vacuuming or steaming to restore pile
- Remove dried stains by lightly brushing
- Professional cleaning recommended for persistent stains and heavy soiling
- **NEVER USE BLEACH**, because bleach will permanently damage the mohair fibers.

Fabrics with Topical Treatments

Any fabric with a topical FR treatment should be cleaned using “S” cleaning code or cleaning with solvent-based cleaner only. Water-based systems are not recommended for fabrics with topical flame retardant treatments.

In most cases, flame retardant processing involves water-based flame retardants. Therefore, water-based cleaning systems will adversely affect the fabrics flame retardant properties.

This is very important to remember for upholstery fabrics that treated to pass NFPA 701 for use as drapery. In this case, if **“WS” cleaning code** is the designated cleaning code, then the addition of the topical flame retardant may require use of **“S” cleaning code** to maintain the fabrics flame retardant properties.

Note on Environmental Cleaning of W fabrics

Environmentally Friendly cleaners can be used for general purpose cleaning. A few are listed below (manufacturers are identified in parenthesis) These cleaners can be substituted for “detergent” when spot cleaning:

- Enviro Care All Purpose Cleaner (Rochester Midland)
- Enz-Away (Naturally Yours)
- N1 All-Purpose (The Clean Environment)
- Begley’s Best Household Cleaner and Carpet Spot Remover (Begley’s Best Co.)
- Cleaner Concentrate (Ultra Shield)
- Seventh Generation (Seventh Generation Inc.)
- Greening the Clean (Deidre Imus Inc.)
- Code Green (Clean Craft Products)
- Oxy Orange Peroxide(American Formula)
- Structured By Nature (Nilodor Inc)
Encapsulating Spotter

Environmentally friendly degreaser products that can be used for oily and greasy stains are listed below (manufacturers are identified in parenthesis):

- ECO 2000 Multiuse Degreaser/Cleaner (KC Products)
- Green Uniclean Degreaser and Floor Cleaner (Ipax Cleanogel)
- Formula G510 (Gaylord Industries)
- Magic 555 Industrial Degreaser and Cleaner (P&D Creative)

Note: **On Oily / Greasy for W-S and S coded fabrics**, in addition to the recommended method some stains (perspiration and body oils) respond well to dry cleaning such as:

- Host (Racine Industries)
- Capture (Milliken)
- Bonafides (Drummond American)
- Keft (Texize)
- SoyClean Degreaser (SoyClean Inc.)
- SoyGreen Degreaser (Soy Technologies)

HELPFUL LINKS

- 1) <http://www.greenseal.org/findaproduct/cleaners.cfm>
- 2) <http://www.epa.gov/epp/pubs/products/cleaning.htm>
- 3) <http://www.doi.gov/greening/sustain/clean.html>
- 4) <http://www.dienviro.com/index1.aspx?BD=17984>
- 5) <http://www.greenblue.org>