

Floor Care and Maintenance Parts 1 and 2 Training Manual

August 2009

Disclaimer:

The training is for informational purposes only and is based on information available during its development. The information contained in this training course is subject to revision as new information becomes available. OGS makes no guarantees of results and assumes no responsibility or liability whatsoever in connection with the use of this training material.

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Useful Websites and Resources

Floor Care and Maintenance Parts 1 and 2
Training Manual

Introduction/Pre-Test

This section provides:

- ☆ Introduction
- ☆ Training Objectives of the Module
- ☆ Discussion of the Pre- and Post-Test

Introduction

The New York State Office of General Services (OGS) designed this two part training course to provide a general overview of floor care and maintenance, and introduce green cleaning best practices and products for hard floors. Topics covered in **Part 1** of the training course are:

- Floor care and maintenance programs;
- Green cleaning best practices for floor care and maintenance;
- Worker safety;
- Typical floor care complaints and neglected areas;
- Custodial tools for floor care;
- Selecting floor care chemicals;
- Four main steps in floor maintenance;
- Preparation for floor care and maintenance;
- Floor care and maintenance procedures; and
- Equipment care and janitorial closets.

Topics covered in **Part 2** of the training course are the Advanced Floor Care procedures of “burnishing and refinishing” and “stripping and finishing”

The OGS’s goal in developing this course is for participants to establish a basic understanding of, and requirements for, floor care and maintenance, incorporating green cleaning practices and the use of OGS-approved cleaning products.

Notes:

Training Objectives

Terminal Objective

The terminal objective of this training course is to provide trainees with an overarching knowledge of floor care and maintenance as part of a Green Cleaning Program.

Enabling Objectives

Upon training completion of both Parts 1 and 2 of the course, participants will be able to list or describe:

Part 1

- A Floor Care and Maintenance Program;
- Several green cleaning best practices related to floor care and maintenance;
- At least five worker safety precautions;
- Equipment and main chemicals used for floor care and maintenance;
- Key factors for selecting floor chemical products;
- Key parts of an effective entryway system;
- Routine maintenance procedures and frequencies, and reasons for routine maintenance;
- Several techniques used to maintain floor care equipment.

Part 2

- Major steps in “Burnishing and Refinishing” and “Stripping and Finishing” procedures;

Pre- and Post-Testing

- Before the start of the course, a multiple-choice test (pre-test) will be given to determine each participant’s current level of knowledge on floor care and maintenance.
- At the end of the training course, participants will take another multiple-choice test or post-test. The scores of these two tests will be compared to determine the effectiveness of the training material.
- OGS will use the test results to determine future improvements and changes to the training materials and to better serve schools.

Training Module Reference Card

If you have not done so already, please download the Floor Care and Maintenance Quick Reference Cards from the Customizable Documents and Templates section of the New York State Green Cleaning

Notes:

Program website. The quick reference cards will be a helpful resource to use as you progress through the module, and will reinforce the training's key points.

Review of Section 1

- This section presented an introduction of what the course will cover.
- Course objectives were stated.
- Pre- and post-tests were explained.

Notes:

Floor Care and Maintenance - Part 1

This section covers:

- ☆ Floor Care and Maintenance Programs
- ☆ Green Cleaning Best Practices for Floor Care and Maintenance
- ☆ Worker Safety
- ☆ Typical Floor Care Complaints and Neglected Areas
- ☆ Custodial Tools for Floor Care
- ☆ Selecting the Right Floor Care Chemicals
- ☆ Four Main Steps in Floor Maintenance
- ☆ Preparation for Floor Care and Maintenance
- ☆ Floor Care and Maintenance Procedures
- ☆ Equipment Care and Janitorial Closets

Note:

- ✓ This is a general overview of floor care maintenance. However, it is important that you work with your vendors or product manufacturers on the specific applications and uses of their products and equipment.

Floor Care and Maintenance Programs

An effective floor care and maintenance program relies upon preventative and routine maintenance of the floor finish. Preventive maintenance includes the use of entryway walk-off mats to trap soils at entryways. Daily routine maintenance includes removing soil by dust-mopping, damp-mopping, and auto-scrubbing floors as well as regularly cleaning entry walk-off mats. Eventually, soil destroys the floor's finish if it is not removed on a daily basis. At some point, however, routine maintenance may not be enough to maintain the floor's appearance, and advanced floor maintenance will be required. Advanced maintenance procedures include floor burnishing/refinishing and floor stripping/restoration. These procedures require additional labor, and may affect the environment, indoor air quality and human health. For example, bur-

Notes:

nishing generates a fine powder from the floor finish and decreases indoor air quality. It is important that floor stripping and refinishing be done properly to reduce environmental, air quality and health impacts.

A good floor care and maintenance program provides several benefits, including:

- Protecting the floor and extending the life of the floor finish;
- Providing a consistent floor appearance;
- Reducing the need for burnishing the floor;
- Making the floor easier to maintain;
- Extending the time between labor-intensive floor stripping and refinishing;
- Reducing soil, germs and allergens that can harm building occupants; and
- Reducing accidents and the potential for worker's compensation-related injuries.

Green Cleaning Best Practices for Floor Care and Maintenance

Comprehensive green cleaning best practices for floor care and maintenance can be found in the Best Practices section of the New York State Green Cleaning Program website. A summary of green cleaning best practices include:

- Using high-performance cleaning equipment better removes soil. For example, replace dust mops with microfiber dust mops and replace outdated vacuums with Green Label-certified vacuums;

Note: The Carpet and Rug Institute's (CRI) Green Label Testing Program introduced in 2000 will officially be phased out in 2010 at which time a new joint program—the CRI Seal of Approval/Green Label Testing Program—will be the standard/testing protocol.

- Providing proper training on all equipment and chemical use;
- Stopping soil and dirt from entering the building by using walk-off mats at entryways;
- Selecting environmentally-friendly chemical products that work quickly and effectively, and floor finishes that are durable and easy to maintain;
- Creating a floor care maintenance program based on areas with high and low traffic levels;
- Creating floor cleaning and inspection schedules that identify tasks by frequency (e.g. daily, weekly, or monthly);
- Developing a communication plan to alert building occupants of day-to-day cleaning activities that may affect them, notifying building occupants prior to stripping and finishing floors;

Notes:

- Developing cleaning procedures that include systematic guidelines for each task including estimated completion times, products and equipment, requirements for chemical safety, and necessary training; and
- Involving occupants in the cleaning process. For example, request students and teachers place their chairs on desks and pick up obvious debris off the floors before leaving at the end of the day.

Note: For additional information, refer to the Useful Websites and Resources section at the end of this module.

Worker Safety

While working, follow these safety guidelines:

- Be aware of what chemicals you use and that are in your workplace;
- Make sure all chemical storage containers are properly labeled and tightly secured;
- Read and understand your facility's written Hazard Communication Plan;
- Know how to read and understand Material Safety Data Sheets (MSDSs);
- Read and understand MSDS labels for every product you use;
- Never mix chemicals;
- Do not use chemicals on surfaces they are not intended for;
- Always wear the appropriate personal protective equipment (PPE);
- Use an automated chemical dispenser/dilution system whenever possible to create accurate dilutions and reduce chemical exposure;
- Undergo adequate training on equipment use, chemical handling, and cleaning procedures for your job duties;
- Never operate equipment you have not been trained to use; and
- Practice universal precautions when cleaning blood or bodily fluid spills or handling soiled materials.

Note: Refer to the Occupational Health and Safety Administration's (OSHA) for blood-borne pathogen standards.

Typical Flooring Complaints and Neglected Areas

Typical flooring complaints of building occupants include:

Notes:

- Slippery floors;
- Soil marks left from high-speed floor machine pads;
- Visible debris on floor (stickers, gum, etc.);
- Black heel marks; and
- Residual cleaning solution on baseboards, furniture, and walls.

Areas frequently neglected by custodians:

- Difficult to reach areas on floors, such as corners and behind doors; and
- Splashed or splattered cleaning solution on baseboards, furniture, and walls. Note: This problem may be caused by a poor performing detergent that does not allow soil to release from the surface.

Custodial Tools for Floor Care

Power Equipment

- Green Label-certified vacuum cleaner (backpack-type preferred) with extra vacuum bags, high efficiency particulate air (HEPA) filters, and other vacuum accessories.

Note: The Carpet and Rug Institute's (CRI) Green Label Testing Program introduced in 2000 will officially be phased out in 2010 at which time a new joint program—the CRI Seal of Approval/Green Label Testing Program—will be the standard/testing protocol.

- High-speed buffer/burnisher with dust control system.
- Low-speed floor machine.
- Floor auto-scrubber.
- Various floor machine and auto-scrubber pads or brushes. Check with your supplier for the appropriate brushes or pads for specific applications.
- Properly rated extension cords.

Non-Powered Equipment

- 32-ounce bottle with trigger sprayer or other adequately sized spray bottle.
- White hand pads.
- Putty knife/long-handled floor scraper.
- "Wet Floor" signs.
- Three mop buckets with wringers, color-coded with tape.
- All-purpose wet mops with color-coded handles to match mop buckets.
- Microfiber wringer, used to wring out solution from microfiber mop pads.

Notes:

- Finish mop head (rayon or rayon blend) and all-purpose cotton mop heads.
- Microfiber mops and mop heads:
 - Scrubbing microfiber mop pads are for heavy-duty cleaning where scrubbing is required, such as kitchens, bathrooms, and high-traffic areas.
 - Dusting microfiber mop pads are designed to absorb more dust and hair than regular mop pads.
 - Multipurpose microfiber mop pads share characteristics of both scrubbing and dry dusting mop heads.
- Trash receptacle liners, used with the finish mop bucket.
- PPE: safety goggles, gloves, and slip-resistant boots.
- 16-inch floor squeegee.
- Doodlebug (baseboard) brush and scrub pads.
- Microfiber cloths and sponges.

Floor Care Chemical Products

Note:

- ✓ Under New York State's amended Education and Finance Laws—*The New York State Green Cleaning Law*, all public and non-public elementary and secondary schools are required to purchase and use environmentally-sensitive (green) cleaning products, including floor care products. The state has given OGS's Environmental Services Unit (ESU) the responsibility of implementing this law. In doing so, OGS has developed the Green Cleaning Guidelines and Specifications for purchasing green cleaning products and created the OGS-Approved Green Cleaning Products List for use in schools. These resources and more can be downloaded from the New York State Green Cleaning Program website.
-

The main types of floor care chemicals include:

- General-purpose cleaner;
- Floor stripper; and
- Floor sealer/finish.

When possible, purchase floor chemical products in concentrated form and dilute them using an automatic dilution dispenser. An automatic dilution dispenser reduces dilution errors and the likelihood of direct contact with concentrated chemical products.

Notes:

Consider tracking the use of chemicals with a computerized chemical inventory system. By documenting the consumption and disposal of chemicals, custodians are better able to manage chemical inventory and costs by reducing waste and waste disposal.

Selecting the Right Chemical Products

Because of its large surface area and the wear and tear of day-to-day traffic, floor care is one of the most important and labor-intensive components of a cleaning program. Selecting the right chemical products can reduce the number of hours required for floor care and simultaneously improve indoor air quality.

Look for the following when selecting floor care products:

- Products that meet the OGS Green Cleaning Guidelines and Specifications;
- Fast-acting floor finish strippers that quickly dissolve and remove the floor finish. Fast-acting floor strippers reduce the time custodians are exposed to chemicals and accelerate the floor stripping process;
- Durable floor finishes that:
 - Withstand day-to-day traffic;
 - Do not require stripping and refinishing for three or more years;
 - Require less burnishing and do not powder easily; and
 - Are easy to maintain and clean.
- Effective general-purpose cleaners that, when properly diluted, do not require a rinse step (leaves no residue) and are designed to work with cold water. This saves custodial time and effort in maintaining the floor finish.

Note:

- ✓ All general purpose cleaners that are Green Seal-certified work effectively with cold water. In addition, mops used with a good general purpose cleaner can release their soil with just a cold-water rinse.
-

Currently, OGS is NOT adopting the Green Seal, Inc. standard for floor finishes, wax/finish strippers, or spray burnishing gloss restorer products (Green Seal's GS-40 standard). However, OGS will accept the use of Green Seal-certified products if they meet OGS's established criteria described in the OGS Green Cleaning Guidelines and Specifications. While a great deal of work has been done to develop "green" floor finishes, OGS is reviewing their results over time before officially approving them for use. Therefore, you should check the OGS-Approved Green Cleaning Approved Products List on the New York State

Notes:

Green Cleaning Program website before purchasing any new product. The list provides a searchable database of approved products.

Any product purchased should be of good quality and value, and come with excellent support, training, and advice from the vendor. Questions to ask yourself and the vendor when selecting floor care products include:

- Does the floor finish vendor answer your questions on all aspects of floor care?
- Does the cleaning product effectively remove soil? Thorough removal of soil is important in extending the life of a floor finish and is the foundation of a floor care and maintenance program.
- Does their floor care and maintenance program hold up to your toughest traffic and continuous wear-and-tear and usage?

Based on the responses, make educated decisions regarding which products or vendors to use. Do not simply continue to use a product because you always have, your predecessor used it, or you get some special price. Floor finish costs need to be evaluated based on labor and material from the initial application to the succeeding upkeep until the next floor stripping. Evaluate detergents based on the actual cost of the diluted product, the amount of labor it requires, and its ability to remove soil.

Floor Care and Maintenance: Four Main Steps

Four steps in performing the best and most efficient floor maintenance are:

1. Work area preparation;
2. Cleaning or maintenance processes;
3. Verification that procedures are satisfactorily complete; and
4. Proper cleanup and storage of equipment for future use.

Preparation for Performing Floor Care

Preparing to perform floor care makes the job easier for the custodian. Consider developing checklists of items needed to perform each task and make sure the items are readily available. Some items can be organized on a cleaning cart to be easily rolled out to the work area. Below are examples of typical checklists of necessary floor care items or steps. They can be modified for specific locations.

- Safety equipment checklist:

Notes:

- Eye protection.
- Latex gloves.
- “Wet Floor” signs.
- Non-slip shoes/boots.
- Vacuum cleaner checklist:
 - Backpack vacuum/upright vacuum cleaner.
 - Wet/dry vacuum.
 - Extra filters, bags, or containers—check and replace or empty if they are more than half full.
 - Hoses and cords—check for cuts and missing plugs (i.e. ground plug).
 - Backpack-type vacuum properly adjusted and fitting.
 - Extension cord, if needed, in good working order and capable of handling the vacuum’s electrical load—no cuts in insulation or missing plugs.
- Auto-scrubber checklist (use the manufacturer’s checklist, if available):
 - Make sure the auto-scrubber is completely charged.
 - Secure all attachments.
 - Add proper dilution of cleaning solution to tank.
 - Attach proper scrubbing pad or brush.
 - Confirm that all components are working properly—vacuum, squeegee, brushes/pads, and fluid injectors.
 - Make sure the auto-scrubber has adequate water pickup and does not leave streaks.

Note:

- ✓ Streaks left by auto-scrubbers are one of the most common floor care complaints. (*Thoroughly dust mopping floors before using an auto-scrubber is the most effective way to prevent soil particles from becoming trapped on the squeegee and causing solution streaking.*)

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- Burnisher/floor machine preparation checklist:

Note: There are several types of burnishing machines—electric, battery, and propane. Please check with the manufacturer or the instruction manual for details on use.

- Make sure extra pads/brushes are on hand.
- Check electric cords and plugs for cuts or missing grounding prongs.

Notes:

- Check to make sure extension cords are in good working order, with no cuts in insulation or missing plugs, and capable of handling the electrical load of the machine.

Note:

- ✓ The New York Collaborative for High Performance Schools (*NY-CHPS High Performance Schools Guidelines Version 1.0*) prohibits the indoor use of fossil-fuel-powered equipment, including propane burnishers.

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- Mop buckets, wringers, and mops checklist:
 - Make sure mops and buckets are color-coded or labeled for each solution type.
 - Place a trashcan liner in the finish bucket before filling.
 - Have clean manufacturer's recommended finish mop heads and a clean plastic bag to store them after use.
 - Have clean all-purpose mop heads available.

Note:

- ✓ Cotton versus synthetic mop heads: Cotton interwoven with synthetic strands may be the best choice because synthetic fibers provide strength, and cotton absorbs solution and soil.
- ✓ Always refer to the finish mop and floor finish manufacturers' directions for acceptable methods on cleaning new mop heads before use.

-
- Prepare floor care solutions for the job using cold tap water. Most chemicals come in concentrated form and must be diluted using a measuring cup or automatic dilution station (preferable).

Review and follow the manufacturers' recommendations and directions on the following:

- Selection and use of floor care products (i.e., general-purpose cleaner);
- Dilution requirements;
- Contact times for floor strippers to dissolve and lift finishes off floors;
- Drying times between coats of floor finish;
- Number of required floor finish coats;
- Burnishing the floor finish; and
- Selecting types of pads or brushes for burnishing and scrubbing the floor finish.

Floor Maintenance Procedures

Notes:

Preventative Maintenance - Entryway Walk-Off Mats

The best line of defense for keeping a facility free of dust, dirt, and contaminants is to prevent them from entering the building. A properly equipped and maintained entryway can reduce the amount of dirt or soil entering a building by more than 80%, if the carpet mats are cleaned regularly and not allowed to fill with soil. The Carpet and Rug Institute (CRI) recommends all entryways have at least 12 to 15 feet of walk-off matting. The New York Collaborative for High Performance Schools (*NY-CHPS High Performance Schools Guidelines Version 1.0*) suggests a three-part, walk-off system for high-volume entryways and entryways accessible from playing fields and locker rooms. A three-part, walk-off system consists of the following:

1. An exterior grill or grate to remove dirt and snow;
2. A drop-through mat system in the vestibule area; and
3. 15 feet of interior walk-off matting.

Along with matting systems, an entryway maintenance plan should be in place that describes:

- Frequency of rotating or vacuuming walk-off mats, based on weather conditions;
- Frequency and types of exterior cleaning for areas leading to the entryways; and
- Walk-off matting requirements for high- and low-traffic entryways.

Routine Maintenance

Routine floor maintenance involves daily dust-mopping or vacuuming, and damp-mopping or auto-scrubbing. General procedures for routine maintenance are provided below.

Dust-Mopping with Microfiber Mops and Vacuum Cleaning Floors

1. Prepare cleaning equipment and place it in the area where work will begin.

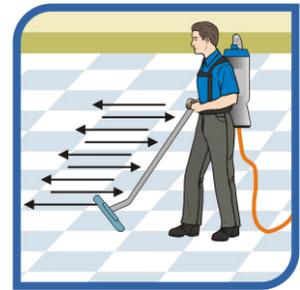


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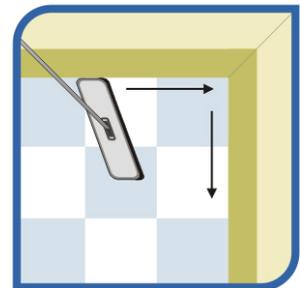
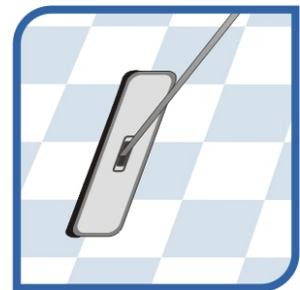
2. Remove debris stuck to the floor (i.e. stickers or gum) using a putty knife or an extended-handle floor scraper.



3. Depending on the size of the cleaning area, vacuum using an OGS-approved backpack or other canister-type vacuum. Beginning at the furthest point of the work area, vacuum using an overlapping back-and-forth motion.. Make sure the corners and edges of the floor are clean.

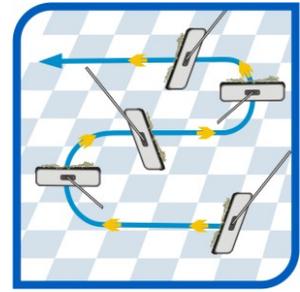


4. Alternatively, use a microfiber dust mop to remove loose soil from the floor including the corners and edges.

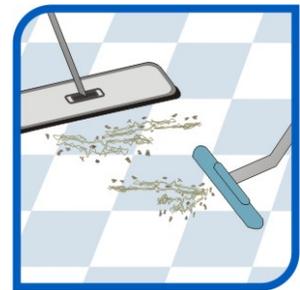
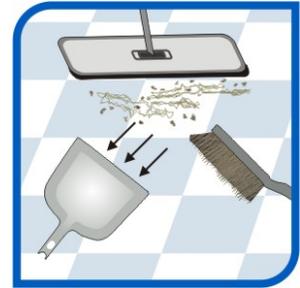


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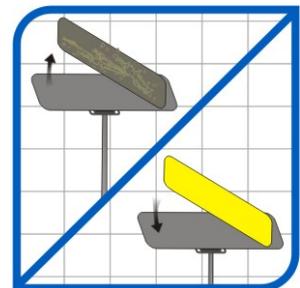
5. Dust-mopping pattern: Begin with the mop next to the wall and walk to the other end of the work area. Swivel the mop head so the leading edge remains the same and return to the other end of the work area. Overlap each pass by 2 to 3 inches. Frequently check the microfiber pad and replace it when dirty.



6. Carefully pick up the soil with a dustpan and counter broom when needed. Vacuuming the dirt and pad may be faster and will not release as much dust into the air.

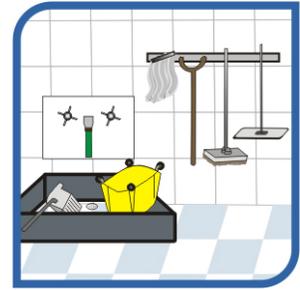
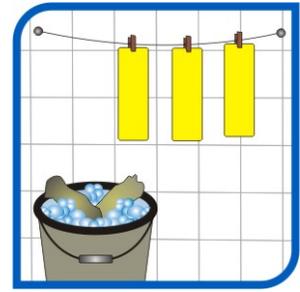


7. Frequently check the microfiber mop pad and replace it when dirty. Place the soiled microfiber pads in a plastic bag until finished.



Notes:

8. Remove most of the soil from the pad by shaking it outside, away from open doors or windows. Launder the soiled mop heads by soaking them overnight in a cold water-formulated general purpose cleaner, and then rinsing thoroughly in cold tap water. Wring the mop pads out and hang them to dry. Never dry microfiber pads or cloths in a clothes dryer because high heat damages the microfiber material.
9. Clean and return equipment to the storage area or janitorial closet.



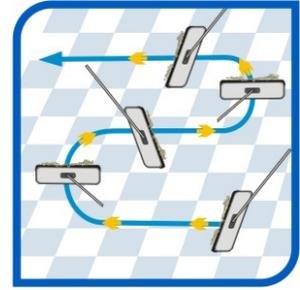
Damp-Mopping with Microfiber Mop

1. Using cold water, properly dilute general-purpose cleaner in small, 1-2 gallon capacity mop bucket.
2. Prepare cleaning equipment and place it in the area where work will begin.



Notes:

3. Vacuum or dust-mop floors with a microfiber dust mop before damp-mopping.



4. Place "Wet Floor" signs at each end of the work area.



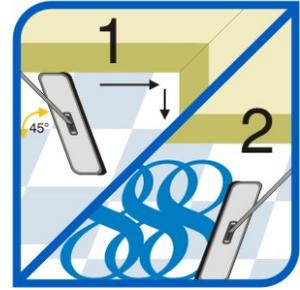
5. Dampen the microfiber mop by submerging the mop pad in the small mop bucket. Wring out excess solution and attach the pad to the mop head.



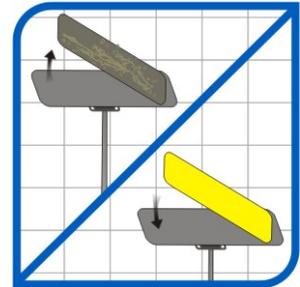
Notes:

6. Mop floor:

- a. First, mop lengthwise along the baseboards to prevent splashing them.
- b. Mop the remainder of the floor with a conventional Figure 8 or S- motion. Always move away from the wet floor, never into it.



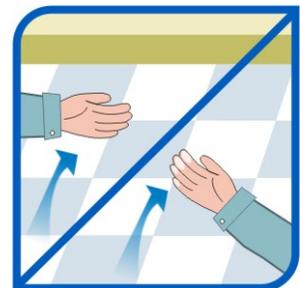
7. Frequently check the microfiber mop pad and replace it when dirty. Never place a dirty mop pad back into the cleaning solution.



8. Remove black heel marks with a dampened white hand pad as you mop.



9. Let the floor dry thoroughly.
10. Check the floor for residual cleaning solution by wiping your hand across it and looking for white powder on your hand. If any residue is found, document the cleaner and its dilution, and investigate the cause of the problem. Using clean cold water, damp-mop again to remove the residue.



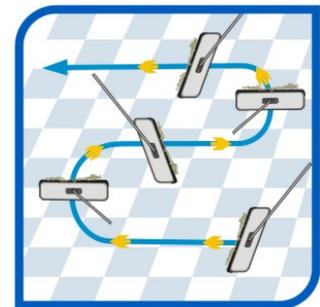
Notes:

Cleaning Floors with an Auto-Scrubber

1. Prepare the cleaning equipment and place it in the area where work will begin.



2. Vacuum or dust-mop with a microfiber mop before using the auto-scrubber.



3. Place "Wet Floor" signs near the work area.



4. Fill the auto-scrubber machine with enough diluted cold water detergent to complete the job.

Note: Dilute the detergent according to the manufacturer's recommendations or preferably use an automatic dilution station.



5. Move the auto-scrubber to the work area.

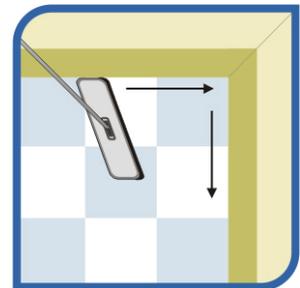
Notes:

6. Start the auto-scrubber and begin cleaning the floor using a brush or pad recommended by the floor finish vendor or manufacturer. Make sure the pad is down and the vacuum is on, and squeegee engaged. Based on the work area, use one of the patterns in Figure 2 for cleaning the floor.
7. Mop up excess solution at turns, and, using a microfiber cloth, wipe any walls and baseboards splashed with solution. Use a 16-inch squeegee to pull excess water away from the edge of the wall and pick it up with the auto-scrubber.

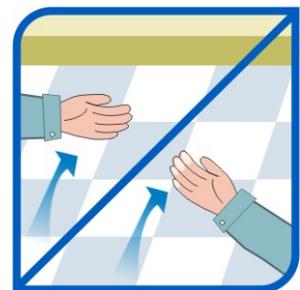
See Figure 2 below.



8. Clean tight corners using a damp microfiber mop.



9. Let the floor dry thoroughly before beginning the next floor care task.
10. Check the floor for residual cleaning solution by wiping your hand across it and looking for white powder. If any residue is found, document the cleaner and its dilution, and investigate the cause of the problem. Using clean cold water, damp-mop again to remove the residue.



Notes:

11. Clean and return the equipment and chemicals to the storage area or janitorial closet.

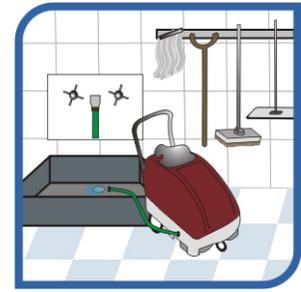
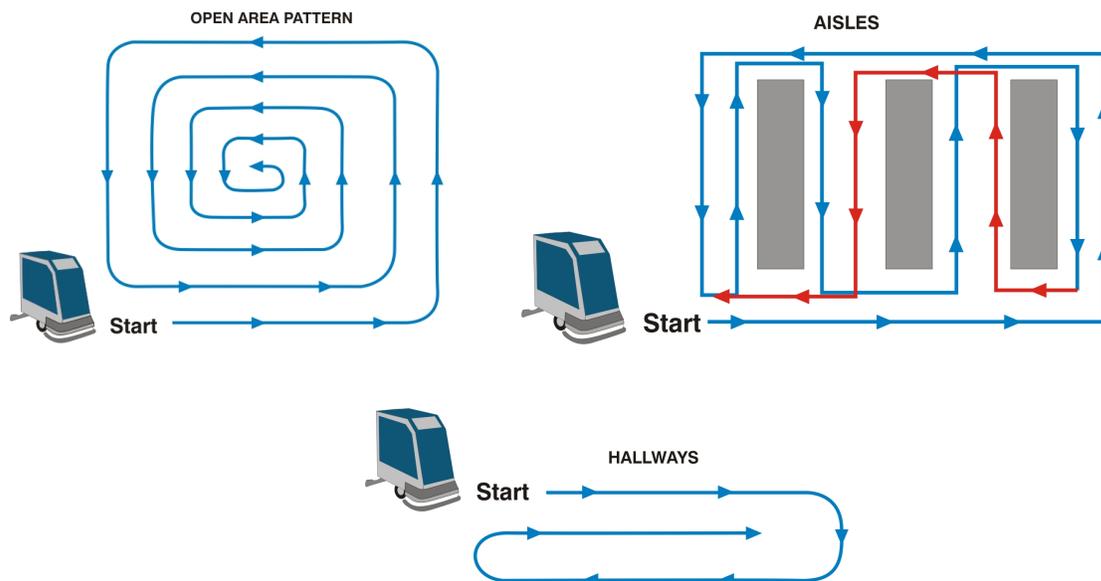


Figure 2. Auto Scrubber Patterns for Open Areas, Aisles, and Hallways.



Equipment Care and Janitorial Closets

Before the end of each shift, custodians should organize, clean, and care for the equipment used during their shift. Any faulty equipment should be reported for repair or replacement. Proper care will extend the life of the equipment and maintain its level of performance. Dirty, faulty, and unkempt equipment can be a potential hazard in the workplace and reflect poorly on the custodial staff. School janitorial closets should be clean and well-organized at all times. All chemicals in the janitorial closets should be properly labeled and tightly secured; access by building occupants should be limited. DISCARD PRODUCTS, IF NOT USED, ACCORDING TO LOCAL ENVIRONMENTAL PRACTICES.

Notes:

Remember, proper care of janitorial equipment requires little time and effort. To care for your equipment, follow these guidelines:

Burnisher/high- and low-speed floor machines:

- Check the power cord and plug for damage.
- Wipe down with a damp microfiber cloth.
- Using compressed air, blow out the area around the drive motor when needed.
- Document and report any problems with the machine.
- Determine if scheduled service is needed.
- Store in a dry place in an upright position.

Auto-scrubber:

- Drain and flush the auto-scrubber solution tank. Dispose of all chemicals in an environmentally-sensitive way according to the New York State Department of Conservation (NYSDEC) and the manufacturer guidelines.
- Remove and rinse off the squeegee.
- Remove the pad driver and pad. Clean the pad in a slop sink using clean water and allow the pad to dry.
- Wipe down the machine.
- Plug into a charger.
- Document and report any problems with the machine.
- Determine if scheduled service is needed.

Vacuum:

- Wipe down the vacuum, replace bags, and clean filters on a regular basis.
- Before storing, examine the vacuum for cut cords and hoses, missing prongs on plugs, worn belts, and clogged hoses..
- Only vacuum water or other liquids with a wet/dry vacuum.
- Store vacuum and attachments properly.
- Document and report any problems with the machine.
- Determine if scheduled service is needed.

Wet vacuum:

- Empty and rinse after each use.

Notes:

- Wipe down the wet vacuum and clean the filters on a regular bases.
- Before storing, examine the vacuum for cut cords and hoses, missing prongs on plug (ground prong), and clogged hoses.
- Store the wet vacuum and its attachments properly.
- Document and report any problems with machine.
- Determine if scheduled service are needed.

Microfiber dust mops:

- Do not pickup liquids or clean oil floors with microfiber dust mops.
- Replace the dust mop head when dirty.
- Vacuum off debris from the dust mop before laundering, or shake it off outdoors away from open windows or doors.
- Launder microfiber dust mops following the manufacturer's recommendations.
- Do not shake off the dust mop indoors. This will release dust particles into the air.
- Hang the dust mop on wall. Do not stand it on the floor.

Damp microfiber mops:

- Replace the microfiber dust mop head when dirty.
- Wash microfiber mops heads following the manufacturer's recommendations.
- Clean damp microfiber mop heads by soaking them overnight in a general purpose cleaner diluted with cold water. Rinse them in cold water, wring out and hang dry.
- Store cleaned and dried microfiber mop heads by stacking them neatly on a flat surface.

Wet mops:

- Rinse the wet mops well after every use.
- After each rinsing, straighten the mop head loops using your fingers and trim any broken mop strands with scissors.
- Cut off loose or uneven strands.
- Hang the mop heads to dry in a well-ventilated area. Make sure the mop head dries quickly. Mop heads that are not washed, rinsed, and dried after each use will develop a sour or foul smell. They should not be used to clean floors until they are clean and odor free.
- Hang the mop heads off the ground with the ends facing down.
- Never store mop head on the floor.

Notes:

Floor finish mops:

- Wash out all the floor finish or wax with clear water.
- Wring out as much water as possible from the floor finish mop, and shake to loosen and fluff strands.
- Important: Never use a cleaning solution on finish mops.
- Hang the mop heads to dry in a well-ventilated area. Make sure they dry quickly.
- Allow the mop to dry before storing it in a clean plastic bag.

Mop buckets with wringers:

- Use only enough hand pressure on the wringer lever to wring the mop out.
- Keep the wringer free of debris.
- Empty dirty cleaning solution after each use and wash the inside and outside of bucket with cold water-diluted, general purpose cleaner. Rinse the bucket with warm water and wipe it to dry.
- Before rinsing buckets containing floor stripper or finish, dispose of the contents following the manufacturer and NYSDEC waste disposal guidelines.
- Oil the wringer mechanism and tighten any loose screws or bolts.
- Always store the wringer in the released position.

Dustpans:

- Wipe the dustpan as needed.

Brushes:

- Rinse the brushes in clear, cold water. Shake out the excess water. If the brush is dirty, wash it with a general purpose cleaner and rinse it with clear water.
- Dry the brushes with their bristles straight, not bent (upside down, on its side or hanging).
- Store the brushes by hanging them. Do not put the brush weight on the bristles.

Putty knife/floor scraper:

- Wipe the knife to remove moisture and debris.
- Store them in a clean, dry place.
- Keep the blade edge sharp.

Fluid measuring devices:

- Rinse fluid measuring devices with water immediately after use and let them dry.

Notes:

- Never leave leftover solution in a measuring container.

Synthetic floor pads:

- Floor pads are designed to work on both sides—flip the pad over to extend its use.
- Pads can be cleaned in several ways:
 - After each use, rinse them with hot water; or
 - If rinsing does not work, soak the pads in stripper solution to remove difficult dirt.
- Dry the pads and store them on a horizontal surface. Never use a wet pad for burnishing or buffing.

Review of Section 2

The training course in Section 2 provided instruction on the following floor care and maintenance topics:

- A description and benefits of floor care and maintenance programs;
- A summary of green cleaning best practices for floor care and maintenance;
- Various worker safety guidelines and tips to reduce work-related injuries;
- A list of typical floor care complaints and neglected areas;
- A list of typical custodial tools and equipment used in floor care and maintenance;
- Guidance on selecting floor care chemicals: floor cleaner, floor finish and floor stripper;
- The four main steps in floor maintenance: preparation, cleaning/maintenance process, inspection of work, and cleanup and storage;
- Several checklists used in preparing floor care and maintenance equipment;
- Step-by-step procedures for routine maintenance; and
- Guidelines for cleaning, maintaining, and storing floor care equipment.

Notes:

Floor Care and Maintenance - Part 2

This section covers:

- ☆ Floor Burnishing and Refinishing Process and
- ☆ Stripping and Finishing

Advanced Floor Care Procedures

In an effort to streamline advanced floor care procedures, OGS has limited training to two procedures: floor burnishing/refinishing and floor stripping/restoration.

Note:

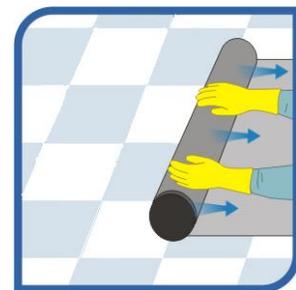
- ✓ Some vendors or manufacturers may refer to these procedures as “floor spot cleaning” and “top scrub and recoat.” Please check with your product vendor or manufacturer for specific details that may apply to their product.
-

Floor Burnishing and Refinishing Process

(Always check the product’s manufacturer instructions!)

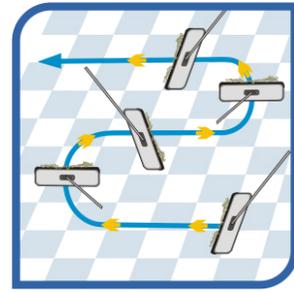
Floor burnishing and refinishing is recommended when routine floor cleaning does not adequately restore the floor’s gloss or shine. The floor burnishing and refinishing process is the removal of the soiled top layers of the floor finish followed by an application of two fresh coats of finish.

1. Remove furniture, mats, and other objects from the work area.



Notes:

2. Dust mop and clean floor.



3. Put out "Wet Floor" signs.



4. Ensure the appropriate PPE is used (gloves, goggles, non-slip foot ware).

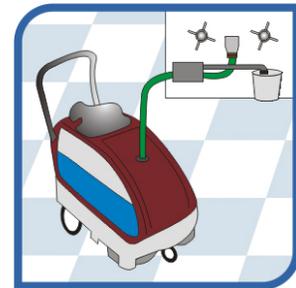


Notes:

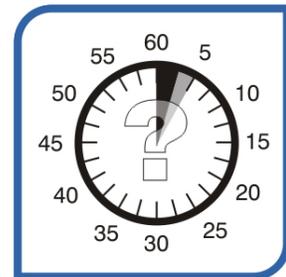
5. Assemble two buckets with wringers and fill one with clean, cold water and the second with general-purpose cleaner. If cleaning a large floor area, use the auto-scrubbing machine filled with general-purpose cleaner.



Note: Gear-driven wringers are recommended because they wring out the most liquid using the least amount of pressure from the user.



6. Apply the cleaning solution with the mop or auto-scrubber, and let stand for 3 to 5 minutes.



Notes:

7. Place a manufacturer's recommended brush or pad on the floor machine and go over the floor. Do not allow the floor to dry while scrubbing the area—add additional solution as needed.



8. For larger floor areas, use an auto-scrubber with the proper brush or pad to scrub off the top layer of finish.



9. Along baseboards and other tight areas apply the cleaning solution and scrub with a scrub or doodlebug pad to remove the top layers of finish. Squeegee the slurry away from the baseboards and other tight areas, and into an area that can be picked up by a wet/dry vacuum or auto-scrubber.



Notes:

10. Pick up the soiled cleaning solution with a squeegee and wet/dry vacuum, or auto-scrubber.



11. Floor Rinsing:

- a. Rinse the floor with clean, cold tap water and vacuum up any residue.

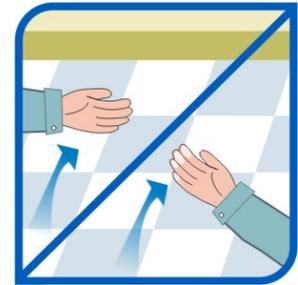


Cold Water Rinse



Notes:

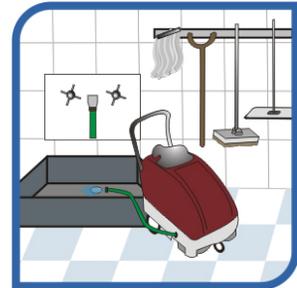
- b. Check the floor for any remaining residue by wiping your hand across it and looking for white powder on your hand. If any residue is present, rinse the floor again and vacuum it dry. Repeat until the floor is clean and residue-free.



- c. Wash splash marks from the walls and furniture



- d. Clean equipment.
Use a floor fan faced away from floor to speed drying.
THE FLOOR MUST BE DRY before proceeding.



12. Floor Burnishing:

Note:

- ✓ Once the floor is dry, the type of burnishing equipment you use may determine how you burnish. Consult with your floor finish vendor or manufacturer for specific circumstances.
-

- a. For propane or battery-operated burnishing equipment, there is no need to use a spray-on finish or mop-on finish (restorer) process. Under the NY-CHPS guidance, propane operated burnishing equipment should not be used indoors. Simply burnish the floor and determine whether the finish looks satisfactory.

Notes:

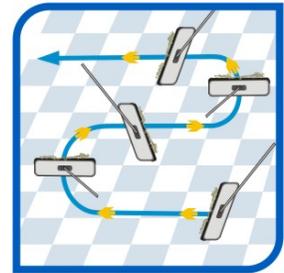
- b. For hand-held burnishing equipment (1,500 to 2,500 revolutions per minute), either use a spray-on finish or mop-on finish (restorer) application. Always consult with the floor finish vendor or manufacturer for specifics.

Note:

- ✓ If burnishing does not bring luster back to the floor appearance, consider applying a fresh top coat of finish (refinish) (Step 13). You may consider “Floor Stripping and Restoration” depending on the condition of the floor.
-

13. Floor Refinishing:

- a. Remove any residue or powder left behind from the burnishing process before applying a coat of floor finish.



- b. Place the OGS-approved diluted floor finish in a lined clean bucket.



- c. Using a finishing mop, apply the floor finish starting at the furthest point of the work area.
- d. Apply the finish in medium coats; be careful the coat is not too thin, which will cause dry streaking, or too heavy, which will form a dry skin on the surface but remain soft underneath.

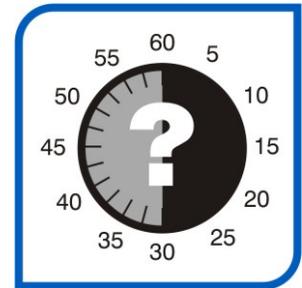


Notes:

- e. Wipe any splattered finish off baseboards with a cleaning solution and microfiber cloth.



- f. Once the first coat of floor finish is dry (observe the manufacturer's recommended drying times, usually between 30 to 60 minutes), either burnish and apply a second coat of floor finish, or just apply the second coat without burnishing (refer to manufacturer's instructions for best results).



- g. Check the manufacturer's instructions to determine when to burnish the final coat of floor finish.

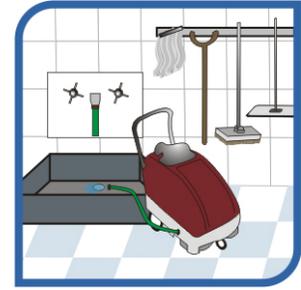


13. Keep traffic off the floor as long as possible.
14. Remove the "Wet Floor" signs when completed.



Notes:

15. Clean and return the equipment and chemicals to the storage area or janitorial closet.



If floors have reached a point where the Burnishing and Refinishing procedure is not sufficient, then proceed to the following segment on Stripping and Restoration.

Note:

- ✓ Before using new finish mops, soak them in water overnight to loosen the mop fibers and remove chemicals applied at the factory. Finishing mops should be rayon or rayon-blended (see floor finish manufacturer's recommendations).
- ✓ To make cleanup easier and faster, line the floor finish bucket with trash receptical liner before adding the finish.
- ✓ Load the finish onto the finish mop by dipping the bottom half of it into the floor finish. Remove excess finish in the mop head by placing it in the mop wringer and pushing it down firmly. Do not use the wringer mechanism to squeeze finish from the mop head. Finish solution should drip from the mop and not continually run.
- ✓ After burnishing, the floors should always be dust-mopped to remove any powder caused by burnishing.

Floor Stripping and Restoration

Note: For best results, always check the manufacturer's instructions for specific information on floor machines and applying floor stripper and floor finish.

The stripping and restoration process is labor-intensive and requires the complete removal of floor finish using a chemical stripper and the application of several coats of finish. Conduct this procedure when:

- School or facility is not being used and no activities are scheduled;

Notes:

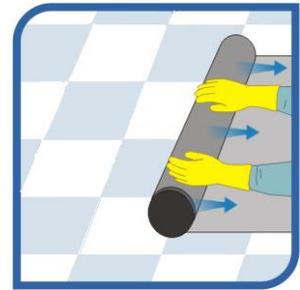
- Workers can properly ventilate the school; and
- Enough time is available to strip the floors, apply several coats of finish, and burnish the floors.

Because of the nature of the process, resolve any scheduling conflicts, and notify the occupants when the work is set to begin..

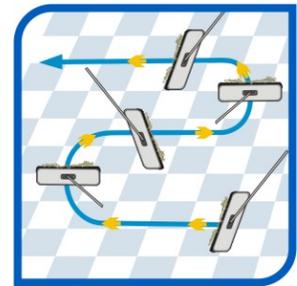
Do not dispose of finish and strippers outdoors—use the appropriate disposal practices.

Floor Stripping

1. Remove furniture, mats, and other objects from work area.



2. Dust-mop and clean the floor.



3. Put out the “Wet Floor” signs.



Notes:

4. Use required PPE (gloves, goggles, and non-slip footwear).



5. Prepare the cleaning equipment and place it in the area where work will begin.



6. Select a floor machine and the appropriate manufacturer recommended brushes or pads.



7. Prepare three mop buckets (color-code the buckets and mop handles with colored tape or labels): a stripper solution bucket, rinse bucket, and floor finish bucket. Line the floor finish bucket with a trash receptacle liner before adding the finish. For the finish mop, use a looped-end rayon-blended fiber mop designed for applying floor finish.

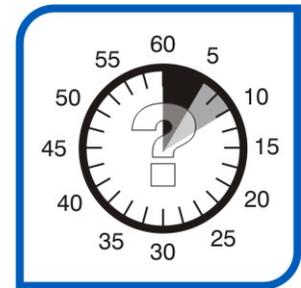


Notes:

8. Apply stripper solution freely to the floor with the mop.



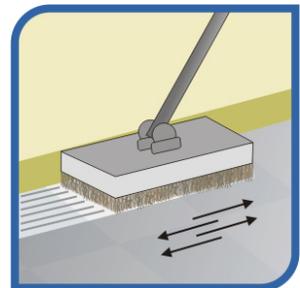
9. Allow the stripper solution to stand for 5 to 10 minutes. **Do not let the solution dry on the floor. Add more if necessary.**



10. Use an appropriate slow-speed floor machine. Consult with the floor finish/stripper vendor or manufacturer for the appropriate brushes or pads.



11. For tight areas and along baseboards, use a scrub pad or doo-dlebug pad to remove the finish. Squeegee the slurry away from the baseboards and other tight areas and into an area that can be picked up by a wet/dry vacuum.



Notes:

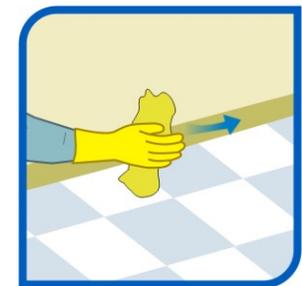
12. Using a floor squeegee and wet/dry vacuum, pick up the stripper slurry. Do not allow the stripper solution to dry on the floor after vacuuming.



13. Check the floors for remaining floor finish and re-strip areas, if necessary.
14. Immediately rinse the floor by mopping it with cold water. Mop along baseboards and corners first, followed by a "Figure 8" mopping motion between the walls. Remember to slightly overlap each pass with the mop.



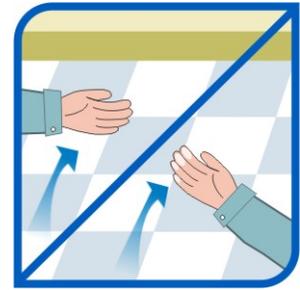
15. Before it dries, wipe any floor stripper splatters off the walls and baseboards with a damp microfiber cloth.



16. After rinsing each work area section, move the equipment to the next area to be cleaned.
17. Let the floor dry. Use a floor fan faced away from the floor to speed drying.

Notes:

18. Check the floor for any remaining residue by wiping your hand across it. If residue is present, rinse the floor again.

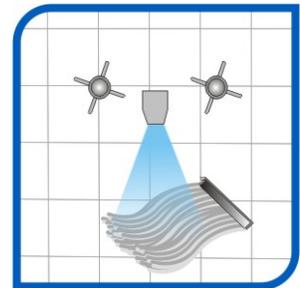


Note:

- ✓ Follow the manufacturer's directions for applying floor stripper and recommended application.
 - ✓ Divide large floor areas into manageable sections (10' x 10'), and strip and rinse each section before moving to the next.
-

Apply Floor Finish

1. Prepare for floor finish application.
2. Make sure the finish mop is clean and well rinsed before using. Note: Do not place a dry finish mop directly into the finish. The air in the mop will cause the finish to foam. Soak the mop in clean water and wring it out before placing it into the floor finish.
3. Dip the mop into the finish. Partially ring out the bottom two-thirds of the mop, using approximately half of the pressure normally applied when wet mopping.

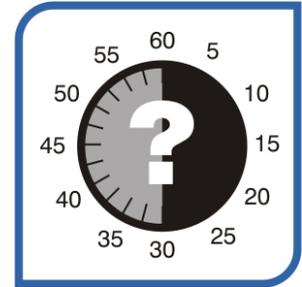


Notes:

4. Apply the finish in medium coats or thickness. Be careful the coat is not too thin, which will cause dry streaking, or too heavy, which will dry on the surface but remain soft underneath.



5. Wait for each **coat** of finish to completely dry before adding another. Follow the manufacturer's suggested drying times between each coat.



6. Apply the manufacturer's recommended number of floor finish coats. In addition, check recommendations to see if buffing is recommended after each coat has dried.



7. Before it dries, wipe off any finish splatters from the baseboards and walls with a damp microfiber cloth..



Notes:

8. Remove the “Wet Floor” signs when work is completed.



9. Keep traffic off the floor as long as possible, at least 36 hours.
10. Follow the manufacturer’s recommended time before burnishing the final coat, if needed.



11. Clean and return the equipment and chemicals to the storage area or janitorial closet.



- ✓ By using a scrub pad or doodlebug pad along baseboards, floor machines can work further away from walls and reduce splatter onto walls.
- ✓ Drying times for some finishes may start when the finish is dry to the touch. Always review manufacturer’s directions for drying times.
- ✓ Drying times can be reduced by circulating air around the work area using fans. **Fans should not blow directly on to the floor, but away from the floor!**
- ✓ Brushes tend to work better for stripping and do not become clogged with old floor finish.

Notes:

Review of Section 3

The Part 2 of the training course in provided instruction on the following floor care and maintenance topics:

- Step-by-step procedures for Floor Burnishing and Refinishing;
- Step-by-step procedures for Stripping and Finishing; and
- Helpful hints and tips for performing these procedures.

Notes:

S e c t i o n 4

Post-Test/Course Evaluation

This section addresses:

- ☆ Administration of the post-test
- ☆ Course evaluation

Please complete the post-test and course evaluation for both the Part 1 and Part 2 courses. All participants will receive a course "Certificate of Completion The post-test and course evaluation are vital for fine-tuning future revisions of the course. **Please do not disregard the post-test and course evaluation!**

Notes:

Useful Websites and Resources

Many manufacturers and suppliers also have helpful websites.
Be sure to check them out.

Building Green.com

www.buildinggreen.com

Carpet and Rug Institute

www.carpet-rug.org/

Center for a New American Dream

www.newdream.org/clean/

Grassroots Environmental Education

www.grassrootsinfo.org

Green Seal

www.greenseal.org

Healthy Schools Network

www.healthyschools.org

Hospitals for a Healthy Environment - Green Purchasing

www.h2e-online.org/

INFORM - A Free Resource to Assist Agencies in Implementing Strategies for a Better Environment

www.informinc.org

NYS Department of Health

www.health.state.ny.us

www.schoolhealthservices.org/uploads/Control%20Communicable%20Diseases-August%2018%202005%20final.pdf

www.health.state.ny.us/publications/7102/index.htm

www.health.state.ny.us/diseases/communicable/influenza/index.htm

The New York State Green Cleaning Program

Greencleaning.ny.gov

U.S Environmental Protection Agency

www.epa.gov/opptintr/epp/

www.epa.gov/epp/pubs/products/cleaner.htm
www.epa.gov/region09/waste/p2/projects/hospital/mops.pdf

Resources

C. Kenneth Tanner, University of Georgia and Jeff Lackney, University of Wisconsin: Madison, *Educational Facilities Planning: Leadership, Architecture, and Management*, Prentice Hall, (Chapter 9), October 2005.

Healthy Schools Network, Inc, *Guide to Green Cleaning—Healthier Cleaning & Maintenance Practices and Products for Schools*, 2006.

Holly, David R., *The Ashkin Group, LLC, Going Green—An Introduction to Implementing Green Cleaning Programs*, Presented March 23, 2006.

Janitorial Products Pollution Prevention Project, Be Healthy, Clean Safely, April 2000: www.westp2net.org/Janitorial/Richmond%20Report.pdf

Michael A. Berry, PhD, *Cleaning For Health: Protecting the Built Environment*.

School Facilities Maintenance Task Force, National Forum on Education Statistics and the Association of School Business Officials International, *Planning Guide for Maintaining School Facilities*, February 2003

The Janitorial Store, *Green Cleaning: Everything You need to Know About Providing Environmentally Friendly Cleaning Services*, e-book, www.TheJanitorialStore.com.

U.S. Department of Education, National Center for Education Statistics, National Forum on Education Statistics, *Planning Guide for Maintaining School Facilities*, NCEs 2003-347, prepared by T. Szuba, R. Young, and the School Facilities Maintenance Task Force. Washington, DC: 2003.

U.S. Green Building Council, *LEED for Existing Buildings: Operations and Maintenance*, January 2008 Version.

Notes: