

MAINTENANCE GUIDE

EXCLUSIVE TO ALL BENTLEY PRODUCTS

Important note: This Maintenance Guide is written to include carpet made from both nylon and wool fiber. However, it is important to note that wool carpet is discussed in a separate section included within this guide. Please understand wool will be specifically included in instructions intended for wool. Otherwise, the instructions are for nylon carpet only. Some of the more aggressive techniques recommended as beneficial and necessary for nylon fiber, such as vacuuming with a beater bar and brush or pile lifting, can be damaging to wool.

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THE RAMIFICATION OF SPECIFICATIONS

The best maintenance program cannot overcome inappropriate choices in colors, patterns, carpet density, backing system, yarn style (cut pile or loop), staple, or BCF fibers and yarn type will all have a significant impact on the performance of the carpet.

The carpet choice should not be made purely on aesthetics but rather on a wide range of criteria like foot traffic, wheel traffic, density of occupancy, type of soil exposure, traffic frequency, and the overall intended use of the area. One of the most important considerations is how you intend to maintain the carpet once it is installed.

For instance, light-to-medium blue carpet will show soiling more than other colors. Solid-color carpet will show traffic lanes and spots more than pattern carpets. Cut-pile carpet in traffic lanes will crush and matte faster than loop carpets. Bulk continuous filament yarn will out perform staple yarn.

Planning should include providing appropriate protection of the new carpet immediately following installation, especially when carpet installation is part of a larger construction or renovation project where other construction trades may be working on top of the new carpet.

The most critical decision of the carpet maintenance program will be WHO will maintain the carpet. 99% of the life of the carpet comes after it is installed. Choosing an in-house person or a company with certified commercial carpet cleaning technicians is crucial. The best products and best installation will not perform as intended if maintained inappropriately.

The goals for any good floor-maintenance program should include the following.

1. Keep the floors looking as close to new as possible.
2. Design a cleaning program that is safe and the least disruptive to the occupancy.
3. Increase indoor air quality.
4. Extend the useful life of the carpet.
5. Be as “GREEN” as possible in the overall maintenance program (energy, water, noise and if possible chemical)

WHY IS REGULAR, PLANNED CARPET MAINTENANCE IMPORTANT?

People spend about 90% of their time indoors. According to the EPA, air inside facilities are two to five times more polluted than the air outside the buildings. Companies want to provide a healthy and pleasant work environment for their employees. Healthful work environments have been shown to improve employee attitudes and a reduction in sick days, which increase productivity by approximately 10%.

Carpet acts like a filter and can actually reduce airborne pollutants including volatile organic compounds compared to hard-surface floors, provided that they are maintained properly. On the other hand, poorly maintained carpet can harbor bacteria and mold, which can cause an increase in indoor air pollution, allergies, breathing issues, foul odors, and can reduce productivity.

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A COMPREHENSIVE MAINTENANCE PLAN

A regular routine of carpet maintenance helps prevent soil buildup that can damage carpet fiber, which, in turn, can cause color loss and loss of resiliency. A well-planned maintenance routine can maximize a carpet installation's useful life and forestall the need for replacement because of premature wear or because the carpet "uglies out."

Routine maintenance involves a planned approach of methodical daily care such as vacuuming and spot cleaning, in addition to periodic interim and restorative cleaning performed as soiling becomes apparent.

Excessive soiling, stubborn spots or spills may require different methods or combination of methods. Please keep in mind that when maintenance is neglected or performed at irregular intervals, carpet can deteriorate to a level that will be difficult or impossible to restore to its original luster and beauty—no matter what cleaning methods are used.

Persistent, thorough maintenance and daily-care routines will keep carpet looking its best, as well as enable carpet fiber to perform as intended. This planned approach to maintenance needs to begin immediately following installation.

For instance, when installation is performed in conjunction with other construction projects, the carpet must be protected with a covering such as re-enforced craft paper that allows the carpet to breathe as adhesives continue to cure. Plastic sheeting should be avoided as a means of carpet protection. Trapping adhesive off-gassing underneath plastic sheeting can cause permanent discoloration of new carpeting.

Properly trained technicians armed with the proper tools are essential to correctly performing the five key elements of any successful maintenance program.

Those five elements involve:

OUTSIDE YOUR FACILITY

• Preventative Maintenance:

Capture or contain the soil before it reaches the building by regularly sweeping the parking lot, parking garage, sidewalks, and at building entryways by using an adequate system of barrier mats at entrances. An adequate barrier system includes mats installed both inside and outside the building, as well as strategically placing mats at funnel areas where traffic loads become more concentrated or at specific highly trafficked interior areas.

A system of appropriate "scrape, scrub, and wipe" mats will remove up to 10 times more soil than carpet mats alone.

With an appropriate walk-off system the first five feet will remove approximately 37% of the soil, 10 feet 52%, 15 feet 71%, 20 feet 86% and 30 feet almost 100% of the exterior soil.

Another consideration:

In areas of the country where ice melts are used: There are different types of ice melts and some are more difficult to remove than others, the volume and frequency of use will have a big impact on your carpet maintenance plan.

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Asphalt parking lots and driveways coated with inexpensive sealers may “walk off,” causing discoloration of all flooring including the carpet. Once the damage is done, it is permanent.

INSIDE YOUR FACILITY

• **Vacuuming/Pile Lifting:**

Regular vacuuming is the single most important part of a maintenance program. It can cost between \$500 and \$700 a pound to remove soil from carpet once it is inside the facility. If the soil is removed before it becomes attached to the carpet fiber through proper vacuuming, then the cost to remove it per pound is greatly reduced. A proper vacuuming program can remove about 80% of this soil making it the most cost-effective soil removal process.

Vacuuming is designed to remove dry soil before it becomes attached to the fiber. Pile lifting will enhance routine vacuuming as well as cleaning effectiveness. It should be added as part of the overall maintenance program. The more aggressive pile lifter will help remove more stubborn, embedded soil, as well as working more effectively to lift and separate fiber so that routine vacuuming is more effective.

• **Spot and Spill Removal:**

Promptly addressing spills is the key to prevent the spill from getting into the carpet backing and causing stubborn spots that are far more difficult to clean. Quickly addressing spills helps minimize the chance of that spill becoming a stubborn stain.

• **Interim Cleaning:**

Several different methods can be utilized. If used regularly, interim cleaning can prolong the need for restorative cleaning.

• **Restorative Cleaning:**

Deep cleaning is designed to remove trapped soils. Hot water extraction is the most effective method and the only restorative method recommended by Bentley.

IDENTIFYING SPECIFIC MAINTENANCE NEEDS

Just as various areas of an office or building are subject to different uses, each type of area demands a different level of maintenance and care. Heavy-traffic areas and areas where traffic is more concentrated, such as entrances and corridors, require more frequent vacuuming and cleaning. Areas around vending machines or kitchen areas and desks need daily attention to spills and stains. Some areas may require different types of equipment for effective maintenance or cleaning.

A comprehensive maintenance program should have a color-coded diagram of the building’s floor space and furniture layout plan indicating appropriate cleaning frequency rates for vacuuming, spot cleaning, pile lifting, and interim and restorative cleaning, based on the nature and concentration of traffic flow.

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MAINTENANCE TECHNIQUES

The ideal maintenance program is designed to help prevent soil from reaching the carpet and to remove soil before it causes damage. Once soil becomes compacted, vacuuming becomes less effective and more aggressive pile lifting becomes necessary.

When soiling is allowed to build-up and become compacted deep within the fiber, the abrasive combination of heavy foot traffic and compacted soil can scratch and damage the best, most durable fiber, causing color and fiber loss. Deeply compacted soil will affect cut-pile fiber twist levels and cause fiber ends to splay outward, losing resiliency and causing matting.

Neglecting carpet maintenance, results in color or fiber twist loss and full restoration may become impossible.

To keep carpet clean and looking as nearly new as possible, this ideal maintenance program should use a combination of methods and frequencies tailored to a facility's specific needs. Those needs should be evaluated by a trained maintenance professional and based on the specific nature of soiling, traffic load, and traffic concentrations.

For instance, the first floor of a building will have maintenance needs that vary significantly from those on the fifth floor. A restaurant or a busy retail outlet will have an even greater variation of maintenance needs.

Remember, poor maintenance can cut short carpet life and adversely affect its long term performance. Failing to adhere to these guidelines in a regular routine that includes interim maintenance as well as restorative cleaning can cause irreparable damage that falls outside warranty coverage.

PREVENTATIVE MAINTENANCE

Maintaining carpet appearance means more than choosing the right cleaning method. Selecting a suitable carpet color, style and construction for the application with careful consideration of traffic load and performance expectations is the best possible start for an effective maintenance program that emphasizes prevention.

Concrete sidewalks, parking lots, and hard-surface floors do very little to remove soil from the bottoms of shoes or from the wheels of rolling traffic.

Barrier mats are essential in keeping as much soil and moisture as possible from ever entering the building.

Outside mats are designed to scrape dirt and debris off shoes while interior mats are designed to remove smaller soil particles as well as help absorb moisture.

Interior barrier mats should extend a minimum of six feet inside the entrance. A planned system of barrier mats, which also requires regular maintenance, is an essential part of any sound maintenance program.

Mats can also be effective in other interior areas including elevators, food station areas, and at stair thresholds. Barrier matting should be maintained the same way as interior carpet with severe traffic as illustrated by the frequency chart in this document. Rubber-backed mats should never be placed on carpet or other rubber floors.

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VACUUM ESSENTIALS

There is no substitute for slow, methodical vacuuming performed at the appropriate frequency with an approved vacuum cleaner, at the appropriate speed of 1.8 feet per second, four passes total for high traffic areas, two north and south, and two east and west. For moderate traffic, two passes at the same speed. This step is not a race to see how fast the area can be vacuumed. When writing a vacuum spec it's not enough to give frequencies of certain areas you must specify the type of vacuum cleaner to use and the rate of production.

Effective daily vacuuming can help reduce the need for more rigorous methods to keep the carpet's clean appearance. Vacuuming removes soil while lifting carpet fiber. In addition to removing soil, the vacuum's lifting action enhances resiliency and helps the vacuum work more effectively on subsequent vacuuming.

THE RIGHT EQUIPMENT

Vacuums with horizontal cylindrical brushes should be used and set so that brushes are always in full contact with the carpet surface. Twin-motor vacuums with independent motors for dedicated to suction and brushing are preferred.

Vacuums with top-loading soil bags and HEPA filters to further contain dust are highly recommended.

Canister and backpack vacuum without motorized rotating brushes should be avoided, as well as riding sweepers with rotary brushes.

The Carpet and Rug Institute's Seal of Approval program grades a variety of maintenance equipment, including vacuum cleaners.

For a list of certified vacuum units, please visit:

<http://www.carpet-rug.org/commercial-customers/cleaning-and-maintenance/seal-of-approval-products/index.cfm>

Vacuum frequency should be determined by visual inspection and performed at least once daily.

Heavy-traffic areas such as lobbies, entryways, funnel areas, barrier mats, and areas in the direct path of weather influences may require more frequent vacuuming. Furthermore, such high use areas may require vacuuming more frequently than once a day. Keen attention to weather vulnerable areas will help prevent wet soil from being tracked throughout the building.

The proper technique for thorough vacuuming depends upon using slow, overlapping strokes and making sure that the entire carpet surface is covered. Strokes should be no longer than two to three feet in length to avoid unnecessary back strain for the operator.

PILE LIFTING

Pile lifting is an effective method for lifting crushed pile and loosening dry soil. Heavily trafficked cut-pile products need more frequent pile lifting than looped products. Pile lifting should always be used to precondition carpets for general cleaning. Pile lifting improves cleaning effectiveness. For best results, apply the pile-lifter machine against the lay of the pile

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SPOT CLEANING

Daily removal of spots and spills helps maintain the carpet's appearance between scheduled cleaning. Immediate action against spots and spills also reduce the probability of a permanent stain. Spotting solutions should be selected as appropriate for the specific type of spot or spill.

Different chemistry should be selected for water-based and oil-based spills or spots. A different chemical will be necessary for solids, including gum. Always use spotting solutions sparingly. If the spill is wet, remove as much moisture as possible with dry, white towel or a hand-held extractor before applying any spotter. Try to remove the spot with water on a white towel or by using a hand-held extractor before using a spotting agent.

TREATING WATER-BASED SPOTS

Liquid spills should be blotted with a clean, white cloth to remove as much of the liquid as possible. If the spill is semi-solid or has hardened, gently scrape away with a spoon or spatula and then blot the spot with a damp white cloth. Always work from the edge of the spot towards the center. Never rub across a wet spill in a manner that causes the stain or contamination to be spread outward from the original area. If the spot remains, try **XL Carpet Spotter** or go to the Carpet and Rug Institute's "Spot Solver" <https://www.xlnorth.com/resources/recommended-maintenance-procedures-for-spotting/> for an excellent reference that should have an approach to help safely remove the spot.

Apply a minimal amount of the recommended solution. Use a soft-bristle brush and gently agitate the solution by hand. Rinse the affected area with water and allow the area to dry for about one hour and then vacuum. Prevent traffic on the freshly cleaned area until the carpet is completely dry.

Please remember to blot the spot. Do not brush the spot aggressively.

TREATING OIL-BASED SPOTS

When removing oily stains such as grease, tar, or asphalt, try **Grab Grease and Oil Remover**, always check for color fastness by testing in an inconspicuous area of the carpet. Apply **Grab Grease and Oil Remover** directly onto the spot. Again, do not rub across the spill, but wipe gently from the outer edge toward the center of the spot. Repeat the procedure until the spot has been removed. Rinse with water and allow the area to dry about one hour and then vacuum. Protect the freshly cleaned area until the carpet is completely dry.

Please note: A small, portable hand-held extractor can simplify the task of flushing residual solution from spots and spills.

SPOT REMOVAL GUIDE

Please refer to the Carpet and Rug Institute's "Spot Solver" to remedy a wide range of the most typical causes of carpet spotting. The Spot Solver can be found <https://www.xlnorth.com/resources/recommended-maintenance-procedures-for-spotting/>.

If you have further questions, please call Bentley at 800.423.4709.

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INTERIM CLEANING

DRY EXTRACTION

Dry compound extraction, such as **Grab Dry** from **XL North**, is a safe, easy, and effective method for performing maintenance on a regular basis. The procedure uses a moist, powder-like compound that does not leave the carpet excessively wet, thus allowing immediate access and traffic once the procedure is complete. This cleaning method typically has the lowest production rate and is the most expensive method of carpet cleaning. Dry compound cleaning eliminates wicking and does well with oily spots and soils. It is considered the safest cleaning method.

The technique for dry compound extraction is as follows:

1. Thoroughly vacuum the carpet two passes at 1.8 feet per second at 2 to 3 feet in length.
2. If carpet is not heavily soiled proceed to step 4.
3. If needed, use a pre-spray like **XL Carpet Spotter** and allow 10 minutes dwell time, spray evenly and heavy enough to stay damp for 20 minutes using a pump-up or electric sprayer. Do not over spray onto other surfaces, walls, or furniture.
4. Agitate carpet with counter rotating brush machine with the appropriate brush stiffness at 1.5 feet per-second in a V or W pattern. The soil load will determine the number of passes. Continue this step until you can visually see the soil separation from the fiber.
5. Spread the dry compound evenly on carpet making sure not to clump the product use one pound of product for every 150 square feet. Apply in a small area not to exceed 30' x 30' the dry compound must stay moist until it can be agitated into the carpet
6. Agitate the compound into the carpet at 1.5 feet per-second at 2 to 3 feet in length in a V or W pattern.
7. Allow compound to completely dry approximately 30 minutes to one hour.
8. Vacuum up the dry compound with two to three very slow passes, 1 foot per second make sure all visible compound is removed

Please note: This process can be even more effective when the carpet is first pile lifted and vacuumed prior to spreading low-moisture cleaning compound.

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LOW-MOISTURE CLEANING

ENCAPSULATION APPLICATION

The Encapsulation (or crystallizing) method of maintenance uses a liquid (like **Liquid Grab Green**) that breaks down and encapsulates sticky soils, then dries to a crystal-like powder that is easily vacuumed away.

Encapsulation cleaners should be applied and used as follows:

1. Thoroughly vacuum the carpet two passes at 1.8 feet per-second at 2 to 3 feet in length.
2. Spray evenly and heavy enough to stay wet for roughly 20 minutes using a pump-up or electric sprayer. Carpet must stay wet until the agitation process can be completed. Do not over-spray onto other surfaces, walls or furniture.
3. Agitate carpet with counter rotating brush machine with the appropriate brush stiffness at 1.5 feet per-second in a V or W pattern. The soil load will determine the number of passes. Continue this step until you can visually see the soil separation from the fiber.
4. Thoroughly vacuum the carpet two passes at 1.8 feet per-second at 2 to 3 feet in length.

FILMER APPLICATION

Filming applications, like **ResisTech 5**, are technically cleaners but should be viewed also as a fiber treatment. Filmers do encapsulate soil, but are not designed to completely release during the vacuuming process. Filmers release or “shed” over time from foot traffic and multiple vacuuming. The soil attaches to the treatment on the fiber not the fiber itself, so when the coating separates through vacuuming or foot traffic it only removes a small amount of the treatment, leaving behind more material to which soil can cling, thus repeating the process. For the best results, this method should only be applied to clean carpet preferably after a hot water extraction method was used.

This method will keep the carpet cleaner than any other cleaning method over a set period of time. And when used in conjunction with hot water extraction and low moisture encapsulation cleaning, this method will be the most cost effective of all maintenance cleaning programs.

The filmer application process is the same as encapsulation application.

Please note: Both applications can be performed using sprayers or can be applied as a foam.

BONNET CLEANING

Avoid bonnet cleaning. Using a bonnet or any other type of machine or oscillates that rotates in a motion parallel to the flooring surface to clean or dry carpet is not recommended and may void warranty coverage. Low-speed rotary cleaning methods must be approved by Bentley.

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HOT WATER EXTRACTION TRUCK-MOUNT/BOX EXTRACTORS

This method of cleaning has the ability to remove the most amount of soil (up to 95%), depending on the type of equipment and process used. This method can be slow and labor intensive, with more challenges compared to other methods.

1. Before starting this method of cleaning make sure the HVAC system stays on until the carpet is totally dry.
2. Check for any occupants that may have a chemical sensitivity before using any carpet pre-spray.
3. Always vacuum and pile lift thoroughly before beginning any carpet cleaning method. This is especially important with hot water extraction in order to remove as much dry, loose soil as possible prior to adding water to the carpet.
4. Place wet floor signs at all transition points, from carpet to hard surface.
5. Pre-spray with a traffic lane cleaner such as **XL Nylon Pre-Spray Advanced** or **ResisTech HWE** (a pH between 9.9 and 4.5). Spray heavy enough to keep carpet wet until the carpet can be extracted. Use a pump-up type or electric sprayer with no more than 60 psi (so pre-spray will not aerosolize). Do not over spray on any furniture, walls, or other floor surfaces.
6. Allow to penetrate for 10 minutes.
7. Agitate using a counter-rotating brush machine with the appropriate brushes at a 1.5 feet per second rate, use 2 to 3 foot long strokes in a V or W pattern. Continue this process until you can visually see the soil separate from the fiber.

All portable extractors should be plugged into a ground fault circuit interrupter. Extract using a carpet wand with straight forward and backward passes (NO V or W pattern) at a rate of 1.8 feet per second, overlap each stroke by 1 inch (use **Grab Crystallizing Acid Rinse** in fresh water tank when using high (9.0-9.9) pH cleaners). On restorative cleaning use multiple passes and finish with 1 dry pass. Continue to pull the wand toward you another 3 inches after releasing the spray trigger to insure all water removal.

Use air movers to help dry the carpet especially at transition points.

SELF-CONTAINED WATER EXTRACTION EQUIPMENT (walk behind, pull back, ride on)

This water extraction cleaning method has average-to-good soil removal somewhere between low moisture and hot water truck mount/box extractors. However, it has a much higher production rate compared to truck-mount or box extractors and about the same as low moisture encapsulation cleaning.

Steps for self-contained extraction equipment:

1. Before starting this method of cleaning, make sure the HVAC system stays on until the carpet is totally dry.
2. Check for any occupancy that may have a chemical sensitivity before using any carpet pre-spray.

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3. Always vacuum and pile lift thoroughly before beginning any carpet-cleaning method. This is especially important with water extraction in order to remove as much dry, loose soil as possible prior to adding water to the carpet.
4. Place wet floor signs at all transition points from carpet to hard surface.
5. Pre-spray with a traffic lane cleaner such as **XL Nylon Pre-Spray Advanced** or **ResisTech HWE** with a pH between 9.9 and 4.5 (Spray heavy enough to keep carpet wet until the carpet can be extracted). Do not over spray on any furniture, walls or other floor surfaces.
6. Allow to penetrate for 10 minutes.

Extract

All portable extractors should be plugged into a ground fault circuit interrupter. Overlap each pass at least 3 to ½ inches depending on how soiled the carpet is.

Use a **XL Crystallizing Acid Rinse** in fresh water tank when using high (9.0-9.9) pH pre-sprays. For best results do not add cleaning solution to fresh water tank.

Use air movers to help dry carpets especially at transition points from carpet to hard surfaces.

THE RIGHT CLEANING SOLUTIONS

Bentley recommends the carpet-care system by **XL North** and also the **Resistech** Carpet Maintenance Treatment by **Antron**.

However, if you choose to use others here are some things to consider:

Some commercial carpet cleaning solutions are very harsh and can damage carpet fiber. Only use cleaning chemicals that meet the basic standards outlined here.

It's also important to evaluate each product prior to widespread use by applying in a small inconspicuous area prior to widespread to prevent the possibility of damage. Bentley carpet can be maintained using a number of widely recognized carpet cleaning agents that are readily available. However, cleaning solutions that have earned the Carpet & Rug Institute's Seal of Approval are preferred.

The Carpet and Rug Institute uses an independent testing laboratory to evaluate cleaning chemistry based on the following criteria:

- Overall cleaning effectiveness; this ensures that the product removes soil and spots better than plain water.
- Rate of re-soiling; this ensures that the product does not attract dirt to the cleaned areas faster than the rest of the carpet.
- Chemical pH; a more neutral pH ensures that carpet dyes and fibers are not adversely affected.
- Surface texture change; the product must leave the carpet pile minimally changed after repeated cleanings.
- Optical brighteners; none are allowed, as they can leave some patches of carpet lighter than the rest.
- Colorfastness; products must not be so aggressive that they cause a color change in the carpet.

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For a list of these certified cleaning solutions see the Carpet & Rug Institute's website at: http://www.carpet-rug.org/commercial-customers/cleaning-and-maintenance/seal-of-approval-products/cleaning-solutions-list.cfm?product_type=0&manuf_id=0

Avoid products with pH levels over 9.9 for nylon and a maximum of 8.5 for wool. Also, make sure that cleaning solutions for either nylon or wool are free of toxic or flammable solvents. Detergents designed for use in hot water extraction equipment should not contain an oil-based de-foamer and caution should be used with the amount of detergent added. Oil-based de-foamers have the potential to leave oily residues and adding too much detergent could leave excess detergent on the carpet. Both scenarios will lead to rapid re-soiling and create a need for more frequent cleanings. In addition, cleaning solutions containing optical brighteners should not be used. Optical brighteners can adversely affect the coloration of carpet and lead to premature aging or yellowing of the carpet. Cleaning solutions used for interim and/or restorative cleaning should be tested for sticky residues that may cause re-soiling. To test a solution, pour a small amount in a clean glass dish. Allow the solution to air dry completely (24 hours minimum). Break up any hard residue on the surface of the glass dish and examine it. If the residue can be characterized as dry powder, dry flakes, or dry crystals, the solution is acceptable. If the residue appears oily, greasy, sticky, or in waxy flakes, the solution is not acceptable since it would likely contribute to rapid re-soiling. Spotting solutions should be used as needed and should be flushed out with clean water once the spot has been treated.

MAINTENANCE EQUIPMENT

Using the right equipment is as important as using the right cleaning solution and the best techniques. These guidelines are intended to provide a proper framework for minimum basic maintenance designed to maximize a carpet investment. Equipment should be selected from those units tested and certified by the Carpet and Rug Institute's Seal of Approval program.

- **Vacuums:** Select a dual-motor, commercial-grade vacuum cleaner bearing the Carpet and Rug Institute's Seal of Approval/Green Label Certification program. Top-loading dust bag machines with HEPA filters are strongly recommended. Battery-powered vacuum cleaners are not recommended.
- **Low-moisture applicator:** Use only those units with counter-rotating brushes bearing the Carpet and Rug Institute's Seal of Approval.
- **Hot water extractor:** Truck-mounted extraction units generally provide optimal performance, but self-contained units are more mobile and can be highly effective in most commercial applications. Use only those units bearing the Carpet and Rug Institute's Seal of Approval.

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CARING FOR WOOL CARPET

Wool is a natural protein fiber obtained from sheep. It is sensitive to color change, yellowing, and degradation when exposed to direct sunlight and it has a narrow pH range for cleaning. Wool cleans best between a pH of 5 and 8.5. The cleaning chemistry must not contain bleaching agents or optical brighteners. Temperature in cleaning wool should never exceed 140 to 150 degrees and excessive agitation when used with high temperatures should be avoided. Wool can absorb up to 33% of its weight in moisture, so it is important not to over wet the carpet and to allow ample time for drying. Below are some guidelines that should be followed.

1. Use a cleaning solution with low alkalinity (pH of 8.5 or less). Alkaline cleaning solutions pH above 8.5 may contribute to browning of fibers.
2. Select a solution that leaves no sticky residue following drying.
3. Do not use cleaning products with added bleaches or dyes. Full-strength application of bleach or cleaners containing bleach will dissolve wool fibers. Weakened solution of bleach or cleaners containing bleach can release fiber dyes and discolor the wool carpet completely.
4. Regular vacuuming is crucial to preventing soil from penetrating to the base of the fibers. Wool has an inherent property that suspends soil near the top of the pile on the surface of the carpet face. Regular vacuuming will remove this surface soil and dirt, preventing it from working into the face and abrading/wearing the fibers.
5. Care should be used when vacuuming shag carpeting. A vacuum without a beater bar or rotary brush should be used for this style of carpet. This will prevent damage to carpet or vacuum. High-end vacuums have separately controlled brushes or beater bars. These should be off when vacuuming. Check vacuum bag frequently as loose fibers are long and tend to clog the vacuum when approaching full.
6. For spot cleaning, act quickly and blot it up with a clean cloth or paper towels. Then use a towel dampened with lukewarm water to remove the substance completely. You can replace water with a solution of three parts of water and one part white vinegar. This solution will not cause any damage to your carpet, but helps to dilute the stain. Blot the area continuously with a dry cloth and never leave any wet spots. Avoid rubbing or scrapping the carpet for stain removal, as this can cause breaking down of the fibers.
7. Wool offers excellent encapsulation release properties, which makes it an ideal fiber for dry and low moisture cleaning. Encapsulation products, such as Resistech 5 or XL Fortify LMC are Wool Safe Approved chemistries that can be used (see "Interim Cleaning, Encapsulation Method for details on process), sprayed onto the carpet surface, agitated, and then vacuumed to remove the cleaning product and the attached soil. Use caution with overly aggressive agitation. Damage to wool carpet is generally attributed to over wetting, too much agitation, and improper chemical selection.

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NEED MORE INFORMATION?

For more information about carpet maintenance, visit our website at www.bentleymills.com or www.xlnorth.com, or call 888.530.2259.

For an XL North Service provider near you, email: Info@xlnorth.com.

Additional sites for reference:

1. Carpet and Rug Institute: www.carpet-rug.org
2. The Institute of Inspection, Cleaning, and Restoration Certification: www.iicrc.org

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MAINTENANCE FREQUENCY CHART

Traffic, Soil Rating	Carpet Owner Site Maintenance		Professional Cleaning Restoration Service	
	Vacuuming	Spot Cleaning	Interim Maintenance	Restoration Maintenance
Light <ul style="list-style-type: none"> • Private offices • Cubicles • 500 traffics or less daily 	Twice or more each week	Perform when vacuuming as spots, spills occur	Once per year	Once per year; should include pile lifting
Moderate <ul style="list-style-type: none"> • Secondary hallways • Shared offices • Conference rooms • Classrooms • 500-1000 traffics daily 	Once daily	Perform when vacuuming as spots, spills occur	Twice per year; should include pile lifting at least twice or more	Twice per year; should include pile lifting at least twice or more
Heavy <ul style="list-style-type: none"> • Common entrances • Elevators • Elevator lobbies • Main hallways • Break rooms • Mail rooms • Patient rooms • Waiting areas • 100-2,500 traffics daily 	At least once daily; some areas will require more.	Perform when vacuuming as spots, spills occur	Monthly; should include pile lifting	Four times annually; should include pile lifting
Severe <ul style="list-style-type: none"> • Common entrances when snow and rain are factors • Cafeterias and any food-service areas • Heavy-traffic load funneled into concentrated areas • 2,500 or more traffics daily 	At least once daily; some areas will require more.	Perform when vacuuming as spots, spills occur	Weekly Should include weekly pile lifting. More frequent pile lifting may be needed to contain tracked soiling	Monthly Should include pile lifting

This grid is intended as a guideline that should apply as a general minimum in most commercial applications. There will be exceptions where frequencies will need to be adjusted by site needs.