

**U.S. Postal Service  
Washington, DC 20260-7310**

**Maintenance Handbook MS-10  
Floors, Care and Maintenance**

**Transmittal Letter 1  
May 15, 1988**

**A. Explanation**

Maintenance Handbook MS-10, *Floors, Care and Maintenance*, replaces Handbook S-3, *Floors, Care and Maintenance*, dated September 1969.

**B. Distribution**

1. **Initial.** Copies of this handbook are being distributed to all facilities. Management should ensure that these handbooks are provided to maintenance personnel.
2. **Additional Copies.** Order additional copies by submitting Form 7380, *Supply Center Requisition*, to the Supply Center, specifying HBKMS10.

**C. Rescissions**

Handbook S-3, *Floors, Care and Maintenance*, issued September 1969, is rescinded.

**D. Comments and Questions**

Suggestions for improving this handbook are solicited from all sources. Anyone wishing to make such recommendations should use the preaddressed comment cards at the back of this handbook.

**E. Effective Date**

These instructions are effective upon receipt.

  
James C. Wilson  
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**PREFACE**

This handbook on floor care and maintenance applies to all facilities occupied by the U. S. Postal Service where the Service is responsible for cleaning and maintenance.

This handbook is for guidance of postmasters, maintenance managers, building superintendents, and others directly involved in the care and maintenance of floors and grounds.

All employees engaged in the maintenance or cleaning of floors and grounds must be provided with a copy and are required to be familiar with the contents.

These procedures must be followed in order to prolong the life and preserve the beauty of our floors while obtaining the required level of appearance without waste of workhours.

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**SAFETY SUMMARY****INTRODUCTION**

The following are standard safety precautions that do not appear elsewhere in this handbook except where special emphasis or precaution is required. Personnel working on this equipment must understand and apply these precautions in all phases of maintenance.

Safety is the responsibility of every individual in the U.S. Postal Service. The supervisor is responsible for instructing personnel in safety practices applicable to the operation and maintenance of the equipment. Likewise, it is the responsibility of each individual operating and maintaining the equipment to understand and observe established safety standards and procedures. U.S. Postal Service Handbook EL-803, *Maintenance Employee's Guide to Safety*, can be ordered by sending Form 7380, *Supply Center Requisition*, to your area supply center.

**SAFETY PRECAUTIONS**

The installation, operation, and maintenance of electronic equipment has several elements of danger. Carelessness can result in injury from electrical shock. The following precautions must be observed:

- \*DO NOT run equipment without proper authority.
- \*DO NOT operate unsafe or defective equipment.
- \*DO NOT engage in horseplay.
- \*DO NOT operate equipment without adequate safety guards.
- \*Avoid unsafe acts and conditions.
- \*Follow all safety precautions.
- \*Keep mentally and physically alert.
- \*Practice good housekeeping.
- \*Report all hazardous conditions and operations to your immediate supervisor.
- \*Use all designated safety devices.

**WARNING**

**Always remember the following safety precautions and observe them when working on or around electrical equipment.**

- \*Know the location of the main power shutdown devices.
- \*Know how to summon medical aid.
- \*Pull the fuses, open the circuit breakers, or disconnect the circuits from their source of power and discharge all capacitors to protect yourself, the test equipment, and the equipment being tested.
- \*Place a security lock on the equipment circuit breaker door panel to avoid inadvertent power application.
- \*Place a DANGER sign, "DANGER, DO NOT USE OR OPERATE," or a similar warning note at the switch or circuit breaker of the circuit being worked on.
- \*Do not rely on safety interlock devices.

## **SAFETY SUMMARY**

## **FLOORS, CARE AND MAINTENANCE**

- \*Do not wear metal identification bracelets, wristwatches, or rings while working on electrical equipment.
- \*Keep clothing, hands, and feet dry if at all possible.
- \*Do not perform work on energized equipment unless authorized by your immediate supervisor.
- \*If it becomes necessary to work on the equipment with power applied, keep one hand free at all times (behind you or in your pocket).
- \*Make sure that the test equipment is grounded to the equipment under test unless otherwise specified.
- \*Be sure that there is no power applied to a circuit when making a continuity or resistance check. (The meter may be damaged.)
- \*Always use the correct tool for the job.
- \*Carefully inspect the insulation of test leads to the test equipment. The slightest break in the insulation is dangerous.
- \*Turn off the power before connecting alligator clips to any circuit.
- \*Avoid the use of toxic or flammable solvents for cleaning purposes unless specifically required.
- \*Where air pressure is required for cleaning, use a low-pressure (30 psi or less) air source; a blower/suction-type cleaner is preferred.
- \*Eye protection (goggles or face mask) must be used when using compressed air for cleaning.
- \*Do not take anything for granted. When working with inexperienced help, check every operation before it is performed.

### **ELECTRICAL FIRE**

In the event of an electrical fire use a Type C, BC, or ABC extinguisher only. Do not use water, soda-acid, or any other liquid stream extinguisher. These present a shock hazard to the user and will cause considerable damage to the electrical equipment.

### **OPERATING SAFETY SUMMARY**

- \*Do not wear loose-fitting clothing, jewelry, ties, or other articles that could become caught in the machine.
- \*Keep hair away from the equipment to avoid its becoming entangled in the machine.
- \*Keep fingers, hands, and arms clear of feed belts, screws, chains, gears, and pulleys.
- \*Never place your hand on any moving part while the equipment is in operation.
- \*Always stop the equipment before attempting to clear any debris from the track areas.
- \*Make certain that personnel are clear of moving parts before starting the equipment.
- \*Always sound warning alarm horn before starting the equipment.
- \*Stop equipment before opening any door or panel on the machine.
- \*Do not place food or drink on any part of the equipment, even if it is not in operation.

### **MAINTENANCE SAFETY SUMMARY**

- \*Do not defeat any of the interlock switches unless authorized by your immediate supervisor.
- \*Keep the equipment power off when performing the preventive maintenance procedures.
- \*Keep the work area clean and neat.
- \*Warn others of possible hazards.
- \*Use goggles or a face mask when using compressed air for cleaning.

\*Use extreme caution when checking or working in the vicinity of any electrical circuit.

**IDENTIFICATION OF SAFETY STATEMENTS:**

**WARNING** - identifies a hazard or procedure that could cause bodily injury or loss of life.

**CAUTION** - identifies a hazard or procedure that could result in equipment damage or destruction.

**NOTE** - identifies a condition or task that requires special attention.

**CHAPTER 1****IMPORTANCE OF FLOOR CARE****110 INTRODUCTION**

Floor care represents the average housekeeping department's greatest expense. In the average postal facility, 40 to 50 percent of the cleaning activities are devoted to floors. Floors represent a large capital investment for the Postal Service. The life and beauty of the floors can be prolonged with proper care and scheduled maintenance. Additionally, well-kept floors reflect good housekeeping practices and promote a safe and healthful environment for customers and employees.

**120 TYPES OF FLOORING**

Many types of flooring exist. Each type requires a different treatment during cleaning operations. The various types of floors react differently to compounds used in their cleaning. Improper cleaning techniques can affect the finish of floor surfaces; therefore, the cleaning materials used must not harm the particular

type of floor. For example, wood floors are absorbent and can be easily damaged by water. Asphalt tile and rubber flooring materials are not easily affected by water, but can be damaged by oils or solvents.

**130 CHANGES IN FLOOR FINISHES**

Floor finishes such as waxes, polymers, acrylic coatings, metal interlock, and various water- or solvent-based resins have had dramatic changes because of the need for a detergent-resistant product. After repeated mopping, these improved finishes retain their gloss, slip resistance, and durability. The finishes can be removed easily during stripping operations. Using these improved finishes greatly reduces maintenance cost. This handbook is not intended to be all inclusive, but is intended to be used as a basis for floor care and maintenance. No specific floor maintenance system is recommended. Systems change and a finish that meets current floor care needs may not meet future floor care needs.

## CHAPTER 2

## SAFETY

**210 INTRODUCTION**

Accidents result from unsafe acts or unsafe conditions. Accidents do not just happen; they can be prevented by using common sense and staying alert in the performance of all tasks. The Postal Service has the responsibility of providing a safe and healthful working environment for its employees. However, safety is the responsibility of every individual in the U. S. Postal Service. The supervisor has the responsibility of instructing employees in safety practices applicable to the operation and maintenance of the equipment.

**220 USPS SAFETY PUBLICATIONS**

U.S. Postal Service handbooks and publications relative to safety are as follows:

- a. HBK EL-801, *Supervisor's Safety Handbook*
- b. HBK EL-803, *Maintenance Employee's Guide to Safety*

**230 EQUIPMENT****231 Storage**

Janitorial carts, mops, mop wringers, buckets, or other equipment must not be left where someone may trip over them (see Figure 2-1). Always store equipment off the workroom floor in approved areas. Store treated sweeping mops and treated dust cloths that are soiled in approved covered metal containers.

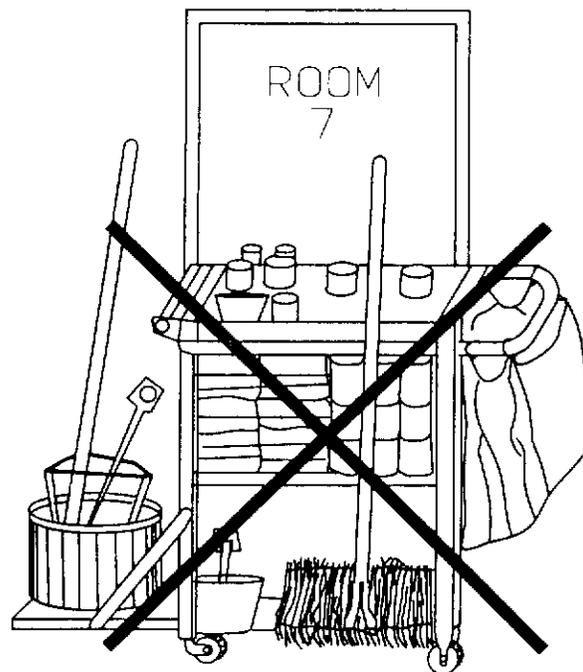


Figure 2-1. Custodial Cart Blocking Doorway

232 Use

**232.1 Electrical Equipment.** Improper use of electrical equipment creates a potential shock hazard. Inspect electric cords on equipment, including extension cords, before using. Remove equipment with frayed cords, loose wiring, and defective grounds or plugs from service. Attach a properly completed Form 4707, *Out of Order (tag)*, to defective electrical equipment immediately. A sample of a properly completed Form 4707 is shown in Figure 2-2.

Take the equipment out of service until it is repaired. Do not remove Form 4707 from defective equipment of any type until it has been properly repaired. Have damaged power cords (cut, worn, frayed, or broken, as shown in Figure 2-3) replaced by authorized personnel. The taping of power cords to effect repair is not acceptable. To avoid a tripping hazard, keep electrical cords away from the path of people. Also, keep the cord away from the path of the equipment. Make certain the equipment power switch is in the off position before connecting or disconnecting electrical equipment to or from the power supply. Charge batteries in accordance with directions in HBK MS-11, *Industrial Storage Batteries*.

 PS FORM 4707, Dec. 1982 U.S. POSTAL SERVICE <b>OUT OF ORDER</b> <i>(Defective or Inoperative Equipment)</i>	
Type of Machine or Equipment	Number
Advance Buffer	27
Office	Date
Your Post Office	8/10/87
Description of Defect	
Cord Frayed Ground Missing.	
Handling Instructions	
Replace cord and plug. Return to Room 55.	
Employee	
J. Brown	
This equipment must be disconnected or properly locked out if connected to a power source.	
Type of Machine or Equipment	Number
Advance Buffer	27
Office Date	Date
Your Post Office	8/10/87
Employee	
J. Brown	
Turn this stub into you supervisor. Affix tag to defective or inoperative article.	

Figure 2-2  
Properly Completed Form 4707

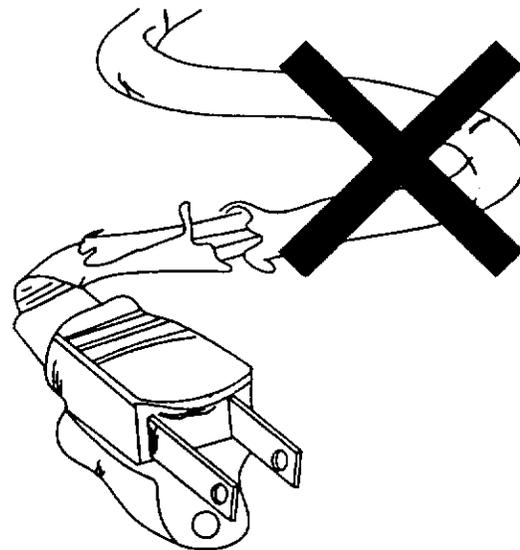


Figure 2-3  
Frayed Cord, Ground Prong Missing

**232.2 Mechanized Equipment.** Tag equipment that is defective with a properly completed Form 4707, *Out of Order (tag)*. Immediately notify supervisor about defective equipment.

**232.3 Ride-On Equipment (Sweepers/Scrubbers).** Follow the requirements listed below for ride-on equipment:

- a. Refer to HBK EL-803, *Maintenance Employee's Guide to Safety*.
- b. Inspect equipment for defects or unsafe condition before using it.
- c. Following the manufacturer's operating instructions, check all pertinent parts of the equipment, such as brushes, for abnormal wear and check safety lights to ensure that they are operational. Report defects to supervisor immediately. Do not use defective equipment.

- d. When using any powered equipment, be particularly alert to pedestrian and vehicular traffic.
- e. Do not leave the keys in equipment when it is unattended.
- f. Keep children away from equipment.
- g. Empty and clean equipment prior to storage.

**232.4 Power-Driven, Walk-Behind Equipment.** Follow the requirements listed below for power-driven, walk-behind equipment:

- a. Inspect equipment before using it.
- b. Following the manufacturer's operating instructions, check pertinent parts of the equipment, such as brushes, for abnormal wear.
- c. If equipped with vacuum bags, ensure that they are in good repair and are not full.
- d. When using any powered equipment, be particularly alert to pedestrian and vehicular traffic.
- e. If equipment is keyed, remove key when equipment is unattended. Put all nonkeyed equipment in a secure area before leaving unattended.
- f. Never leave equipment unattended while motor is running.
- g. Keep children away from equipment.
- h. Empty and clean equipment prior to storage.

**232.5 Protective Equipment.** While performing tasks, such as stripping floors, custodians should wear proper footwear and protective safety equipment. Before using cleaning chemicals, disinfectants, neutralizers, and floor finishes, always read and follow manufacturer's label instructions. If a product contains ingredients that are flammable, caustic, or irritating to the skin, wear proper protective safety equipment, such as face shields, safety gloves, and apron. (See Figure 2-4.) Always use chemical-resistant gloves when hands are put in cleaning, stripping, or sealing solutions. Use products that have objectionable odors only in areas that are properly ventilated and contain very few people.

## 240 SUPPLIES

### 241 Storage

Store supplies carefully. Store flammable materials and liquids only in approved safety containers. Store housekeeping chemicals in approved chemical storage areas. (See HBK MS-56, *Fire Prevention and Control*, Chapter 3 for additional information.)

### 242 Use

Special care must be taken when working with chemical products.

**WARNING**

Always read the instructions for use carefully. Follow them exactly. All containers of potentially hazardous materials must have labels which identify the material, its potential hazards, and precautions to take. If you cannot find a label on a container, or are uncertain of the contents or how to use the material, ask your supervisor.

**WARNING**

When using floor care chemicals, adequate ventilation must be provided.

**WARNING**

Never add water to cleaning chemicals or acid. Slowly add cleaning chemicals or acid to the water, pouring on the side of the container instead of directly into the water. This will prevent splashing or bubbling that could cause a chemical burn on the employee.

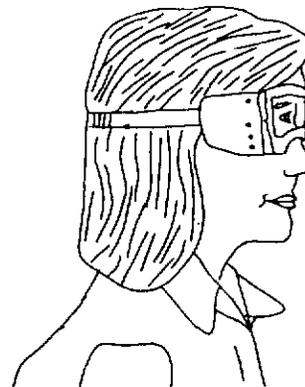


Figure 2-4  
Protective Goggles

**243 Recordkeeping**

Copies of OSHA Voluntary Form 174, *Material Safety Data Sheet (MSDS)*, must be on file for all chemical products. (See Figure 2-5.) Be familiar with the MSDSs for all chemicals used on the job. If there is any question consult your supervisor or the MSDS.

Figure 2-5. OSHA Form 174

**250 MATERIAL****251 Disposal**

Arrange for the prompt removal of all trash and waste material. Until such removal, use extreme care around the waste depository.

**252 Handling**

It may be necessary to move equipment and furniture when cleaning a floor. If manual lifting is required, lift

with the legs, not the back (see Figure 2-6). Use the following safe lifting procedure:

- a. Inspect area around object to be moved and the route over which it is to be carried.
- b. Estimate the size of the load. Never attempt to lift objects that are too heavy or awkward to handle without help.
- c. Keep balanced.
- d. Be sure of good footing.

- e. Bend knees and keep back straight.
- f. Wear hand protection if needed.
- g. Get a good grip on the load.
- h. Hold load close to body with chin tucked in.
- i. Do not twist the torso or fight a "lost load."
- j. Never lift objects in crowded areas. Clear the area to make lifting safer and easier.

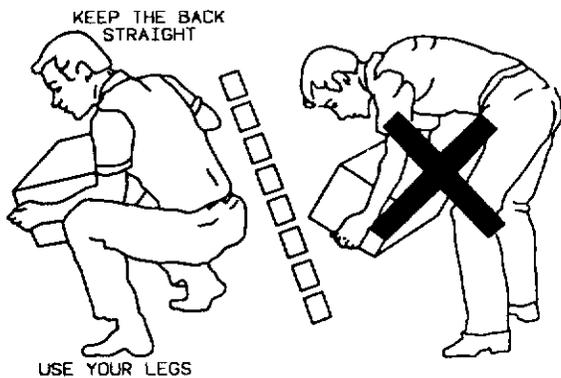


Figure 2-6  
Proper and Improper Methods of Lifting

## 260 REPORTING UNSAFE CONDITIONS OR NEEDED REPAIRS

Each Building Services employee should carry a supply of note paper and pencil to report conditions that they are not qualified to correct; for example: broken light switch, broken window, plumbing problem.

## 270 WET FLOORS

In order to avoid serious injuries caused by slips and falls on wet floors, use the following guidelines:

- a. Use Wet Floor signs freely and place them in high visibility areas to alert employees and/or customers.
- b. When possible, close off the area by barricading it with safety rope.
- c. During rainy or snowy weather, place safety matting in employee/customer entrances, such as lobbies and vestibules.
- d. Repeatedly mop up water that has been tracked in.
- e. When mopping or scrubbing floors, complete work in one small section at a time.
- f. After scrubbing or wet mopping the floor, check it for a slippery film. If a film is present, rescrub or mop the floor using a neutralizer to remove the film.

## CHAPTER 3

## CARE OF EQUIPMENT

## 310 INTRODUCTION

Equipment represents a very large capital investment for the Postal Service, because the Postal Service provides all of the equipment necessary to do the job. Proper care will prolong equipment life and ensure more efficient operation of equipment. Therefore, requirements for proper care of equipment must be followed.

## 320 MECHANICAL EQUIPMENT

## 321 Floor Machines

The requirements for proper care of floor machines, such as the machine shown in Figure 3-1, are as follows:

- a. Check switches, cables, plugs, and ground wires for defects before using or storing the machine. Do not use defective equipment. Tag the defective equipment with a properly completed Form 4707, *Out of Order (tag)*, and notify your supervisor immediately.
- b. When using a disc machine, with the power cord disconnected from power source, tilt the handle down and place the brush on the machine by hand. Never place the machine over the brush and attempt to lock it in place by clicking the starting switch.
- c. Examine the brush before each use, ensuring that the drive plate screws or bolts are tight.
- d. Thoroughly clean (rinse) the brush after wet usage and hang to dry. Never store the brush with the bristles down, or under the machine, because this will flatten the bristles and reduce the efficiency of the brush.
- e. Before storing disc machines equipped with a solution tank, check the screen, rinse the tank with plain water, and flush the hose. After each

use of machines with spray units, clean the spray heads and flush the system to prevent dried cleaning material from clogging the heads or system.

- f. Wipe off machine cable and housing with a damp cloth after each use.

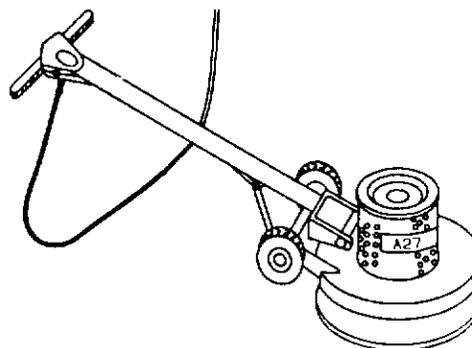


Figure 3-1  
Low RPM Floor Machine 160 to 185 RPM

## 322 Power-Operated, Combination Scrubber/Vacuums

The requirements for proper care of power-operated, combination scrubber/vacuums, such as the vacuum shown in Figure 3-2, are as follows:

- a. Follow manufacturer's instructions for maintenance, cleaning, and operation.
- b. Drain and flush the solution tank and distribution line after using the vacuum. Air dry the tank.

- c. Remove the sludge from the dirty water recovery tank. Flush the tank with plain water and allow it to air dry.
- d. After using the vacuum, wipe the squeegee clean and ensure that it is stored in the up position.
- e. See HBK MS-11, *Industrial Storage Batteries*, for complete battery maintenance instructions.
- f. Do not smoke, light matches, or use any open flame in the area where batteries are charged.
- g. Charge the battery before storing the equipment so it is ready for the next use.

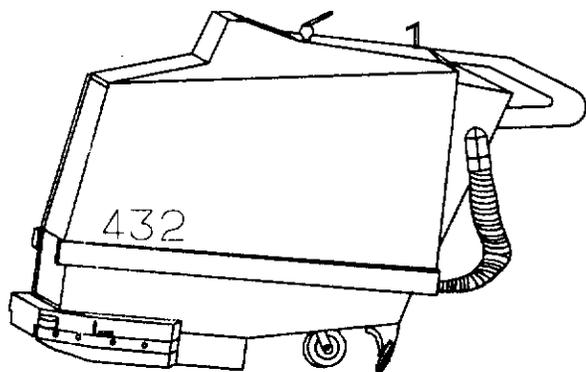


Figure 3-2  
Battery-Powered, Combination Scrubber/Vacuum

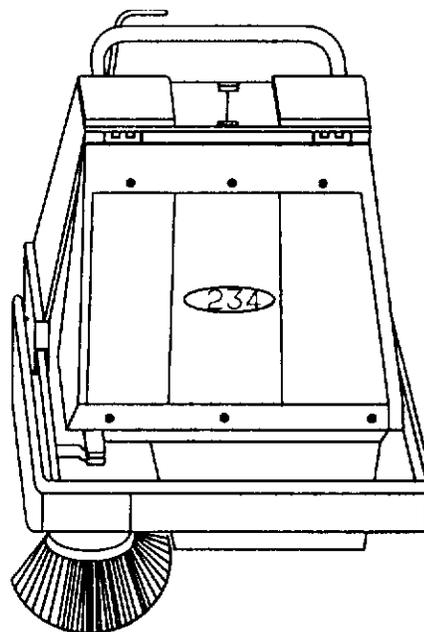


Figure 3-3  
Battery-Powered, Walk-Behind, Mechanized Sweeper

### 323 Mechanized Sweepers

The requirements for proper care of mechanized sweepers, such as the sweeper shown in Figure 3-3, are as follows:

- a. Follow manufacturer's instructions for maintenance, cleaning, and operation.
- b. Before using, inspect brushes for excessive wear.
- c. Keep filters in good operating condition.
- d. Agitate filters each time the contents of the hopper are dumped.
- e. Dump and clean the hopper before storing the sweeper.
- f. See HBK MS-11, *Industrial Storage Batteries*, for complete battery maintenance instructions.
- g. Before storing the sweeper, charge the battery so it will be ready for the next use.
- h. Do not smoke, light matches, or use any open flame in the area where a battery is being charged.

### 324 Wet/Dry Vacuums

The requirements for proper care of wet/dry vacuums are as follows:

- a. Inspect electric cords on vacuums, including extension cords, before using them. Do not use equipment with frayed cords, loose wiring, or defective grounds or plugs. Immediately attach a properly completed Form 4707 to a defective vacuum. Take vacuum out of service until it is repaired. Do not remove the Form 4707 from the vacuum until it has been repaired. Have damaged (cut, worn, frayed, or broken) power cords replaced by authorized personnel. Taping of power cords to effect repair is not acceptable.
- b. Check wands, hoses, and nozzles for clogs. Remove any clogs, before storage of the vacuum, by flushing and cleaning wands, hoses, and nozzles.
- c. After each wet use, check the filter and replace it if it is clogged or full. After each dry use, check the bag and replace it if it is clogged or full.

- d. After using the vacuum for wet applications, flush the tank and/or filter with water to remove sludge. Air dry the equipment before storing.

### 325 Carpet Extractors

- a. Inspect electric cords on carpet extractors, including extension cords, before using them. Do not use equipment with frayed cords, loose wiring, or defective grounds or plugs. Immediately attach a properly completed Form 4707 to a defective extractor. Take the extractor out of service until it is repaired. Do not remove the Form 4707, from the extractor until it has been repaired. Have damaged (cut, worn, frayed, or broken) power cords replaced by authorized personnel. Taping of power cords to effect repair is not acceptable.
- b. Check wands, hoses, and nozzles for clogs. Remove any clogs, before storage of extractor, by flushing and cleaning wands, hoses, and nozzles.
- c. Drain and flush the solution tank, including the distribution line, after each use and allow the tank to air dry.
- d. Remove the sludge from the dirty water recovery tank. Flush the tank with plain water and allow it to air dry.

### 330 MANUAL EQUIPMENT

#### 331 Buckets and Wringers

Wax allowed to dry on a bucket or wringer is very difficult to remove. Rinse out mop buckets and wringers after each use to prevent buildup of detergent, wax, and dirt.

#### 332 Wet Mops

Dirty mops will eventually sour and give off a highly objectionable odor. They also use up fresh detergent solutions and are ineffective in mopping operations. The requirements for proper care of wet mops are as follows:

- a. Thoroughly rinse and wring out the mops after each use. Shake mops to allow the strands to hang free, then hang to air dry.
- b. Store in approved areas only. Never store wet mops on the floor or against the wall.

#### 333 Dusting Tools

Store dusting tools upright on the handle or hang them on the wall. Never store them face down on the floor; this will cause the bristles to spread and reduce their efficiency.

#### 334 Squeegees

The requirements for proper care of squeegees are as follows:

- a. After each use, wipe the rubber blades clean and dry.
- b. Squeegees should not be stored with the blades touching the floor. Hang squeegees by the handles in a cool place away from the sunlight, since the blades are easily damaged. Never hang them outside to dry.

CHAPTER 4

FLOOR MATS

410 INTRODUCTION

Floor mats are used to prevent the tracking of soil (dirt, water, etc.), from entrance areas or from where the soil is produced, into and throughout the facility. The proper use of floor mats protects floors and reduces carpet wear. Floor mats should be large enough to allow each foot to be wiped off at least once. Mats should be placed in lobbies, vestibules, and other entrances during rainy or snowy weather to reduce slipping hazards and prevent tracking of water, snow, ice, and ice-melting compounds into the facility.

420 TYPES OF MATS

At present, more than 50 different types of mats are available commercially. The types of mats selected depend upon the needs of the facility, such as climate, amount of inclement weather, and floor type. A list and description of the more popular types of mats follows:

- a. Carpet Mats. Carpet mats are an excellent choice to protect lobbies during wet weather. They are constructed of nylon or carpet pile and are available in various sizes. These mats effectively prevent tracking of grit, fine dust, and moisture. Due to their heavy backing, carpet mats lie flat without taping.
- b. Link Mats. Link mats effectively prevent tracking of heavy soil, but pick up little moisture. They are constructed of plastic, vinyl, or rubber and can be used either inside or outside the building.
- c. Tire Mats. Tire mats are extremely durable and effectively prevent tracking of soil. They are made from old tire casings and are low in cost. Tire mats may be used inside or outside the building.
- d. Cocoa Mats. Cocoa mats are made of tough cocoa fibers. Due to their porous construction, they very effectively prevent tracking of soil and moisture. These mats currently are not authorized for use in the Postal Service, because they cannot be secured to the floor and present a potential slip/trip hazard.

430 APPLICATION OF MATS

Size is one of the most important factors concerning application of mats in places such as lobbies, vestibules, and other entrances and exits. They must be large enough to be walked on, because small door mats are often kicked aside or stepped over. They should be of a type and construction that prevents tripping hazards. Inspect mats often. If curling occurs, as shown in Figure 4-1, tape down the edges with pressure-sensitive or duct tape to prevent tripping. The following examples of mat usage are not intended to limit the use of mats, but to demonstrate their effectiveness.

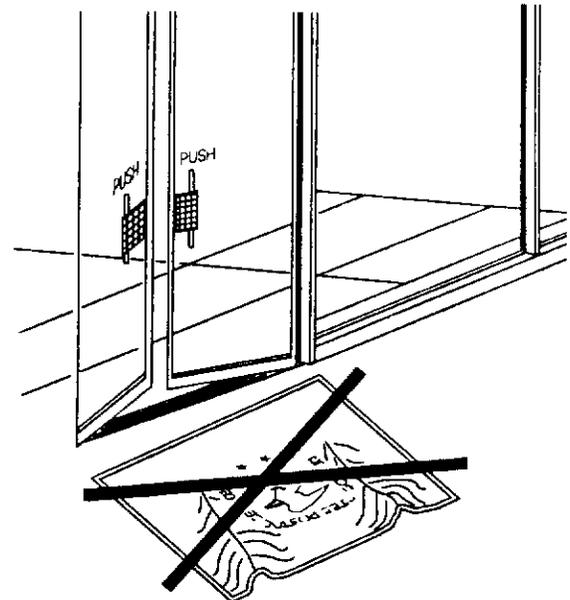


Figure 4-1  
Mat has Curled Edge - Unsafe

- a. Use mats at employee and customer entrances. Use extra mats at these locations during inclement weather.

- b. Use mats in self-service postal units and/or Post Office box areas to catch water dripped from clothing and shoes during inclement weather.
- c. Use mats at the transition point from the boiler room to the workroom floor or other areas. This prevents the tracking of degreaser, soot, solvents, etc. from the boiler room to other areas.

#### 440 CLEANING OF MATS

Most mats are easily cleaned. They should be cleaned periodically to remove the accumulated soil. Carpet mats can be turned upside down and beaten on the back, causing the embedded dirt to drop out, or they may be vacuumed. Most mats can be readily rolled up (see Figure 4-2), carried to the wash area, and washed with a hose.

#### NOTE

Never seize long or heavy mats at one end and drag them out of their position on the floor. The strain from dragging the mats may cause a break or tear, or the mats may develop curled edges that present a safety hazard. To remove a long section of matting, roll it up and have two employees carry it.

Allow mats to drain well before returning them to the floor. Moisture allowed to remain under matting for extended periods may stain the floor. Mats can be rented from firms such as a large commercial laundry specializing in uniforms and wiping cloths. The commercial firm replaces the mats periodically with clean ones that have been treated with a dust-catching solution.

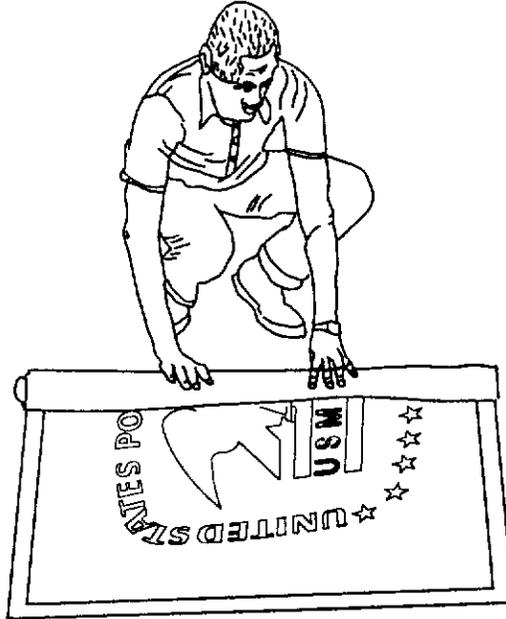


Figure 4-2  
Employee Properly Rolling Up Mat for Cleaning

## CHAPTER 5

## SNOW AND ICE REMOVAL

**510 INTRODUCTION**

Snow causes walkways, steps, driveways, and parking areas to become hazardous. Attention must be given to areas where customers or employees may slip and fall or where driving conditions are hazardous. The timely removal of snow and ice is an absolute necessity to avoid serious injury to customers or employees. Ensure proper and adequate training is provided to all employees who operate snow blowers or snow removal equipment. The manufacturer's operating and maintenance instructions should be followed precisely and used to instruct in proper operation.

**520 SNOW AND ICE REMOVAL PLAN**

In areas where snow and ice present a problem, establish a snow and ice removal plan. If possible, begin snow and ice removal before the snow and ice is walked on. This prevents employee/customer injuries and makes removal easier. Once snow is walked or driven on, it becomes packed and is much harder to remove. Review snow and ice removal plans to ensure that they are adequate and that employees are properly trained in snow and ice removal methods and the operation of snow and ice removal equipment.

**530 MAINTENANCE AND SAFETY OF EQUIPMENT**

Ensure that preventive maintenance is completed on all snow and ice removal equipment, such as snow blowers and plows, before the winter season. Conduct a safety check in conjunction with preventive maintenance to ensure that all safety devices on snow and ice removal equipment are in place and in working order. Refer to HBK MS-1, *Operation and Maintenance of Real Property*, for further information on equipment maintenance. Follow manufacturer's label instructions on powered equipment.

**540 DE-ICING PRODUCTS****541 Recommendations**

Keep de-icing products available in amounts required for the full season. Calcium chloride, anhydrous type, in pellet form is recommended for the melting of ice on roadways, while calcium chloride in flake form is recommended for use on sidewalks and other areas of pedestrian traffic.

**542 Use**

Spread ice-melting products evenly and apply them in a timely manner. Apply more than once a day, if necessary, in areas of extremely low temperatures and/or high winds. After applying snow- and ice-melting products, remove the melted residue from areas of pedestrian traffic to prevent refreezing.

**543 Precautions**

Observe the following precautions when using ice-melting products:

- a. Use a scoop shovel or conventional broadcast-type spreader.
- b. Keep hands as dry as possible. Wash hands after using ice-melting products and dry thoroughly.
- c. Do not dump the material because dumping raises a caustic cloud of dust.
- d. Wear rubber gloves; do not use cloth gloves because the powder sifting inside is hard to remove.
- e. Do not assign employees to this task if their skin is constantly irritated when handling calcium chloride.
- f. Place mats at all facility entrances to protect floor surfaces and prevent slips and falls when ice-melting products are being used.

**544 Removal**

Chloride compounds tracked onto floors cause considerable damage to floor finishes. To clean floors after chloride has been tracked onto them, first perform a damp-mopping operation to pick up as much of the tracked residue as possible. Then perform a wet-mopping operation to suspend and remove the residue. You will have to change the detergent solution often, since chloride deposits use up detergent solutions very quickly.

## CHAPTER 6

## CLEANING METHODS

## 610 INTRODUCTION

Various cleaning methods are used in the Postal Service depending on the job to be done. Some of the methods used include policing, dry maintenance (dust mopping), manual and mechanized sweeping, damp mopping, wet mopping, scrubbing, spray buffing, and burnishing. Detailed descriptions of these cleaning methods are presented in this chapter.

## 620 POLICING

Policing of floors requires the removal of cigarette butts, gum, spills, and other litter to restore the appearance of cleanliness and order. (See Figure 6-1.) It does not give the same result as sweeping or other floor cleaning operations. Needed tools and equipment are toy corn broom, putty knife (for gum removal), cloth or mop (for spills), plastic spray bottle containing cleaning solution, supply cart, and/or janitor's cart. Tools needed will vary as shown in the following examples:

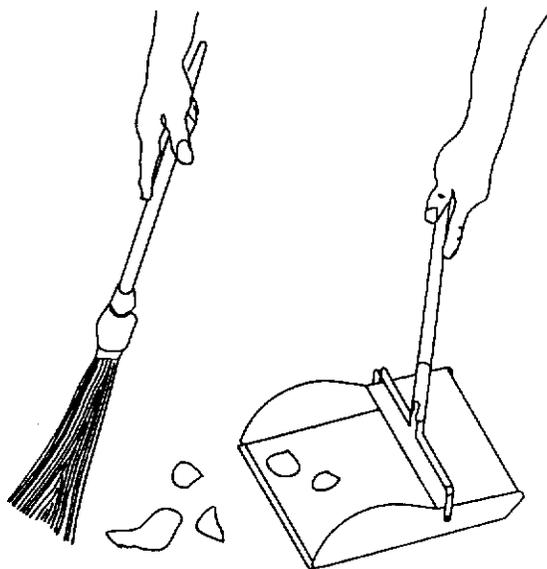


Figure 6-1  
Toy Broom and Pickup Pan

- a. For lobby and corridor policing, a toy broom or small short-handled brush and a dustpan or pickup pan may be adequate.
- b. Swing room policing requires a damp cloth as well as a pickup pan and toy broom.
- c. A large waste/trash container is needed when policing a workroom area for emptying waste receptacles in the area.

## 630 DRY MAINTENANCE

Dry maintenance (dust mopping) is the most frequent cleaning method used in resilient, nonresilient, and wood floor care. The use of treated sweeping mops and/or cloths protects the floor finish and helps maintain the surface gloss. Treated sweeping mops and cloths remove surface dirt and provide adequate dust control with little or no use of water and solvents. Water and solvents could damage these types of floors, so they should be used as little as possible. When dry maintenance does not clean the floor, use damp mopping procedure. Scrub only when dry maintenance and damp mopping do not clean the floor. A proper dry maintenance program reduces the need for wet mopping.

## 640 SWEEPING

## 641 Manual

**641.1 General.** All surface dirt must be completely removed, not pushed from one location to another. Treated sweeping mops and cloths remove the soil instead of scattering or pushing it around. They also provide a higher quality cleaning level and reduce the frequency of other cleaning operations.

**641.2 Applications.** The following guidelines should be considered when deciding whether or not to use treated sweeping:

1. Use treated sweeping equipment on all dry interior floor surfaces, except carpeted floors.

- b. Do not use sweeping compounds on any surface. Absorbent compounds (not sweeping compounds) may be used to remove oil and grease from floors.
- c. Use hair brushes, fiber brooms, and straw brooms sparingly, if at all, and then use mainly on outside surfaces.
- d. Use sweeping mops and/or cloths that are treated with a compound that picks up and holds soil and dirt. Use each of these with a sweeping tool, the frame of which is equipped with a swiveling head that permits complete tool maneuverability.
- e. Use sweeping cloths for sweeping smooth floors in offices and other areas where the use of a sweeping mop is not compatible with the area's activity and equipment. For example, use the sweeping cloth on the wood floor of a small, congested area that is too small for easy use of a sweeping mop.
- f. Use sweeping cloths without a sweeping tool for hand dusting other smooth surfaces such as furniture, fixtures, distribution cases, walls, ceilings, overhead pipes, ducts, and conveyor housings.
- g. Use treated sweeping mops on all rough surfaces and on smooth surfaces where accumulation of litter prevents effective use of sweeping cloths.

**641.3 Equipment.** The following equipment is needed:

- a. Treated sweeping mop and/or cloth with handle and frame
- b. Putty knife
- c. Toy broom
- d. Pickup pan or dustpan
- e. Container for sweepings

**641.4 Treated Cloths.** Treated cloth rental service is available in most sections of the country. When unavailable, obtain disposable treated cloths and sweeping tools from an area supply center. Replace them with a clean cloth when they become so saturated that they leave a streaked surface. Do not shake them out and then continue to use.

**641.5 Treated Mops.** Treated mop rental service is also available in most sections of the country. When unavailable, obtain handles, mopheads, and mop

treatment from an area supply center. Use the following procedure for preparing and caring for mopheads obtained from area supply centers:

- a. Treat the mopheads by placing them in mop treatment solution until they are completely soaked. Prepare the solution as directed on manufacturer's label instructions.
- b. Remove mopheads and thoroughly wring them out by squeezing them in a mop wringer.
- c. Hang mopheads in a well-ventilated area to dry for 18 to 24 hours. Do not use them if they are wet enough to leave streaks on the floor.
- d. Obtain the service of an industrial laundry (available in most sections of the country) to wash and re-treat the mopheads. Offices must not set up their own washing procedures.
- e. In areas where industrial laundry service is not available, remove excess dirt from mopheads with a vacuum or by rubbing them over a grill. Spray them lightly with mop treatment solution and then hang them to dry. When this method is no longer effective, replace them with new mopheads.

**641.6 Procedure.** Manually sweep floors as follows:

- a. Use putty knife to remove gum and other substances stuck to the floor. Always push the putty knife away from your body (see Figure 6-2).

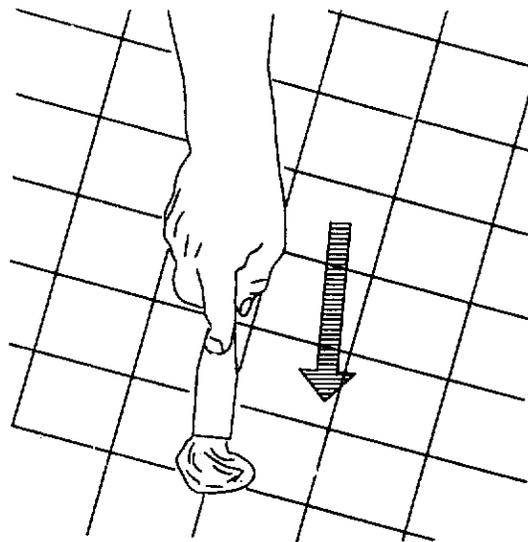


Figure 6-2  
Proper Use of Putty Knife

- b. Use the proper equipment for the particular size and condition of the floor surface. For general use, use the 24-inch treated mophead with the 24-inch frame size. For large aisles and open areas, use the 36-inch mophead with the 36-inch frame size. For stairs or tight areas, use the 18-inch mophead with the 18-inch frame size.
- c. Keep the treated mophead or treated cloth flush (even) with the floor at all times.
- d. Sweep with a figure-eight motion. Walking forwards, use the lower wrist to pivot the sweeping mophead at the completion of each side stroke, so as to keep the same edge leading (leading edge) in the sweeping direction.
- e. By using the leading edge, small objects may be carried along while sweeping. When objects accumulated at the leading edge become unmanageable, temporarily push them to one side and continue sweeping.
- f. Pick up the accumulated objects in a dustpan and place them in a waste receptacle. The swiveling head on the sweeping tool permits using the leading edge to sweep hard-to-reach places, such as underneath cases and ledges.

#### 642 Mechanized

Mechanized equipment, such as walk-behind and/or ride-on sweeper and scrubber/vacuums, is to be used as much as possible. Manually sweep congested areas, such as those around sorting cases and around fixed machinery, using fiber or straw brooms. Use a pedestrian-type power vacuum or rider-type power sweeper (refer to HBK MS-47) for exterior areas, such as sidewalks, driveways, and parking areas, where the size of the area justifies the use of mechanized equipment. Manually sweep all inaccessible areas and push sweepings to an area that is accessible to the power sweeper. Safety requirements are as follows (refer to HBK EL-803):

- a. Be particularly alert to pedestrian and vehicular traffic when using power-driven equipment.
- b. Do not leave equipment unattended while the motor is running.
- c. If keyed, do not leave the key in the equipment while it is unattended.
- d. Keep children away from equipment.
- e. Only properly trained employees are permitted to operate powered equipment such as power vacuums and rider-type sweepers.
- f. Employees who operate rider-type powered equipment must possess a valid OF-346, *U.S. Government Motor Vehicle Operator's*

*Identification Card*, endorsed for each piece of equipment they are qualified to operate.

#### 650 MOPPING

##### 651 Damp

**651.1 Applications.** Use damp mopping when picking up of cleaning solution is not required and when dry maintenance does not produce the desired result. Also use damp mopping for policing areas where water accumulates during bad weather, around vending machines, and for cleaning areas where spills occur. Give special attention to areas around vending machines to keep vermin under control.

**651.2 Equipment and Products.** Equipment and products needed are as follows:

- a. Wet-floor safety signs and rope
- b. Putty knife
- c. Treated sweeping mop and/or cloth with handle and frame
- d. Toy broom
- e. Pickup pan or dustpan
- f. One mophead with handle for wet use
- g. One mop bucket on wheels with wringer and cleaning solution
- h. Work gloves

**651.3 Procedure.** Use the following procedure:

- a. Place safety signs and, when needed, rope in the work area to alert others to use caution on wet floors.
- b. Use putty knife to remove gum and other substances stuck to the floor.
- c. Sweep the area with treated sweeping mop and/or cloth and pick up the sweepings with toy broom and dustpan.
- d. Following manufacturer's label instructions, fill bucket with a measured amount of water (gallon, half gallon, quart, etc.), add exactly the amount of cleaning solution per gallon, half gallon, quart, etc., as recommended by the manufacturer and place wringer on bucket.
- e. Dip mop into prepared cleaning solution and wring the mop out until it is almost dry.

- f. Walking backward, damp mop the floor using a figure-eight motion, as shown in Figure 6-3. Turn the mop over every three or four strokes.



Figure 6-3  
Mop in Figure-Eight Motion

- g. Return the mop to the cleaning solution frequently, wring it almost dry, and continue mopping until the entire work area is mopped.
- h. Change cleaning solution as needed to prevent streaking.
- i. Allow the floor surface to dry completely before removing the safety equipment.

## 652 Wet

**652.1 Applications.** Wet mop all floors except wood and cork. Wet mopping is required when accumulated dirt must be loosened and removed by applying an appropriate soil-suspending solution. It is a two-step procedure where the cleaning solution is applied with a solution mop and then picked up with a rinse mop or wet pickup vacuum. A wet pickup vacuum removes the cleaning solution more effectively than a mop and greatly reduces the floor surface drying time. The need for frequent wet mopping is reduced by a proper dry maintenance program.

**652.2 Equipment and Products.** Equipment and products needed are as follows:

- a. Wet-floor safety signs and rope
- b. Putty knife
- c. Treated sweeping mop and/or cloth with handle and frame
- d. Toy broom
- e. Pickup pan or dustpan
- f. Two mopheads with handles for wet use
- g. One mop bucket on wheels with wringer and cleaning solution
- h. One mop bucket on wheels with wringer and rinse water
- i. Wet pickup vacuum
- j. Work gloves

**652.3 Procedure.** Use the following procedure:

- a. Place safety signs and, when needed, rope in the work area to alert others to use caution on wet floors.
- b. Use putty knife to remove gum and other substances stuck to the floor.
- c. Sweep the area with treated sweeping mop and/or cloth and pick up the sweepings with toy broom and dustpan.
- d. Following manufacturer's label instructions, fill one bucket with a measured amount of water (gallon, half gallon, quart, etc.), add exactly the amount of cleaning solution per gallon, half gallon, quart, etc. as recommended by the manufacturer, and place wringer on bucket.
- e. Fill second bucket half full with plain cold water for rinsing and place second wringer on it.
- f. Dip cleaning mop in prepared cleaning solution, wring out lightly so it remains wet, and moderately apply to the floor surface in a section approximately 8 by 8 feet. Begin mopping by dragging the mop parallel to and 1 inch away from baseboards, forming wet parallel stripes on the floor (see Figure 6-4). Then, walking backward, work in a figure-eight motion to the inner edges of the parallel stripes so as not to splash baseboards and walls.



Figure 6-4  
Mop 1" Away and Parallel to Wall

- g. Use the wet pickup vacuum to remove the cleaning solution from the floor surface.
- h. Dip rinse mop in rinse water, wring out lightly so it remains wet, and apply the rinse water to the work area.
- i. Use the wet pickup vacuum to remove the rinse water from the floor surface.
- j. Allow the floor surface to dry completely before removing the safety equipment.

#### NOTE

Do not flood the floor with cleaning solution or rinse water. Remove cleaning solution (if any) from baseboards.

## 660 SCRUBBING

### 661 Hand

**661.1 Applications.** Hand scrubbing may be used for all floors except wood and cork. Use hand scrubbing **ONLY** when a floor machine is unavailable or in small areas where use of a machine is impractical.

**661.2 Equipment and Products.** Equipment and products needed include the following:

- a. Wet-floor safety signs and rope
- b. Putty knife
- c. Treated sweeping mop and/or cloth with handle and frame
- d. Toy broom
- e. Pickup pan or dustpan
- f. Cleaning cloths
- g. Walk-off mats
- h. Three mopheads with handles for wet use
- i. One mop bucket on wheels with wringer and cleaning solution
- j. One mop bucket on wheels with wringer and rinse water
- k. One mop bucket on wheels with wringer for wet pickup if wet pickup vacuum is unavailable
- l. One mop bucket on wheels with wringer containing final rinse solution

#### NOTE

The final rinse solution consists of tap water and a neutralizing product that ensures the floor surface is free of the cleaning solution.

- m. One deck scrub brush with handle
- n. Work gloves

**661.3 Procedure.** Use the following procedure for hand scrubbing:

- a. Place safety signs and, when needed, rope in the work area to alert others to use caution on wet floors.
- b. Use putty knife to remove gum and other substances stuck to the floor.
- c. Sweep the area with treated sweeping mop and/or cloth and pick up the sweepings with toy broom and dustpan.
- d. Place dry cleaning cloths under the doorways and walk-off mats at entrances adjacent to the work area.
- e. Following manufacturer's label instructions, fill one mop bucket with a measured amount of

water (gallon, half gallon, quart, etc.) add exactly the amount of cleaning solution, per gallon, half gallon, etc., as recommended by the manufacturer and place wringer on bucket.

- f. Fill one mop bucket half full with cold water (for rinsing) and place a wringer on it.
- g. Place wringer on the mop bucket containing final rinse solution.
- h. Place wringer on another mop bucket and use for wet pickup if wet pickup vacuum is unavailable.
- i. Dip mop used for cleaning in bucket containing cleaning solution and moderately apply to a section approximately 8 by 8 feet. Begin by dragging the mop parallel to and 1 inch away from baseboards, forming wet parallel stripes on the floor. Then, walking backward, work in a figure-eight motion to the inner edges of the parallel stripes so as not to splash the baseboards and walls. Allow solution to remain on the floor for a few minutes so it can loosen old finish.
- j. Scrub the section with the deck brush to soften and remove all of the old finish.
- k. Use wet pickup vacuum, if available, to pick up solution. If wet pickup vacuum is unavailable, dip one clean mop in bucket containing rinse water, wring out, and use to pick up solution.
- l. When the cleaning solution is picked up, immediately apply the final rinse solution to the floor using a wet-mop application. Do not wring the mop completely dry. Repeat the rinse procedure until there is no obvious solution remaining on the floor surface.

#### NOTE

To remove stubborn spots, dip a small piece of synthetic pad in the cleaning solution and rub lightly, directly on the spot(s).

- m. Repeat all steps until entire floor surface is scrubbed.

#### NOTE

Do not flood the area. Do not splash water or cleaning solution on walls, baseboards, or furniture. Remove cleaning solution (if any) from walls, baseboards, and furniture.

### 662 Machine

**662.1 Applications.** Machine scrubbing may be used on all floors except wood and cork. Use machine scrubbing whenever conditions permit.

**662.2 Equipment and Products.** Equipment and products needed include:

- a. Wet-floor safety signs and rope
- b. Putty knife
- c. Treated sweeping mop and/or cloth with handle and frame
- d. Toy broom
- e. Pickup pan or dustpan
- f. Cleaning cloths
- g. Walk-off mats
- h. Three mopheads with handles for wet use
- i. One mop bucket on wheels with wringer and cleaning solution
- j. One mop bucket on wheels with wringer and rinse water
- k. One mop bucket on wheels with wringer containing final rinse solution

#### NOTE

The final rinse solution consists of tap water and a neutralizing product that ensures the floor surface is free of the cleaning solution.

- l. Floor machine, low-speed (approximately 160 - 185 rpm), with scrubbing brush or synthetic fiber scrubbing pads (dark brown, light blue, or olive)
- m. Wet pickup vacuum
- n. Safety eye protection and work gloves

**662.3 Procedure.** Use the following procedure:

- a. Place safety signs and, when needed, rope in the work area to alert others to use caution on wet floors.
- b. Use putty knife to remove gum and other substances stuck to the floor.

- c. Sweep the area with treated sweeping mop and/or cloth and pick up the sweepings with toy broom and dustpan.
- d. Place dry cleaning cloths under the doorways and walk-off mats at entrances adjacent to the work area.
- e. Following manufacturer's label instructions, fill one mop bucket with a measured amount of water (gallon, half gallon, quart, etc.) add exactly the amount of cleaning solution per gallon, half gallon, quart, etc., as recommended by the manufacturer, and place wringer on bucket.
- f. Fill one mop bucket half full with cold water (for rinsing) and place a wringer on it.
- g. Place wringer on another mop bucket containing final rinse solution.
- h. Dip mop used for cleaning in mop bucket containing the cleaning solution and moderately apply to a section approximately 8 by 8 feet. Begin by dragging the mop parallel to and 1 inch away from baseboards, forming wet parallel stripes on the floor. Then, walking backward, work in a figure-eight motion to the inner edge of the parallel stripes so as not to splash the baseboards and walls. Allow solution to remain on the floor for a few minutes so it can loosen old finish. Do not allow solution to dry on surface.
- i. Scrub the floor using floor machine and synthetic fiber scrubbing pad or scrubbing brush.
- j. Use wet pickup vacuum to pick up solution.
- k. Dip one clean mop in mop bucket containing rinse water, wring nearly dry, and apply water to floor surface turning mop every three or four strokes. Return mop to mop bucket frequently, wring nearly dry, and repeat procedure until entire section is rinsed.
- l. Dip one clean mop in mop bucket containing final rinse solution and apply solution to the floor surface, using a wet-mop application, until the cleaning solution is picked up. Do not wring the rinse mop dry. Repeat the rinse procedure until no obvious solution remains on the floor surface.

**NOTE**

To remove stubborn spots, dip a small piece of synthetic pad in the cleaning solution and rub lightly, directly on the spot(s).

- m. After a section of the floor is scrubbed and rinsed, proceed to the next section, repeating

the scrubbing and rinsing procedures until entire floor surface is completed.

**NOTE**

Do not flood the area. Do not splash water or cleaning solution on walls, baseboards, or furniture. Remove cleaning solution (if any) from walls, baseboards, and furniture.

**670 SPRAY BUFFING****671 Applications**

Use spray buffing on all floors except wood and cork. Use spray buffing for periodic maintenance of aisles, corridors, and other traffic lanes to constantly maintain the original appearance of initially prepared floors without resorting to initial preparation procedures. Spray buffing is especially beneficial in heavily traveled areas such as hallways or in front of doorways.

**672 Solutions**

Commercial spray buffing solutions with varying compositions are available through local sources. Some manufacturers offer a finish and water mixture while others offer a finish, water, and cleanser mixture. These solutions are available in aerosol cans, or in bulk form for trigger spray applications. Spray buffing solution is required for spray buffing and must be compatible with the floor finish system in the facility. When commercial solutions are not used, a mixture of spray buffing solution can be prepared, but will vary depending upon the floor finish used. To prepare a solution for use in a plastic spray bottle or a mechanical attachment, a good formula consists of one part floor finish to three or four parts water with a few drops of a neutral liquid detergent per 16 ounces of solution.

**673 Equipment and Products**

Equipment and products needed include:

- a. Wet-floor safety signs and rope
- b. Putty knife
- c. Treated sweeping mop and/or cloth with handle and frame
- d. Toy broom

- e. Pickup pan or dustpan
- f. Gloves
- g. Spray buffing solution
- h. Floor buffing machine
- i. Buffing pads (white or yellow)

#### 674 Procedure

Use the following procedure:

- a. Place safety signs and, when needed, rope in the work area to alert others to use caution on wet floors.
- b. Use putty knife to remove gum and other substances stuck to the floor.
- c. Sweep the area with treated sweeping mop and/or cloth and pick up the sweepings with toy broom and dustpan.
- d. Spray a light mist onto the floor 2 to 3 feet ahead of the machine.

#### NOTE

Do not over spray. Over spraying causes a stripping action of the floor finish, resulting in streaking or a blotchy appearance.

- e. Immediately buff the misted area with the floor machine and buffing pad. The floor will become dull and smeared, but continued buffing will dry the surface and produce a brilliant gloss.
- f. Continue steps d and e until the area is completed. Turn the buffing pad over periodically, allowing a fresh side to be used. Buffing pads are porous; once they become full it is necessary to change or clean them. Cleaning is accomplished by rinsing or soaking the pad in warm water or a diluted stripping solution and allowing it to air dry.

#### NOTE

Spray buffing is effective only on floor finishes in which dirt or black marks are lightly imbedded. Heavy dirt accumulations require scrubbing or, as a last resort, initial preparation procedures.

#### 675 Changes

In recent years buffers have undergone dramatic changes. Ordinary buffers operate at 160 to 185 rpm. High-speed buffers operate at 185 to 350 rpm. Both ordinary and high-speed buffers operate on the principle of a sweeping, side-to-side motion. High-speed buffing requires fewer passes to bring floor surfaces to a higher gloss.

#### 680 BURNISHING

##### 681 Description

Burnishing machines (ultra-high-speed floor machines) and buffers are similar in appearance. Basic differences between burnishers and buffers are as follows:

- a. Burnishers operate at speeds of 750 to over 3,000 rpm, while buffers operate at 160 to 350 rpm.
- b. Burnishers are operated in a slow forward motion, whereas buffers are operated in a sweeping, side-to-side motion.

##### 682 Advantages

The advantages of burnishing are as follows:

- a. The finish on a burnished floor surface will remain for a much longer time than the finish on a floor surface maintained through other methods.
- b. Burnishing provides a glossier floor surface and repairs the wear damage caused by pedestrian traffic. In burnishing, the shine is produced by the speed of the machine passing over the synthetic floor finish at such a rate that the burnishing pad creates heat by friction. This heat softens the floor finish momentarily, causing several coats of floor finish to bond together as one, thus producing a very high gloss and hard, finished surface.

##### 683 Procedure

The procedure for burnishing is the same as the procedure used in regular and high-speed spray buffing, except burnishing is done in a slow forward motion.

**NOTE**

A floor surface must be properly cleaned and prepared before the burnishing procedure can be used. Usually five to eight coats of floor finish is sufficient preparation for a previously unburnished floor. Floor surfaces that previously have been burnished will require fewer coats of floor finish. Do not hold a burnisher still on a floor surface as the high speed may cause damage to the floor surface (burn spots).

**684 Equipment and Products**

Equipment and products needed for burnishing are the same as for spray buffing, except a burnishing machine and burnishing pads are required in lieu of a buffer and buffer pads. Both economical and

durable, synthetic buffing and burnishing pads complement the floor finish process. They are available in nylon and polyester. Following is a categorical list of pads by their aggressiveness:

Color	Use
*Black, Dark Blue, Dark Green	Stripping
Dark Brown, Light Blue, Olive	Scrubbing
White	Light duty buffing
Yellow, Red, Beige	Buffing/Burnishing

\*The darker the pad color, the more aggressive the pad.

The scrubbing pad is sufficient to remove imbedded soil and other visible markings without removing all of the floor finish. However, a coat of finish must be reapplied after the scrubbing operation has been performed. The soft buffing and burnishing pad removes light markings and restores the appearance of the floor. The white, light-duty pad is used to maintain a high gloss on the floor finish.

## CHAPTER 7

## APPLICATION METHODS

## 710 INTRODUCTION

Application of floor sealer and finish is an important process in the postal floor care program. Application methods vary depending on the type of sealer or finish and on the type of floor. Several different application methods are discussed in this chapter.

## 720 RESILIENT AND NONRESILIENT FLOORS

## 721 Wet Stripping (Initial Preparation)

**721.1 Applications.** Wet stripping (initial preparation) of resilient and nonresilient floors must be done before applying floor sealer and finish. This procedure ensures that old sealer, finish, and soil are removed before the application of new floor sealer and finish.

**721.2 Equipment and Products.** Equipment and products needed for wet stripping (initial preparation) of resilient and nonresilient floors include:

- a. Wet-floor safety signs and rope
- b. Putty knife
- c. Treated sweeping mop and/or cloth with handle and frame
- d. Toy broom
- e. Pickup pan or dustpan
- f. Cleaning cloths
- g. Walk-off mats
- h. Three mopheads with handles for wet use
- i. One mop bucket on wheels with wringer and stripping solution
- j. One mop bucket on wheels with wringer and rinse water
- k. One mop bucket on wheels with wringer and final rinse solution

## NOTE

The final rinse solution consists of tap water and a neutralizing product that ensures the floor surface is free of the stripping solution.

- l. Floor machine, low-speed, approximately 160 to 185 rpm
- m. Stripping pads (black, dark blue, or dark green)
- n. Wet pickup vacuum
- o. Safety eye protection and work gloves

**721.3 Procedure.** Use the following procedure for initial preparation:

- a. Place safety signs and rope in the work area to alert others to use caution on wet floors.
- b. Use putty knife to remove gum and other substances stuck to the floor.
- c. Sweep the area with treated sweeping mop/cloth and pick up the sweepings with toy broom and dustpan.
- d. Place dry cleaning cloths under the doorways and walk-off mats at entrances adjacent to the work area.
- e. Following manufacturer's label instructions, fill one mop bucket with a measured amount of water (gallon, half gallon, quart, etc.), add exactly the amount of cleaning solution per gallon, half gallon, quart, etc., as recommended by the manufacturer and place wringer on bucket.
- f. Fill one mop bucket half full with cold water (for rinsing) and place a wringer on it.
- g. Place wringer on the mop bucket containing final rinse solution.
- h. Dip first mop used for cleaning in mop bucket containing stripping solution and moderately apply to a section approximately 8 by 8 feet. Begin by dragging the mop parallel to and 1 inch

away from baseboards, forming wet parallel stripes on the floor. Then, walking backward, work in a figure-eight motion to the inner edges of the parallel stripes so as not to splash baseboards and walls. Allow the stripping solution to remain on the floor for approximately 5 minutes to allow the chemical to loosen the old floor finish and dirt.

**NOTE**

Do not permit the stripping solution to dry while stripping the floor. It may be necessary to apply more solution as the floor is stripped.

- i. Place a stripping pad (black/dark green) in the mop bucket containing the stripping solution, rotating the pad slowly until it is soaked. Place the soaked stripping pad under the floor machine and scrub slowly in a back-and-forth motion. If the floor is badly soiled, use more solution and repeat the machine operation.

**NOTE**

The second machine operation should be opposite in direction from the first operation. For marble, travertine, and terrazzo surfaces, use floor machine with a brush or light-colored (olive or light blue) pad.

- j. Use wet pickup vacuum to pick up solution.
- k. Dip second clean mop in mop bucket containing rinse water, wring nearly dry, and apply to floor surface, turning every three or four strokes. Return mop to bucket frequently, wring nearly dry, and repeat procedure until entire section is rinsed.
- l. Dip third clean mop in bucket containing final rinse solution and apply to the floor surface using a wet-mop application. Do not wring the rinse mop dry. Repeat the rinse procedure until there is no obvious solution remaining on the floor surface.

**NOTE**

To remove floor finish buildup and dirt along baseboards and in corners, size and cut a piece of stripping pad to fit a doodle bug. Dip the pad in the mop bucket containing the stripping solution, place it on doodle bug and scrub the section.

- m. Upon completion of the first section, move to the next section of the area to be stripped and repeat the stripping and rinsing procedure until the entire work area has been stripped.

**722 Dry Stripping**

**722.1 Applications.** The dry-stripping method of cleaning a floor surface differs from the wet-stripping method in that a cleaning product is applied to the floor surface by spraying or misting rather than wet mopping. The dry-stripping method is usually used to restore heavy traffic areas (aisles, entrances, and exits) where surface soil cannot be removed by the wet-mopping procedure. This method of floor cleaning removes soil and dirt and may also remove a portion of the floor finish product that will have to be replaced to restore the original gloss to the surface of the floor. The dry-stripping method is used on heavily soiled and worn surfaces to restore the beauty of the floor.

**722.2 Equipment and Products.** Equipment and products needed for dry stripping include the following:

- a. Wet-floor safety signs and rope
- b. Putty knife
- c. Treated sweeping mop and/or cloth with handle and frame
- d. Toy broom
- e. Pickup pan or dustpan
- f. Cleaning cloths
- g. Mophead with handle for wet use
- h. Mop bucket on wheels with wringer and final rinse solution

**NOTE**

The final rinse solution consists of tap water and a neutralizing product mixed according to the manufacturer's label instructions. The final rinse solution ensures the floor surface is free of the spray product applied in the stripping procedure.

- i. Floor machine, low-speed (approximately 160 to 185 rpm)

## APPLICATION METHODS

- j. Floor stripping pads (black, dark blue, or dark green)
- k. Dry-stripping spray product

**722.3 Procedure.** Use the following procedure:

- a. Place safety signs and, when needed, ropes in the work area to alert others to use caution on wet floors.
- b. Use putty knife to remove gum and other substances stuck to the floor.
- c. Sweep the area with treated sweeping mop and/or cloth and pick up the sweepings with toy broom and dustpan.
- d. Place dry cleaning cloths under the doorways and walk-off mats at entrances adjacent to the work area.
- e. Spray (mist) the dry-stripping product onto a section of the floor surface approximately 6 by 6 feet.
- f. Apply the floor machine with stripping pad to sprayed surface. Move the machine slowly over the surface, using a side-to-side motion, until the soil and dirt is completely removed.
- g. Sweep the stripped area with treated sweeping mop and/or cloth and pick up the sweepings with toy broom and dustpan. The dry-stripping method produces a quantity of dust and dirt that, if allowed to remain on the floor surface, may create a problem in the rinsing procedure.
- h. Upon completion of a section of the work area, proceed to the next section, repeating steps e, f, and g until the entire work area is stripped.
- i. Upon completion of the dry-stripping procedure, apply the rinse solution to the floor surface. The rinse mop should be moist, not wet.
- j. Frequently change the rinse solution during the rinse procedure to prevent streaking.
- k. Continue the rinse procedure until the floor surface is free of the dry-stripping spray product.
- l. Allow the floor to completely dry and apply the finish/sealer.

### 723 Dry Scrubbing

**723.1 Applications.** The dry-scrubbing method of cleaning a floor surface differs from the wet-scrubbing method in that a cleaning product is

applied to the floor surface by spraying or misting rather than wet-mopping. The dry-scrubbing method is usually used to restore heavy traffic areas (aisles, entrances, and exits) where surface soil cannot be removed by the wet-mopping procedure. This method of floor cleaning removes soil and dirt and may also remove a portion of the floor finish product that will have to be replaced to restore the original gloss to the surface of the floor. The dry-scrubbing method is used on lightly soiled surfaces to restore the beauty of the floor.

**723.2 Equipment and Products.** Equipment and products needed for dry-scrubbing include the following:

- a. Wet-floor safety signs and rope
- b. Putty knife
- c. Treated sweeping mop and/or cloth with handle and frame
- d. Toy broom
- e. Pickup pan or dustpan
- f. Cleaning cloths
- g. Mophead with handle for wet use
- h. Mop bucket on wheels with wringer and final rinse solution

#### NOTE

The final rinse solution consists of tap water and a neutralizing product mixed according to the manufacturer's label instructions. The final rinse solution ensures the floor surface is free of the spray product applied in the scrubbing procedure.

- i. Floor machine, low-speed (approximately 160 to 185 rpm)
- j. Floor scrubbing pads (dark brown, light blue, or olive)
- k. Dry-scrubbing spray product

**723.3 Procedure.** Use the following procedure:

- a. Place safety signs and/or ropes in the work area to alert others to use caution on wet floors.
- b. Use putty knife to remove gum and other substances stuck to the floor.

- c. Sweep the area with treated sweeping mop and/or cloth and pick up the sweepings with toy broom and dustpan.
- d. Place dry cleaning cloths under the doorways and walk-off mats at entrances adjacent to the work area.
- e. Spray (mist) the dry-scrubbing product onto a section of the floor surface approximately 6 by 6 feet.
- f. Apply the floor machine with scrubbing pad to sprayed surface. Move the machine slowly over the surface, using a side-to-side motion, until the soil and dirt is completely removed.
- g. Sweep the scrubbed area with treated sweeping mop and/or cloth and pick up the sweepings with toy broom and dustpan. The dry-scrubbing method produces a quantity of dust and dirt that, if allowed to remain on the floor surface, may create a problem in the rinsing procedure.
- h. Upon completion of a section of the work area, proceed to the next section, repeating steps e, f, and g until the entire work area is stripped.
- i. Upon completion of the dry-scrubbing procedure, apply the rinse solution to the floor surface. The rinse mop should be moist; not wet.
- j. Frequently change the rinse solution during the rinse procedure to prevent streaking.
- k. Continue the rinse procedure until the floor surface is free of the dry-scrubbing spray product.
- l. Allow the floor to completely dry and apply the finish/sealer.

#### 724 Resilient Floor Sealer and Finish

**724.1 Applications.** During initial preparation both sealer and finish are applied. During periodic maintenance only, finish is applied.

**724.2 Equipment and Products.** Equipment and products needed to apply floor sealer and synthetic floor finish to resilient floors include the following:

- a. Wet-floor safety signs and rope
  - b. Two mopheads with handles for wet use
  - c. One mop bucket on wheels with wringer and floor sealing product
  - d. One mop bucket on wheels with wringer, or lamb's-wool pad and applicator, and floor synthetic finish product
  - e. Work gloves
- 724.3 Procedure.** Use the following procedure:
- a. Before applying the sealer, inspect the floor to ensure that the surface is dry and all of the old finish has been removed.
  - b. Inspect the placement of safety signs and rope previously placed during the initial preparation (wet stripping) procedure to ensure that it is properly placed and adequate to alert others to use caution on wet floors.
  - c. Following manufacturer's label instructions, pour into one mop bucket only the amount of floor sealer product necessary to cover area, and place wringer on it.
  - d. Dip mop used for sealing in mop bucket containing floor sealer product; wring well but not dry.
  - e. Apply the floor sealer to a section of the floor surface approximately 8 by 8 feet. Begin application from the wall outward by dragging the mop parallel to and 1 inch away from baseboards, forming wet, parallel stripes on the floor. Then, walking backward, apply sealer product in a figure-eight motion to the inner edges of the parallel stripes so as not to splash baseboards and walls.
  - f. Upon completion of the first section of the floor surface, apply a coat of floor sealer to the next section of the floor surface. Repeat process until entire floor surface is sealed. Allow sufficient time for the surface to completely dry (follow manufacturer's label instructions).
  - g. When the floor surface is completely dry, apply a second coat of sealer using the same method as previously outlined in this procedure, with one exception: mop in the opposite direction with a crisscross motion, moving the mop back and forth across floor, to ensure complete coverage of the floor surface.
  - h. When the second coat of floor sealer is completely dry, dip the mop used to apply the finish into the bucket containing the synthetic floor finish; wring well but not dry.

**NOTE**

Soak new, unused mopheads in water overnight before using them with synthetic floor finishes. This will remove preservative oils from the mop strands, thus allowing better absorption of the floor finish into the strands. Use this mop only for application of the floor finish. Line the mop bucket with a trash can liner, before pouring the finish into it. This prevents the finish from becoming contaminated with other products.

- i. Apply finish to floor surface using several thin applications in sections approximately 8 by 8 feet. Begin applying the finishing product from the wall outward by dragging the mop parallel to and 8 inches away from baseboards, forming wet, parallel stripes on the floor. (See Figure 7-1) Then, walking backward, work in a figure-eight motion, turning mop over every three or four strokes, to the inner edges of the parallel stripes as not to splash baseboards and walls.



Figure 7-1  
Mop 8" Away and Parallel to Wall

**NOTE**

With the exception of the final coat of floor finish, the initial and succeeding coats are applied to the floor surface approximately 8 inches away from the walls and stationary objects, (cabinets, etc.). This method will prevent product buildup in nontraffic areas.

- j. Allow finish to dry thoroughly between coats, according to manufacturer's label instructions. Extremely porous floors may require several coats before developing an acceptable gloss.
- k. Upon completion of a section of the floor surface, move to the next section and repeat the mopping application of the floor finish until the entire floor surface is done.
- l. When the floor surface is completely dry, apply the final coat in sections as was done with previous coats. However, the final coat should be applied as previously outlined in initial application of floor finish. Begin by dragging the mop parallel to and 1 inch from baseboards, forming wet, parallel stripes on the floor. Then cross the direction of the first application, mopping in the opposite direction with a crisscross motion. This method will ensure an even coating of the surface.
- m. Allow the floor surface to completely dry before returning the area to traffic use.

**NOTE**

Do not pour unused synthetic finish back into the original container as it will contaminate the fresh supply. Store excess finish, if any, in a well-marked, clean container.

**725 Nonresilient Floor Sealer and Finish**

**725.1 Applications.** During initial preparation both sealer and finish are applied. During periodic maintenance only, finish is applied.

**NOTE**

Equipment, products, and procedure for the application of sealer and finish to marble, travertine, or ceramic and quarry tile are the same as equipment, products, and procedure used for terrazzo with one exception; marble and travertine sealer or terrazzo sealer may be used on marble and travertine floors.

**725.2 Equipment and Products.** Equipment and products needed for terrazzo include the following:

- a. Wet-floor safety signs and rope
- b. Terrazzo sealing compound
- c. Two mopheads with handles for wet use or lamb's-wool pad and applicator
- d. One mop bucket on wheels with wringer and terrazzo sealing compound
- e. One mop bucket on wheels with wringer and synthetic finish product.
- f. Work gloves
- g. Floor machine with polishing brush or synthetic fiber polishing pads (white or yellow)

**725.3 Procedure.** Use the following procedure:

- a. Before applying the sealer, inspect the floor to ensure that the surface is dry and all of the old finish has been removed.
- b. Inspect the placement of safety signs and rope previously placed during the initial preparation (wet stripping) procedure to ensure that it is properly placed and adequate to alert others to use caution on wet floors.
- c. Following manufacturer's label instructions, fill one mop bucket with terrazzo floor sealing compound (2 inches full, 3 inches full, etc.) and place wringer on it.
- d. Dip one mop or lamb's-wool applicator into mop bucket containing sealing compound, rub off excess on edge of bucket, and apply to the floor in a very thin, even coat.
- e. Apply the sealer to a section of the floor surface approximately 8 by 8 feet. Begin application from the wall outward by dragging the mop or pushing the applicator parallel to and 1 inch away from baseboards, forming wet, parallel stripes on the floor. Then, walking backward,

work in a figure-eight motion to the inner edges of the parallel stripes so as not to splash baseboards and walls.

- f. Upon completion of the first section of the floor surface, apply a coat of sealer to the next section of the floor surface. Repeat process until entire floor surface is sealed. Allow sufficient time for the surface to completely dry (follow manufacturer's label instructions).
- g. When the floor surface is completely dry, apply a second coat of sealer using the same method as previously outlined in this procedure, with one exception: mop in the opposite direction with a crisscross motion, moving the mop back and forth across the floor, to ensure complete coverage of the floor surface.
- h. When the second coat of sealer is completely dry, buff the floor using the floor machine with polishing brush or synthetic fiber polishing pad.
- i. After completion of the buffing procedure, dip the mop used to apply the floor finish into the bucket containing the floor finish product; wring well but not dry.

**NOTE**

Soak new, unused mopheads in water overnight before using them with synthetic floor finish. This will remove preservative oils from the mop strands, thus allowing better absorption of the floor finish into the strands. Use this mop only for application of the floor finish. Line the mop bucket with a trash can liner, before pouring the finish into it. This prevents the finish from becoming contaminated with other products.

- j. Apply the finish to a section of the floor surface approximately 8 by 8 feet. Begin application from the wall outward by dragging the mop parallel to and 1 inch away from baseboards, forming wet, parallel stripes on the floor. Then work in a figure-eight motion to the inner edges of the parallel stripes so as not to splash baseboards and walls.
- k. Upon completion of the first section of the floor surface, apply a coat of floor finish to the next section of the floor surface. Repeat process until entire floor surface is finished. Allow sufficient time for the surface to completely dry (follow manufacturer's label instructions).

- i. When the floor surface is completely dry, apply a second coat of floor finish using the same method as previously outlined in this procedure with one exception: mop in the opposite direction with a crisscross motion, moving the mop back and forth across floor, to ensure complete coverage of the floor surface.

### 730 CONCRETE FLOORS

#### 731 Applications

During initial preparation both sealer and finish are applied. During periodic maintenance only, finish is applied.

#### 732 Equipment and Products

Equipment and products needed to prepare and seal a concrete surface include the following:

- a. Wet-floor safety signs and rope
- b. Putty knife
- c. Push broom for concrete surfaces
- d. Toy broom
- e. Pickup pan or dustpan
- f. Work gloves
- g. Garden hose and nozzle
- h. Two mop buckets on wheels with rinse water (if garden hose cannot be used)
- i. One mop bucket on wheels with cleaning solution (without wringer)
- j. Deck scrubbing brush with handle
- k. Floor squeegee with handle
- l. Concrete sealer
- m. Pan to contain the sealer for application (pan can be the type used in roller painting)
- n. Lamb's-wool applicator with handle and base

#### 733 Procedure

**733.1 Preparing the Floor.** Use the following procedure:

- a. Place safety signs and, when needed, rope in the

work area to alert others to proceed with caution.

- b. Use putty knife to remove gum and other substances stuck to the surface.
- c. Use the push broom to gather dust and dirt.
- d. Use a toy broom and dustpan to remove the gathered dust and dirt.
- e. Wet the entire floor surface of the area to be cleaned with tap water from a garden hose or bucket.
- f. Apply the cleaning solution to a floor section approximately 8 by 8 feet.
- g. Use the deck scrub brush to scrub the area to which the cleaning solution was applied.
- h. Use the floor squeegee to remove the cleaning solution. The solution should be pushed with a squeegee toward a floor drain.
- i. Flood the area just cleaned with tap water from a garden hose or bucket.
- j. Remove the rinse water with a floor squeegee, pushing the water toward a floor drain.
- k. Repeat the rinse procedure until no evidence of the cleaning solution is visible.
- l. Proceed to another section of the area to be cleaned and repeat steps f, g, h, i, j, and k. Continue this procedure until the entire work area is completed.
- m. Allow the floor surface to completely dry before sealing the surface.

**733.2 Sealing the Floor.** Applying the concrete sealer is the final step in completing the task, and is done in the following manner:

- a. Pour the concrete sealer into the applicator pan.
- b. Dip the lamb's-wool applicator into the solution and allow the sealer to soak the lamb's wool.
- c. Using the applicator, apply the sealer to the floor surface. This application should be done in sections approximately 8 by 8 feet.
- d. Repeat the application of the sealer to each section until the entire work area is completed.
- e. Allow the surface to dry. The recommended time for drying is stated on the manufacturer's label instructions.

- f. Apply additional coats of sealer allowing each coat to dry in accordance with the manufacturer's label instructions.
- g. Heavy traffic areas should receive more coats of sealer than light traffic areas.

**CAUTION**

**Water and strong soaps are harmful to wood floors. Water absorbed by wood floors causes them to warp and creates openings between the boards. Use solvent-type, combination cleaner and surface finish instead of water.**

## 740 WOOD FLOORS

### 741 Applications

For initial preparation, use surface renewer. For periodic maintenance, use combination cleaner and surface finish.

### 742 Machine Scrubbing with Surface Renewer

**742.1 Equipment and Products.** Equipment and products needed for machine scrubbing wood floors with solvent-type, surface renewer include the following

- a. Wet-floor safety signs and rope
- b. Putty knife
- c. Treated sweeping mop and/or cloth with handle and frame
- d. Toy broom
- e. Pickup pan or dustpan
- f. Cleaning cloths
- g. Walk-off mats
- h. Solvent-type, surface renewer
- i. Shallow pan for surface renewer
- j. Lamb's-wool applicator with handle and base
- k. Floor machine with synthetic fiber scrubbing pad (dark brown, light blue, olive)
- l. Wet/dry pickup vacuum
- m. One mophead with handle for wet use if wet/dry pickup vacuum is unavailable
- n. One mop bucket on wheels with wringer to use if wet/dry pickup vacuum is unavailable
- o. Work gloves

**742.2 Procedure.** Use the following procedure:

- a. Place safety signs and, when needed, rope in the work area to alert others to use caution on wet floors.
- b. Use putty knife to remove gum and other substances stuck to the floor.
- c. Sweep the area with treated sweeping mop and/or cloth and pick up the sweepings with toy broom and dustpan.
- d. Place dry cleaning cloths under the doorways and walk-off mats at entrances adjacent to the work area.
- e. Pour surface renewer into shallow pan to a depth of 1 to 2 inches.
- f. Dip lamb's-wool applicator into the renewer and liberally apply to a section approximately 8 by 8 feet.
- g. Scrub the section, using the floor machine with a synthetic fiber scrubbing pad, immediately after applying the surface renewer.
- h. Pick up loose dirt and residue with the wet/dry vacuum and continue scrubbing until all of the surface renewer has been worked into the floor and the floor is practically dry.
- i. Repeat steps f through h until the entire floor surface is renewed.
- j. When dry, sweep the entire area with treated dust mop and/or cloth to remove dust particles.

### 743 Machine Scrubbing with Combination Cleaner and Surface Finish

**743.1 Equipment and Products.** Equipment and products needed for machine scrubbing wood floors with solvent-type, combination cleaner and surface finish include the following:

- a. Wet-floor safety signs and rope
- b. Putty knife

- c. Treated sweeping mop and/or cloth with handle
- d. Toy broom
- e. Pickup pan and dustpan
- f. Cleaning cloths
- g. Walk-off mats
- h. Solvent-type, combination cleaner and surface finish
- i. One mophead with handle for wet use
- j. One mop bucket on wheels without wringer
- k. Floor machine with synthetic fiber scrubbing pad (dark brown, light blue, olive)
- l. Synthetic fiber polishing pad (white or yellow) or polishing brush
- m. Wet/dry pickup vacuum
- n. Work gloves

**743.2 Procedure.** Use the following procedure:

- a. Place safety signs and, when needed, rope in the work area to alert others to use caution on wet floors.
- b. Use putty knife to remove gum and other substances stuck to the floor.
- c. Sweep the area using treated sweeping mop and/or cloth and pick up the sweepings with toy broom and dustpan.
- d. Place dry cleaning cloths under the doorways and walk-off mats at entrances adjacent to the work area.
- e. Shake container of solvent-type, combination cleaner and surface finish (follow manufacturer's label instructions) and pour into mop bucket.
- f. Dip mop into the combination cleaner and surface finish and hold it over the bucket until it stops dripping.
- g. Liberally apply combination finish to a section of the floor approximately 8 by 8 feet. Allow it to stand (follow manufacturer's label instructions) to loosen dirt.
- h. Scrub the area, using the floor machine with a synthetic fiber scrubbing pad.
- i. Pick up loose dirt and residue with wet/dry pickup vacuum and continue scrubbing until all of the cleaner finish has been worked into the floor and the floor is practically dry.
- j. Upon completion of the first section, move to the next section and repeat steps f through i until the entire floor surface is finished.
- k. Allow the entire floor to dry thoroughly (follow manufacturer's label instructions); normally not less than 30 minutes. Then buff the area, using the floor machine with a synthetic fiber polishing pad (white or yellow) or polishing brush.

**744 Mopping with Combination Cleaner and Surface Finish**

**744.1 Equipment and Products.** Equipment and products needed for applying solvent-type, combination cleaner and surface finish to renewed wood floors include the following:

- a. Wet-floor safety signs and rope
- b. Container of solvent-type, combination cleaner and surface finish
- c. One mophead with handle and frame for wet use
- d. One mop bucket on wheels with wringer
- e. Floor machine with synthetic fiber polishing pad (white or yellow) or polishing brush
- f. Work gloves

**744.2 Procedure.** Use the following procedure:

- a. Complete machine scrubbing with solvent-type, surface renewer.
- b. Following manufacturer's label instructions, pour combination cleaner and surface finish into mop bucket and place wringer on it.
- c. Dip mop into the bucket containing combination cleaner and surface finish; wring well but not dry.
- d. Apply finish to a section of the floor surface approximately 8 by 8 feet in a thin coat. Redip and wring out mop as often as needed and apply to the floor surface until the entire section is completed.
- e. Upon completion of the first section, move to the next section and repeat steps c and d until the entire floor surface is covered.
- f. Allow the entire floor to dry thoroughly (follow manufacturer's label instructions); normally not less than 30 minutes. Then buff the area, using the floor machine with a synthetic fiber polishing pad (white or yellow) or polishing brush.

**745 Sealing with Urethane Sealer**

Because of the nature of urethane sealer, postal employees shall not apply this type of chemical to wood or cork floors. Therefore, if this procedure is required, it will be done by contract.

**750 ALKALI-DAMAGED LINOLEUM FLOORS****751 Recognition**

Linoleum floors contain a linseed oil binder. Strong alkalis cause a reaction on linoleum floors (commonly referred to as bleeding) where the linseed oil is removed, thus damaging the linoleum. These floors can be partially restored by treatment with a fast-drying, penetrating sealer as replacement for the removed linseed oil. Linoleum floors damaged by strong alkalis can be recognized in one or all of the following ways:

- a. Color fading
- b. Loss of resiliency
- c. Cracking or alligating
- d. Excessive absorption of synthetic floor finish

**752 Equipment and Products**

Equipment and products needed to renovate alkali-damaged linoleum with a fast-drying, penetrating sealer include the following:

- a. Wet-floor safety signs and rope
- b. Container of penetrating sealer
- c. Shallow pan for penetrating sealer
- d. Lamb's-wool applicator with handle and base
- e. Floor machine with synthetic scrubbing pad (dark brown, light blue, olive)

- f. Synthetic fiber polishing pad (white or yellow)
- g. One treated sweeping mop and/or cloth with handle and frame
- h. One mop bucket with wringer
- i. One mop with handle for wet use
- j. Work gloves

**753 Procedure**

Use the following procedure:

- a. Complete wet stripping. Allow floor to thoroughly dry for a minimum of 3 hours. This is very important because moisture interferes with the bonding and drying of the sealer.
- b. Following manufacturer's label instructions, pour sealer in pan and dip applicator into it.
- c. Liberally apply sealer to a section of the floor approximately 8 by 8 feet. Allow the sealer to stand (follow manufacturer's label instructions) 5 minutes, etc. Move to a second section while waiting and repeat procedure.
- d. After allotted standing time (follow manufacturer's label instructions), return to first section and use the applicator to smooth out the sealer already applied picking up the excess.
- e. Repeat steps b through d until the entire floor is sealed.
- f. Allow floor to dry completely (usually 2 hours) by following manufacturer's label instructions on sealer used. Then, using the floor machine with a synthetic fiber polishing pad (white or yellow), buff the floor to smooth the surface. This may produce a dulling effect.
- g. Use treated sweeping mop and/or cloth to remove residual dust.
- h. Apply two thin coats of synthetic floor finish and maintain in the future as a resilient tile floor.

**CHAPTER 8**

**CORRECTION OF PROBLEMS**

**810 INTRODUCTION**

Powdering, slippery floors, black marks, lack of durability, and poor gloss, are some of the problems encountered in floor care maintenance. These problems must be corrected.

**820 CORRECTION**

The following chart (Table 8-1) lists many problems encountered, probable causes, and suggested remedies.

Table 8-1  
Problem-Cause-Remedy Chart

PROBLEM	CAUSE	REMEDY
a. Slippery floors	Oily, dry mop residue on floor surface	Damp mop with neutral detergent.
	Abrasive dirt, grit, and dust on floor	Use walk-off mats at entrances and doorways; dust mop periodically.
	Powdering floor finish	Use scrubbing or initial preparation (wet stripping) procedure.
b. Scratches or scuff marks on floors	Abrasive dirt, grit, and dust on floor, due to exterior conditions	Use walk-off mats at entrances and doorways; dust mop periodically.
c. Black marks on floors	Floor finish worn away	Perform periodic maintenance.
	Inadequate amount of floor finish used	Perform periodic maintenance; apply protective coats of floor finish.
d. Formation of traffic lanes	Too little periodic maintenance	Follow periodic maintenance procedures.
e. Powdering of floor finish	Stripper solution residue remaining on floor	Perform initial preparation (wet stripping) and reapply finish
	Stripper mop used in place of finish mop	Perform initial preparation (wet stripping) and reapply finish.
	Finish applied too thinly	Perform initial preparation (wet stripping). Apply additional finish as recommended by manufacturer.
	Excessive use of alkaline cleaner	Perform initial preparation (wet stripping) and rinse thoroughly. Use neutral cleaner for routine maintenance.
	Incompatibility of various floor finishes	Use the same manufacturer for stripper, neutralizer, and floor finish.

Table 8-1 (Continued)  
Problem-Cause-Remedy Chart

	PROBLEM	CAUSE	REMEDY
	Powdering of floor finish (continued)	Contamination of floor finish	Perform initial preparation (wet stripping).
f.	Poor gloss	Dirty mops used in applying finish	Perform initial preparation (wet stripping). Apply finish as recommended by manufacturer.
		Floor incorrectly rinsed	Perform initial preparation (wet stripping). Apply finish as recommended by manufacturer.
		Insufficient number of coats applied	Apply additional finish as recommended by manufacturer (2 to 3 finish coats usually recommended).
g.	Poor durability	Incorrect cleaner used	Use manufacturer-recommended neutral cleaner for maintenance.
		Incorrect buffing pad used	Use recommended pad.
		Dirt, sand, and grit on floor	Perform initial preparation (wet stripping). Use walk-off mats at entrances and dust mop the floor.
h.	Poor removal of old finish or soil	Stripper not strong enough	Use manufacturer-recommended stripper and dilution ratios.
		Extremely heavy buildup of previous finish or sealer	Restrip the floors.
		Improper stripping pad used	Use more aggressive stripping pad.
i.	Slow finish drying time	Damp floor (finish applied before last rinse thoroughly dried)	Ensure floor dries thoroughly before applying finish.
		Too much finish applied	Apply thin, even coats of finish.
j.	Poor leveling or spreading of floor finish	Floor not adequately prepared or properly rinsed	Follow procedure for initial preparation (wet stripping) or periodic maintenance.
		Poor quality floor finish	Change floor finish brands.
k.	Sticking of furniture to freshly finished floors	Floor finish applied too heavy	Use thin coat of floor finish. Allow floor to dry thoroughly before moving furniture.
l.	Yellow film	Excessive coats of floor finish	Perform initial preparation (wet Stripping). Apply finish in thin coats.
		Use of a finish that has a yellow color	Perform initial preparation (wet stripping). Use a nonyellowing floor finish.

Table 8-1 (Continued)  
Problem-Cause-Remedy Chart

PROBLEM	CAUSE	REMEDY
m. Color fading	Strong cleaners used	Use neutral synthetic detergents.
n. Color bleeding	Alkaline cleaners or abrasive materials used	Do not use these cleaners or materials. Use <u>only</u> neutral synthetic cleaners.
o. Buckling of vinyl asphalt or other resilient tile	Water and detergent seepage between tiles that damages the adhesive and loosens the tiles	Replace tiles. Use only enough water during the stripping process to keep stripper solution from drying out. Use a wet vacuum to remove water from the floor.

**APPENDIX A**

**STAIN REMOVAL GUIDE**

Removing stains from floors can be a cumbersome task. The method recommended for removal of a stain may remove the stain, but injure the floor. For instance, most solvents dissolve asphalt tile; strong alkalis destroy linoleum and damage grouting in ceramic tile. Any product used for the removal of

stains must be on the USPS-approved products list. Some manufacturers of floor care maintenance products offer their own product for stain removal; however, the product must be on the USPS-approved products list for local purchase. When such products are used, follow manufacturer's label instructions.

## APPENDIX B

## COMPUTER ROOM FLOOR CARE

I. Introduction

Custodial operations in computer rooms require special consideration in order to avoid damage to computer equipment. Do not use buffers or scrubbers because bumping or shaking may damage the computer equipment.

II. Floor Types

Basically, two types of tiles are used on computer room floors:

- a. High-pressure laminated tile
- b. Vinyl asbestos tile

III. Cleaning Procedure for High-pressure Laminated Tile Floor

The cleaning procedure for high-pressure laminated tile floors includes the following:

**CAUTION**

**Do not bring buckets of mopping solution or rinse water into computer room; leave them outside of room.**

- a. Damp Mopping. Use the following steps for damp mopping:
  1. Damp mop with a new mop that is used exclusively on the laminated floor.
  2. Use a mild synthetic detergent mixed according to the manufacturer's label instructions.
  3. Wring mop until it is almost dry and apply solution to tiled floors only.
  4. Use extreme caution to ensure that water does not drip through to the subfloor or come in contact with the computer equipment.
  5. Rinse the floor with tap water, using a second new mop that is well-wrung (almost dry).

6. Remove perforated floor panels and hand wash. Rope off open areas for safety.

**NOTE**

Never apply floor finish to a high-pressure laminated tile floor.

- b. Periodic Maintenance. Dust mop or vacuum the floor. Do not use a mop saturated with oils or chemicals, because a film on the floor will affect the static properties. If a vacuum is used, carefully avoid bumping into the computer equipment with either the vacuum or cleaning attachment. Do not plug the vacuum into any of the equipment outlets; use an outlet outside of the computer room.
- c. Spot Removal. Spilled liquids are not readily absorbed by high-pressure laminated tile floors; on the other hand, certain substances can create a stain if allowed to remain on the floor for an extended period of time. Avoid floor stains by attending to spills as soon as possible. Remove black marks from floor by using a nonabrasive cleanser, similar to those available for home bathtub cleaning, and a soft cloth.

IV. Cleaning Procedure for Vinyl Asbestos Tile Floor

The cleaning procedure for vinyl asbestos tile floors includes the following:

- a. Damp Mopping. Use the following steps for damp mopping:
  1. Use a mild synthetic detergent mixed according to the manufacturer's label instructions.
  2. Wring mop until it is almost dry and apply solution to tiled floors only.
  3. Use extreme caution to ensure that water does not drip through to the subfloor or come in contact with the computer equipment.
  4. Rinse the floor with tap water, using well-wrung mop (almost dry).

5. Remove perforated floor panels and hand wash. Rope off open areas for safety.
- b. Periodic Maintenance. Use same procedure as for high-pressure laminated tile floors (see Section III, part b).
- c. Other Floor Maintenance. After the floor has completely dried, carefully apply synthetic finish so that finish does not drip onto the subfloor or come in contact with computer equipment. Do not apply finish to perforated floor panels.
- d. Other Cleaning Tasks. Other routine cleaning tasks can be done using conventional techniques. Take particular care when working around computer equipment to avoid bumping or otherwise disturbing it. Routine maintenance of vinyl asbestos floors does not create a health hazard. Sanding, cutting, or other activities which may release asbestos fibers must be prohibited.

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