Procedures for stripping, recoating and maintaining resilient tile.

Recommended floor care procedures

Bestway Products Co.

To achieve optimum appearance and proper film protection for your floor coverings, it is extremely important to use the right equipment for each task. The best floor finishes in the world will look bad and be less likely to hold up if laid with a dirty mop or applied from a bucket that has other chemical residue in it. There are many different kinds of equipment to maintain floors and it is critical that your equipment match the maintenance program you have established. If you have questions about your floor maintenance program, Bestway Products staff would be glad to assist you. Floor finishes are applied to floor coverings for
three reasons:

- To protect the floor covering from wear, stains, and daily abuse.
- For ease of maintenance, allows spills and normal soil to be easily removed.
- Appearance: well-maintained floors are image-enhancing.

A little known fact about floor finishes is how thin they really are. Five coats of a 20% finish properly applied is about the thickness of the cellophane wrapper on a pack of cigarettes. Yet we have tremendous expectations from floor finishes. A women's high heal shoe can place 20,000psi on the area of floor where her heel hits during a walking stride. It's really amazing finishes can survive under those conditions. But a lack of a floor maintenance program will never give the finish film a chance to perform or last as you might want. As you read this you Just understand that a proper floor program starts with your expectations. If you have the expectation of keeping the floor looking like they are "wet," then you need to understand the amount of resources required to accomplish your expectation level. An expectation level like that requires an amount of resources that is fairly intense. Most people expect the "wet" look to be obtained from the proper choice of a floor film, and fail to grasp the amount of resources required in machines and labor to maintain a floor to a "wet" look. When the finish fails to perform up to their expectations, they blame the finish or the people that applied it. For example, look at large retailers. They are always laying finish and high speed burnishing. You may be able to obtain a "wet" look without high expense, but you better not have much traffic, and your results will be in proportion to your input. Second, A floor maintenance program without the proper level of equipment is not a floor maintenance program at all. In order to properly maintain a floor you must be willing to invest in equipment that meets your need. The level of equipment will obviously vary with each situation, but don't expect a "wet" look without investing in a high speed burnisher. With years of experience in floor maintenance, we have seen every combination of programs. It is impossible to expect a janitor to clean a school with 30,000 square feet of halls with a mop and a bucket, but yet I'm amazed when we get called into a new account and they have no machinery to properly do the job and wonder why poor Joe always has terrible looking floors. So buy Joe what he wants, Bestway Products!

1. Stripping old finish

1.1 Stripping the floor of any old finishes.

1. Plan the job and check the area to be stripped outlining what will be needed to totally clean and remove old finish from all areas. Note edges and corners where buildup may have occurred and require extra attention. There are no short cuts in the stripping procedure, when you are finished stripping the floor must be clean and spotless before applying any new coats of seal or finish. Remember that great results start from a perfectly clean floor, any dirt or old finish will be sealed into the new finish and be visible. Most poor strip and re-finish jobs are from a failure to properly prepare a floor, and there is nothing worse than working a substantial number of hours only to have to redo the whole procedure over again.
2. As a general rule, you will need 1 gallon of diluted stripper per 100 square feet of flooring to be stripped. More product will be required if buildup is visible. Floor finish covers approximately 2000 square feet per gallon for the first coat, and 3000 square feet per gallon for each additional coat. You should plan on using the rule of 100 to determine how many coats of finish will be required. The Rule of 100 states that you add coats of finish until the percent of non-volatile solids of a floor finish reach approximately 100. For example a finish with 25% non-volatile solids requires 4 coats (4 x 25%=100). If you use the rule of 100, you will be assured the right amount of finish will be applied to protect the floor initially. You may want to add additional coats in high traffic areas or in front of counters etc.
3. Gather all the necessary equipment for the stripping job and check to insure that all tools are in proper working order. Shoe protection is recommended.
4. Remove all furniture, equipment, or free standing items that exist on the area to be stripped. Draw a diagram prior to removal to aid in putting everything back in its roper position when the finish job is completed.
5. Sweep the area if large debris is evident, otherwise a thorough pass with a dust mop treated with a dust mop treatment is recommended to remove soil and dirt.
6. Remove stubborn stains and chewing gum, as noted in your pre-inspection, prior to stripping the floor. Sometimes a 4 inch scraper is the best tool for removing difficult stains. Remember to not use any chemicals on the floor which may damage the floor covering.
7. Pre-spray baseboards and corners where buildup is visible with a heavy duty mixture of stripping chemical or a product specifically designed for this task. Typically the specialized chemicals to do this task are especially strong, please be careful not to injure yourself when using these chemicals.
8. Have the appropriate "Wet Floor Signs" placed strategically throughout the area you will be stripping. Remember that the chemicals will become extremely slippery when on the floor and special consideration must be taken to prevent injury.
9. Mix Bestway Time Saver stripping solution according to the label directions and apply liberally to the area. The stripping solution must have enough product available to completely dissolve the finish on the floor. You want to have "standing" chemical on the floor, getting the floor wet will not be nearly enough material. The stripping process will go much harder if the proper amount of stripping chemical has not been applied. Work according to your

plan for stripping, depending on the number of people in your crew. Remember not to start more area than you can safely and completely finish before the stripping chemicals dry. If stripping slurry dries before you can remove it, the metal interlocking compound (zinc) which allows a finish film to be removed is released immediately upon starting the stripping process and the polymer re-attaches to the floor without the metal interlocking release capability. When this happens the newly treated finish is nearly impossible to remove. If you've ever seen brown dark areas under a floor film, this is what happened.

10. The steps for stripping include: (A) mixing the stripper; (B) applying the stripper; (C) letting the stripper work for approximately 5 to 10 minutes; (D) physically agitate the stripper with a floor machine with a black pad; (E) remove the stripping slurry; (F) rinse the floor at least twice.

11. Use a doodle-bug pad to make sure the edges are free from any finish that the rotary machine could not reach. Sometimes a 4" scraper with a 48" inch handle is especially helpful in detailing around corners, edges, door jams, and areas where stripping machines cannot reach. Using a scraper or doodle-bug pad around the edges greatly enhances the final appearance of a finished floor. If you don't clean up the edges I guarantee you will not like the final results.

12. Remember to clean the tank vacuum when done, do not allow the stripper slurry to dry. Also do not allow the vacuum motor to suck the slurry foam into its inner workings. It will not be cleanable without disassembling the unit and creates a real mess. Our repair department sees several units a month with the complaint the unit no longer has suction. Upon inspection we find a cocooned vacuum motor inside of dried stripper slurry. Stripper solutions tend to make lots of foam, so be attuned to the machines warning signs of filling up. Use of defoamer may be necessary. But do NOT get the defoamer on the floor. Defoamers have silicones in them, and you will not be able to put finish on a floor that has silicone residues.

1.2: Rinsing the floor of any alkaline residue and perform detailing work.

1. Pick up all spent stripping solution preferably with an automatic scrubber or wet vacuum before any detailing or rinsing operations.

2. If using an auto scrubber the first rinse can be done with the machine filled with warm rinse water. If using a clean rinse mop, dip mop into clean warm rinse water. Do not ring out the mop completely. Lay the rinse water over the entire stripped area. A neutralizer may be added to the first rinse.

3. Pick up any rinsing solution with an auto scrubber, vacuum or mop.

4. Using a mop fairly dry, mop around edges and corners paying particular attention to not leave any stripping chemical behind. This is the detailing process to verify no stripping solution remains.

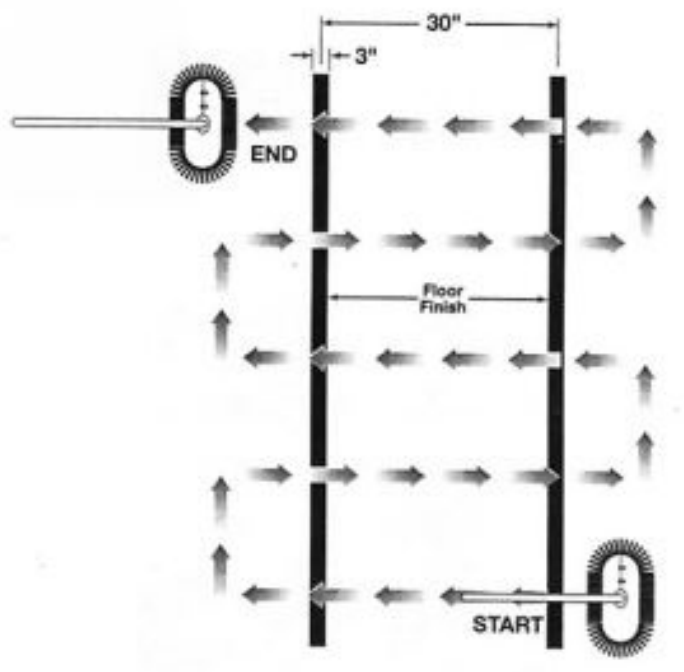
5. After the floor has dried from rinsing, check the floor for any residue or white film. You can check for white film by wiping your hand on the floor. If a film is still present, additional rinsing is required. It is important that the floor is completely clean otherwise floor finishes and seals will not adhere properly to the floor.

6. Allow the floor to completely dry before attempting to put any seal or finish on it. Do not allow any oil based products, silicones, or solvents to come in

contact with the floor at this time. Airborne materials, such as paint aerosol fumes, can rest on the floor. When finish is applied, the water based product will not properly cover those areas and cause a problem know as "fish eyes." Do not dust mop the floor during this process. Most dust mops are treated with an oil based treatment and will transfer the oil to the floor affecting the finish. If you burnish a floor after stripping and before the first coat, dust will be created. This dust must be allowed to settle and mopped up, and the floor allowed to dry again. Do not use a dust mop to clean the floor for the reason just mentioned.

2. Sealing & finishing

Two important points to remember about the application of floor finish are temperature and humidity. The temperature of the floor (not the air) must be at least 56 degrees. If this is not achieved the floor film will not properly bond and will most likely fail one way or another. When applying finish in the winter months, remember to look out for large picture/store front windows. These windows often will create a down draft of cold air that will lower the floor temperature or the finish below 56 degrees. Remember to look for these areas during the winter months. Humidity must be in a range where a person



would be comfortable. Extremes on either end create problems for the bonding process and can create a defective floor film. If necessary during the summer, run the air conditioner (if possible). In the winter try to avoid applying finish when you are in high static electric conditions.

2.1: Applying finish using Bestway's flat mop system.

This system incorporates a special synthetic head similar to a dust mop head on a swivel frame and handle. Simply pour two strips of finish approximately 3" wide and 30" apart on the floor. Then, using the flat mop applicator, walk

backwards between the strips spreading the finish as seen in the diagram. The lines of finish can be applied using a gallon container with a ¼" hole drilled in the cap and an 1/8" breather hole in the top of the handle. For large areas, two operators can be used for fast effective application. The first operator applies the strips of finish using two gallon containers with cap drilled as described above. The second operator then spreads the finish.

2.2: Applying finish using a mop and bucket.

1. Always use a clean rayon mop or a mop specifically designed to apply finish. Never use a cotton mop head for applying finish, cotton mop heads have cotton oil which can interfere with applying finishes. Never use a finish application mop for anything but applying finishes, clearly mark the mop head and store it in a separate location from those used to damp mop the floor.
2. Soak the finish mop head in warm water and wring it out thoroughly. Water will fill the mop fibers, thus saving finish.
3. When using a bucket and mop, put a plastic trash liner in your mop bucket to assure that your finish will not become contaminated from previous chemicals which may have been used in the mop bucket. This will also assist you in faster cleanup.
4. Dip mop into bucket of finish and push the mop head lightly into the wringer. You want the mop to be full of finish but not dripping. A gentle downward push of the mop handle will also cause excess finish to be removed.
5. Start applying the finish in a corner furthest from your exit point and begin by outlining along baseboards. When doing larger reas where the finish may have an opportunity to dry before you can return for a parallel run, seek to establish an outline that will be consistent with the floor tiles.
6. Fill in the area between the outlined edges, applying finish with a smooth overlapping stroke. We recommend that all finishes be applied in medium to thin coatings. Refill the finish applicator as necessary and make sure the finish is being applied evenly. Do not allow the applicator to start to streak as you are applying finish.
7. Continue applying finish, covering each area before the adjoining area is dry. A smooth and even application will assure all of the pores in the floor are properly filled for lasting protection.
8. After the first coat has dried, normally in 15 to 25 minutes, apply a second coat in a different direction following the procedure outline above. The drying time will be dependent on the humidity and air flow in the room. Do not use high speed blowers to speed the drying process; they interfere with the process of properly forming the coating. You can however; use blowers to move air around an area provided that the blower does not directly aim at the floor. If the floor coating is not dry in a maximum of 45 minutes you need to use a thinner coat provided that humidity is in a normal range.
9. Subsequent coatings should be applied as above. Be sure to allow proper drying time between coats. If multiple coats are to be applied at one time, the first coats should be applied 6-8 inches away from the walls, partitions, display cases, etc. The final one or two coats should be applied to the entire

floor. This process keeps the finish from building up along the edges where there is no traffic.
Failure to confirm the previous coating is completely dried before the next coat is applied can cause a condition known as "pulling." Pulling is when the applicator sticks to the top of the previous coat and then pulls the skin away exposing partially died finish below. When this happens there is no fix other than stripping again, or living with the problem (and it looks really bad). 10. DO NOT RETURN ANY FLOOR FINISH BACK TO THE STORAGE CONTAINER. Any floor finish that comes out of the container must be considered spent, and is to be thrown away at the end of the job. Failure to do this will create a smell that will knock you over the next time you open the top. When using Bestway's flat mop finishing system, there is no chance of contamination so wasted finish is not a concern.
11. When the coat of finish is applied, complete the job by cleaning all tools. Stripping slurry must be cleaned from the wet vacuum before it dries. It will be next to impossible to remove the dried slurry, and it WILL ruin the vacuum system.

3. Daily maintenance

3.1: Cleaning the floor with mop and bucket

1. Sweep the area if large debris is evident, otherwise a thorough pass with a dust mop treated with a dust mop treatment is recommended to remove dry soil and dirt.
2. Always use Bestway's Cleanbrite neutral detergent mixed according to the directions when cleaning highly finished floors. Alkaline cleaners can soften, damage, and create unsightly films causing additional maintenance. Strong alkaline cleaners actually start stripping the floor finish.
3. When wet mopping a floor it is important to change the mopping solution when visible contamination occurs. There is nothing worse than mopping a floor with dirty water or using a heavily soiled mop head. Dirty water does not remove soils, it simply spreads dirt around. Start with clean equipment and be sure to clean it when you are done.
4. Apply mopping solution liberally, but do not flood, allowing the solution to contact the floor and not dry out as you are mopping. Do only an area applicable for the mop size you have, and frequently return to the mop bucket to rinse the dirt off. A smaller mop, 16-20oz, will require more frequent returns to the mop bucket, conversely a larger mop, 24-32oz, does not require as many trips but is much heavier to pull. Physical agitation with the mop may be required, and clamping a green hand scrubbing pad in with the mop head can assist in agitation.
5. Remember to place appropriate signs or barricades to prevent entering an area where wet floors can cause loss of traction to equipment or shoes.

3.2: Cleaning the floor with an automatic scrubber

1. Sweep the area if large debris is evident, otherwise a thorough pass with a dust mop treated with a dust mop treatment is recommended to remove dry soil and dirt.
2. Perform any pre-operations checks on the scrubber unit as described by the manufacturer or distributor. These checks typically include checking the batteries, brushes, pads, squeegee assembly, etc. Remember a properly

maintained machine performs much better and provides better results. We've seen terrible looking floors because a user failed to change a $15.00 squeegee blade on an $8000.00 piece of equipment.
3. Always use Bestway's Cleanbrite neutral detergent mixed according to the directions when cleaning highly finished floors. Alkaline cleaners can soften, damage, and create unsightly film, which is even more apparent when using an automatic scrubber. By causing more agitation than a mop, an automatic scrubber can leave side trails of solution. Be careful not to leave these trails, they take longer to dry and thus create a longer hazard than necessary. A properly maintained machine should not leave any wet areas behind; some machines like our Tomcat brand are more capable of preventing those problems.
4. Fill the scrubber solution tank with water first, then add the proper amount of chemical. A faster and more accurate method for filling automatics is using a chemical proportioner. The proportioner mixes the chemical with water at a predetermined dilution rate. This way if you only need one half of a tank you are not guessing at the amount of chemical to add. They also tend to decrease the cost of cleaning floors by eliminating chemical waste. We have several systems from Dema that perform this function.
5. Choose an appropriate pattern that will assure full coverage. Turn on the water, set the pads or brushes down on the floor, drop the squeegee, turn on the vacuum, and start moving forward. Some machines will require you to turn the water down or off when making turns to avoid leaving water through the corners. If trails are left behind, quickly return with a damp mop and bucket to remove the excess water before it dries.

4. Periodic maintenance

4.1: Dry burnishing with high speed machines (above 1000 RPM).

1. Sweep the area if large debris is evident, otherwise a thorough pass with a dust mop treated with a dust mop treatment is recommended to remove dry soil and dirt. All buffing programs are actually "controlled abrasions processes," therefore it is necessary to remove all soil prior to burnishing or you will run the risk of embedding soils into the finish film and causing unsightly yellowing.
2. Follow distributor recommendations as to proper pad for your machine and the floor finish you have selected. If you are not sure about the proper pad, ask your Bestway Sales Representative, we will be glad to assist. As a general rule there are no magic combinations that are always winners. Several factors make the best pad on one floor perform terribly on another. Factors such as machine speed, pressure of the pad on the floor, the pads construction materials, moisture in the floor film, finish properties, dirt embedded in the film, the use of restorer products, etc. all determine which pad will provide optimum results.
3. After dry burnishing run a dry dust mop over the floor to remove any dust from the burnishing process. The dust left behind can be a slipping hazard.

Pointer: never treat a dust mop just prior to using it. Always treat a dust mop at least 12 hours before using it to avoid spreading a film on the floor.
4. Do not use this process if the tile is asbestos. Typically tiles made prior to 1976 that are 9" x 9" are asbestos. There are some 12" x 12" asbestos tiles that were used; however, they are very rare.

4.2: Spray buffing.

1. Sweep the area if large debris is evident, otherwise a thorough pass with a dust mop treated with a dust mop treatment is recommended to remove dry soil and dirt. All buffing programs are actually "controlled abrasions processes," therefore it is necessary to remove all soil prior to burnishing or you will run the risk of embedding soils into the finish film and causing unsightly yellowing.
2. Using Bestway Spray Back, lightly mist the product through a trigger sprayer directly onto the floor ahead of the buffer. Spray compounds differ greatly in their abilities, but their purpose is all the same: to provide lubrication to the pad surface, assist in working out heavy scuff marks, and to facilitate better blending in scratched areas. It is a typical assumption that spray buffing compounds "add" something back to the floor, they do not add anything back and is not a substitute for scrub and re-coat procedures. There is also a school of thought that floor finishes can be diluted to perform the same type of function as a true spray buffing compound. It is true that this method can work in some instances; there is a significant difference between the chemical construction of floor finishes and spray buffing compounds. For example, spray buffing compounds can contain solvents designed to assist in removing black heal marks; finishes however do not have any solvents in them.
3. Buff the area where the spray buffing compound has been applied until dry. The time required will vary depending on the speed of the equipment and the amount of compound applied. Move on to another area when area is dry and without swirl marks.
4. As you work this process look for depth of gloss. Depth of gloss can aid in determining when it is time to scrub and re-coat. Pay particular attention to traffic patterns and high volume areas, they will need attention before an area seldom traveled.

4.3: Restoring using ultra high speed machines & Restoration.

1. Sweep the area if large debris is evident, otherwise a thorough pass with a dust mop treated with a dust mop treatment is recommended to remove dry soil and dirt. All buffing programs are actually "controlled abrasions processes," therefore it is necessary to remove all soil prior to burnishing or you will run the risk of embedding soils into the finish film and causing unsightly yellowing.
2. Wet cleaning should be performed as this product is strictly a restoring product and not a mopping detergent. It is important to properly clean the floor before using any of the restoring product.
3. Dilute Bestway’s Restoration with 4 parts of water
4. Using the same procedure previously described for sealing and finishing. Use either Bestway’s flat mop system or a mop and bucket. Typically these

products are mopped on and allowed to dry. When dried they leave a haze film behind which is buffed off as in the dry burnishing process. This method tends to cut down on the amount of dust produced because the finish film gains moisture from the restorer product while it is drying. The increased amount of moisture does two functions. First it softens the finish film making it more pliable, and second reduces the amount of airborne dust. These advantages for restorer products are only gained if the burnishing process is completed with 30 minutes or so after the product has completely dried, otherwise the film re-hardens.

5. Restorative Maintenance

These procedures are used when the above steps will not bring the finish to your expectations, or the film is wearing off and additional finish needs to be applied.

5.1 Top Scrub and Re-coat with a single disc machine.

1. Sweep the area if large debris is evident, otherwise a thorough pass with a dust mop treated with a dust mop compounds is recommended to remove dry soil and dirt.
2. Depending upon the depth you wish to penetrate into the finish film during the scrubbing process, use either a black pad for more aggressive penetration or a green/blue pad for less aggression. An all purpose cleaner over a neutral cleaner will also increase penetration. Always mix chemicals according to manufacturers instructions.
3. Apply solution liberally, but do not flood, allowing the solution to contact the floor for at least 2-3 minutes. Thoroughly scrub the floor film during this waiting period.
4. Pick up the solution with a wet dry vacuum, or less preferably a wet mop. Use a detail mop with clean solution to remove any trails or foot prints.
5. (optional) Use a dry buffing technique described above to "level" the floor before applying any floor finish. This will enhance the quality of the completed floor. However, care must be observed to allow any airborne dust created to settle and then another wet mopping should be performed with water to remove dust. Allow the floor to dry completely.
6. Apply one to two coats of finish in the traffic areas as described in the "Applying Floor Finish" procedure. For appearance sake this coat must be applied evenly, and if necessary feathered at the edges. If lines are apparent where the new finish has been applied, wait at least 2 hours and lightly buff the edges. Try to avoid going "wall-to-wall," as this creates the build-up along edges which everyone hates to strip because machines don't go all the way to the edges.

5.2 Top scrub and Re-coat using an automatic scrubber.

1. Sweep the area if large debris is evident, otherwise a thorough pass with a dust mop treated with a dust mop compounds is recommended to remove dry soil and dirt.
2. Use the same procedures for "Cleaning with an Automatic" adding a double scrub. A double scrub is operating the machine as normal, except leaving the vacuum off and the squeegee up. This scrubs the floor and leaves the chemical to work on removing any embedded soil. On the second pass operate

the machine as normal, placing additional chemical on the floor. See discussion in procedure 1 for information about choosing a floor pad for the automatic. Keep in mind that an automatic generally can place more pressure on the floor than a single disc machine.
3. Have a clean detailing mop ready to pick up any left over chemical.
4. Using a neural detergent in this process will alleviate the need to rinse; however, performing a cleaning procedure with stronger chemicals requires them to be neutralized before applying finish. This can be done by adding a small amount of a neutralizer to a fresh tank of water in the automatic, and rinse the floor.
5. (Optional) Use a dry buffing technique described above to "level" the floor before applying any floor finish. This will enhance the quality of the completed floor. However, care must be observed to allow any airborne dust created to settle and then another wet mopping should be performed with water to remove dust. Allow the floor to dry completely.
6. Apply one to two coats of finish in the traffic areas as described in the "Applying Floor Finish," procedure. For appearance sake this coat must be applied evenly, and if necessary feathered at the edges. If lines are apparent where the new finish has been applied, wait at least 2 hours and lightly buff the edges. Try to avoid going "wall-to-wall," as this creates the build-up along edges which everyone hates to strip because machines don't go all the way to the edges.

Got more questions? Or you're really confused now? Ask your Bestway Products Representatives, we would be glad to help!

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