

Healthy High Performance *Floor Care Guide*



corporate



education



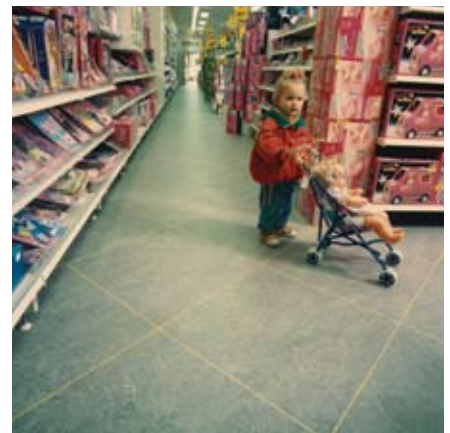
entrances



healthcare



long term care



retail



Foreword

JohnsonDiversey's Vision and Mission

JohnsonDiversey works with our customers to be their best partner, as a global leader of cleaning and hygiene solutions, in delivering safe, healthy, high-performing facilities.

Dear JohnsonDiversey Stakeholder,

JohnsonDiversey's long-standing commitment to the environment led us to develop Healthy High Performance Cleaning, the only comprehensive green cleaning program in the industry. HHPC is a unique approach combining green cleaning products with green cleaning procedures, staff training, purchasing guidelines and occupant education and communication.

Healthy High Performance Cleaning is the perfect complement to the green attributes of Forbo Flooring's Marmoleum. Our companies align in our mutual commitment to developing and manufacturing products that create safe and healthy environments both indoors and out.

Thank you for choosing JohnsonDiversey products and systems. We're proud to partner with Forbo Flooring, the global leader in flooring systems, to help you deliver safe, healthy, high-performing facilities.

Ed Lonergan
President & CEO,
JohnsonDiversey, Inc.



Forbo's Vision and Mission

As a global leader in flooring systems, we create better environments and more rewarding perspectives for all our stakeholders. Our way to serve and drive the market sets the pace and standard for world class flooring solutions.

Dear Forbo Flooring Stakeholder,

At Forbo Flooring, creating better indoor environments, while fully and responsibly committing to sustainable, LCA-based, environmental practices, is our overriding objective. The rigorously controlled manufacture and subsequent installation of our flooring is only one part of Marmoleum's unequalled environmental profile. Proper floor care allows the maximum benefits of the product to come through. Indoor Air Quality and other health benefits, combined with reduced usage of chemicals of the proper environmental profile, that provide the desired aesthetic appearance while maximizing the long term performance of the floor is our goal. Through our innovative Topshield Finish, combined with improved approaches to interior maintenance like the Johnson Diversey "Healthy High-Performance Cleaning System" we can achieve that goal at the lowest possible cost in the industry today.

Thank you for choosing Forbo Flooring products and giving us the opportunity to help you create better environments for all.

Denis Darragh
Managing Director
Forbo Flooring North America



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Protecting your occupants, and sustaining the planet for the future.

The body of this document contains excerpts from JohnsonDiversey's Healthy High Performance Cleaning Program. Forbo Flooring and JohnsonDiversey share the same commitment to Environmental Stewardship, and as product manufacturers want to make sure that in combination our products can offer your facility a healthier environment for all those who enter its doors. In the following text, you will see that a healthy, safe, indoor environment will generate cost savings and increase worker productivity. By selecting environmentally preferable products for both flooring and cleaning, you can save money, as well as play an important role in the future and sustainability of our planet.

For a complete introduction to the full benefits of JohnsonDiversey's Healthy High Performance Cleaning Program, please contact Johnson Diversey at 800-558-2332 or visit www.JohnsonDiversey.com. Why put it off until tomorrow, when you can start saving money and the planet today.

INTRODUCTION

The Negative Impact of Buildings

Commercial buildings in the United States significantly impact our environment.

They consume:

- 40% of total energy
- 65% of total electricity
- 38% of raw materials
- 12% of potable water

They produce:

- 5 billion pounds of cleaning and coating chemicals
- 30% of greenhouse gas emissions
- 30% of total waste output, representing 136 million tons annually

The enormous environmental impact of cleaning products resulting from the extraction of raw materials, their manufacture into finished goods, their transportation, storage, use and ultimate disposal is enormous. The impact of many of these products on building occupants and cleaning personnel health is also sizable. Building occupants spend substantial time within buildings. They can be exposed to chemicals and other substances resulting from the cleaning process for many hours each day. The same can be said for cleaning personnel who are in daily contact with cleaning chemicals. Creating a healthy environment by extracting the contaminants that normally enter buildings can greatly enhance worker productivity, performance and work quality as well as their sense of wellbeing.

At one time, cleaning for appearances may have been enough. No more. Building owners and managers are much more aware of the effect facilities have on health, safety and the environment, which in turn can have considerable financial impact.

Consider these facts:

- 1 of every 3 buildings has poor indoor environmental quality affecting the health of occupants, according to the World Health Organization (WHO).
- Contaminants are typically at a minimum 2 to 5 times worse indoors than outdoors, according to the U.S. EPA.
- Asthma has increased in young children by 160% since 1980, becoming the leading cause of disease-related absenteeism and accounting for more than 14 million lost days in school.
- Poor indoor air quality costs the U.S. economy \$60 billion of lost worker productivity every year, states the EPA.

Building owners and managers are also becoming more aware of both the lifecycle cost of their buildings and the impact their ongoing operations have on the environment.

- 75% of a buildings lifetime costs are generated by alterations, energy and operations.
- Buildings consume 38% of all energy, use 65% of all electricity and add 40% to atmospheric emissions.
- Cleaning and maintaining commercial buildings requires 5 billion pounds of chemicals, 4.5 billion pounds of paper and 36 billion plastic trash liners.

This guide does not suggest that current cleaning procedures are in anyway inadequate or have created a condition placing building occupants, cleaning personnel or the environment at risk. Rather, it shows you how to go beyond traditional procedures to reduce the impact cleaning practices have on building occupants while at the same time maintaining or improving the health, comfort and appearance of a building.

Clearly, we have an opportunity to do better. We need to take a leadership role to protect the health of building occupants and cleaning personnel as well as reduce the overall impact on our environment.

Protecting your occupants, and sustaining the planet for the future.

ADDRESSING THE ISSUES

Reduce Impact and Costs with Healthy High Performance Cleaning

Smart building owners and managers in organizations from across all sectors and industries are taking action to reduce the negative impacts of their facilities. JohnsonDiversey, the leading provider of safe, healthy, high-performing facilities has developed a comprehensive, new approach to cleaning that goes far beyond appearances. We call it Healthy High Performance Cleaning, or HHPC for short.

HHPC from JohnsonDiversey is designed to improve a building's environmental quality and sustainability with a cost neutral or cost reduction impact on operations. It is a unique, all inclusive approach to cleaning that helps ensure a clean and safe work environment, increase employee productivity and satisfaction, and enhance the value and integrity of buildings while reflecting organizational mission and values.

Why Healthy High Performance Cleaning?

HHPC was developed to help you minimize the environmental, health and safety impact of your buildings on employees, tenants, occupants, customers, visitors and cleaning staff. HHPC takes a total survey of your facility, its mission and the activities within it. Chemicals are just part of a much more comprehensive solution to making your facilities safe, healthy and high-performing.

HHPC starts with environmentally preferable chemicals then offers proven cleaning strategies, procedures and purchasing guidelines for consumables, tools and equipment. With HHPC, you get:

- A clear perspective on the need for green cleaning and green cleaning concepts.
- A review of market influences and individual responsibilities along with stewardship principles which are core to HHPC.
- Cleaning strategies, procedures and guidelines backed by the most up-to-date training support tools.
- Environmentally preferable janitorial guidelines for chemicals, paper and liners, and tools and equipment.

- A pathway to earn credits toward certification under the LEED™ for Existing Buildings Green Building Rating System™ (LEED-EB™) from the U.S. Green Building Council (USGBC).

There has never been a greater need for HHPC because it is a key part of operating facilities in an environmentally responsible way. HHPC will help your organization achieve the benefits of operating a healthy high performance building, such as:

- Improved employee and occupant health
- Improved worker/employee productivity
- Reduced worker's compensation claims for custodial staff
- Sustained or improved organizational reputation and brand equity among employees, customers and the surrounding community
- New opportunity to market and differentiate

The HHPC approach looks to third-party, certifying organizations like Green Seal for chemicals and the USGBC for buildings to validate that cleaning products and facilities meet the highest standards. Independent certifications like these assure that high levels of performance are met as well as assuring that health, safety and environmental criteria are applied.

LEED-EB™ Certification

For those who work in organizations that place high strategic value on the ongoing sustainable operations of your buildings, HHPC can help earn points under the U.S. Green Building Council's LEED-EB™ rating system. LEED™ stands for Leadership in Energy and Environmental Design and is the industry standard used to determine just how "green" a building is.

LEED-EB™ certification aims to improve occupant well-being, environmental performance and economic returns of buildings using established and innovative practices, standards and technologies. HHPC for LEED-EB™ provides you the potential to earn as much as one-third of the points needed for certification.

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STUDIES REVEAL THE IMPACT OF CLEANING

The impact of cleaning can best be shown through several studies, which formed the foundation for Healthy High Performance Cleaning. The studies relied heavily on training and procedures to maximize the effectiveness of cleaning personnel and included active involvement with building occupants. The results of these studies showed a positive impact on occupant health and the environment.

Implementation of new procedures, equipment and cleaning supplies, was found to decrease the levels of airborne dust inside the building by 52%. Total volatile organic chemical (VOC) concentrations decreased by 49%, total bacteria decreased by 40% and fungi colony-forming units decreased by 61%.

GENERATING PRODUCTIVITY IMPROVEMENTS

While studies attempt to quantify the health implications of quality cleaning procedures, our experience demonstrates that when building occupants suffer from symptoms such as respiratory illness, allergies and headaches, their performance also suffers. Dust from ineffective vacuuming can cause dry and scratchy eyes. Some VOC's can potentially cause headaches and nausea. Bacterial contamination from molds and fungi can potentially cause allergic reactions and flu-like symptoms. Even simple odors can cause "water cooler complaints" and low employee morale.

Beyond the health and environmental benefits of cleaning, a healthier indoor environment can have substantial financial benefits. According to BOMA, the average cost for salaries and benefits in a Class A office building is \$275.00 per square foot, while the average cost for cleaning is only \$1.25 per square foot. Thus, an incremental increase of just 0.5% in worker productivity will result in an increase equal to \$1.37 per square foot, effectively eliminating cleaning costs. In addition to improved productivity, Healthy High Performance Cleaning can contribute to reduced health care and insurance costs as well as better recruiting and retaining of top talent as part of the quality of life issues.

In additional research, Dr. Berry investigated the impact of a healthy school environment on student performance and concluded that, "there is a direct connection between healthy school environments; behaviors and attitudes of students, parents, and educators; and academic achievement."¹

The project at the Charles Young Elementary School in Washington, D.C., clearly demonstrated that cleaning, as part of a healthy school environment, was crucial to the student's high performance. While cleaning was just one component of creating a healthier environment, the results were remarkable. For students at or above basic math requirement levels, their performance increased by 25 percentage points. At the same time, students at or above basic reading requirement levels increased their performance by 16 percentage points as a result of a healthy school environment.

DEFINING HEALTHY HIGH PERFORMANCE CLEANING

Healthy High Performance Cleaning is a process that reduces the overall impact on human health and the environment by taking a holistic view of a facility, its mission and the activities that take place within that facility. The success of Healthy High Performance Cleaning hinges not on products, but on a larger principle – stewardship. This notion of stewardship introduces the sense of caring for the building and its occupants. Finally, Healthy High Performance Cleaning is a critical component of the sustainable built environment.

STEWARDSHIP PRINCIPLES

Managing a building is a huge responsibility. As an asset it can be worth tens of millions of dollars and some historical buildings are irreplaceable. The materials of construction, energy and other products used in building operations have an enormous environmental impact. The impact of cleaning chemicals and processes makes an indelible impact on the lives of the people who work, visit and live in the building. Thus, Stewardship is about "care" for a building far beyond the basic operations.

What do we mean by Stewardship?

Here are the 10 Stewardship Principles we follow:

1. Go Beyond Appearances
2. Take a Holistic Approach
3. Educate and Communicate
4. Scheduled Routine Maintenance
5. Plan for Accidents
6. Minimize Exposure
7. Minimize Residue
8. Ensure Safety
9. Reduce All Pollutants
10. Safe Disposal

¹ Michael A. Berry, PhD, Healthy School Environment and Enhanced Educational Performance – The Case of Charles Young Elementary School, Washington, DC, Carpet & Rug Institute, January 2002.

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CLEANING PERSONNEL RESPONSIBILITY

The role that cleaning workers play in a Healthy High Performance Cleaning program compared to a traditional cleaning program is very similar when we look at the day-to-day responsibilities for keeping facilities clean, removing trash, restocking restroom supplies, etc. In a Healthy High Performance Cleaning program, cleaning personnel are part of a Stewardship Team, not a group of individuals responsible for cleaning the building. The importance of their role in maintaining a healthy indoor environment should be elevated in stature throughout the facility. The result is improved communications, which in turn means there are fewer problems that can be solved more quickly and with less aggressive or toxic materials.

OCCUPANT RESPONSIBILITY

Defining Healthy High Performance Cleaning programs also identifies the critical role played by occupants.

For example:

- Cleaning a simple coffee or beverage spill becomes more difficult over time as the spill dries. As it seeps into the carpet and dries, it can require more aggressive stain cleaning agents to remove. The time it takes for an occupant to report a spill directly affects the type of cleaning product that is used for removal.
- Occupants who eat in their work areas may leave food crumbs in and behind desks, which may require the need to use toxic pesticides if the crumbs attract insects or rats. This is a huge problem in urban areas.
- Those who work in clutter, or who create excessive amounts of trash, or who don't recycle, increase the amount of time custodial workers need to maintain the area, resulting in less time to perform other vital tasks.

Because occupants significantly affect the building environment, everyone must work together to reduce our environmental impact and create the safest and healthiest work environment.

SUPPLIER RESPONSIBILITY

It is not just the cleaning personnel and the occupants that affect cleaning. It is also the cleaning product suppliers who frequently participate in the training on product usage and safety. Waste management companies along with other contractors such as elevator, roof or HVAC repair, have a profound effect on the overall impact a building has on occupant health and the environment because of their activities within a building.

Participation by suppliers is perhaps the most unique aspect of a Healthy High Performance Cleaning program. By law, product suppliers are required to provide an MSDS for all of their products used in the facility. Many suppliers also provide on-site training.

DEVELOPING A PURCHASING STRATEGY

Historically, the decision-making matrix for product selection was primarily limited to cost and performance. While health, safety and environmental concerns have always existed, they often play too little or no role in the decision-making matrix. The traditional assumption has been that all products meet the minimum requirements, and thus are acceptable. Furthermore, many procurement personnel have the perception that all products used for specific tasks are essentially the same. Therefore, no additional consideration regarding health and environmental attributes was necessary.

While the traditional decision-making model may be adequate, it fails to recognize the advances that have been made in many product categories. For example, the paper industry has developed processes for using high levels of post-consumer content in paper products, a resource that was unavailable 20 years ago.

Furthermore, purchasing was often done independent of other facility issues, such as construction materials, flooring materials, HVAC issues, geographical location, occupant make-up, cleaning personnel, facility mission, etc. This limited focus resulted in a "one-size-fits-all" product solution which would only be the appropriate decision if all facilities, occupants, cleaning personnel, etc., were the same. Environmentally preferable purchasing expands the decision-making model and takes advantage of new technologies to reduce health and environmental impacts that may have far-reaching financial implications.

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DEFINING ENVIRONMENTALLY PREFERABLE PRODUCTS

Section 201 of Presidential Executive Order 13101 defines “environmentally preferable” products as “products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service.” This definition of environmental preferability is consistent with the growing U.S. and international trend in this area, and as such, is an excellent conceptual definition of the term².

There are two critical elements in the definition of environmental preferability. The first is that it defines the issue as a comparison. It does not suggest that some are “bad” and others are “good.” It does not describe the issue as black and white. Rather it is a comparison in an effort towards the continual reduction of impact resulting from both products and services such as those provided by cleaning contractors or custodial staff. The second critical element is that the definition of “environmentally preferable” includes human health along with environmental impact.

Thus, the concept of environmental preferability is not intended to suggest that traditional products are “bad” or have put our cleaning personnel, building occupants and visitors or the environment at risk of harm or injury. Rather, the concept of environmental preferability is simply a decision-making strategy that takes advantage of the opportunities to reduce impact and perform tasks better. Considering the billions of pounds of chemicals (e.g., cleaner and floor coatings), paper (e.g., toilet tissue and hand towels) and plastic (e.g., trash can liners) used by the commercial cleaning industry to clean and maintain buildings, there exists an enormous opportunity to reduce the negative impacts of cleaning and have a positive influence on health and the environment.

For a guide to Forbo’s “Cost of Ownership” through HHPC, please visit www.forboflooringNA.com.

² More information on Presidential Executive Order 13101 can be found at <http://www.ofee.gov/eo/13101.htm>.

Healthy High Performance Cleaning Procedures

Healthy High Performance Cleaning takes traditional cleaning beyond appearances with procedures designed to make your building the safest, healthiest and cleanest it has ever been. The first step is understanding that cleaning plays a huge role in the health and safety of a building's occupants. Cleaning also directly affects the asset value of a building. The next step is putting what you know into practice and understanding what makes the difference.

DUST MOPPING AND VACUUMING

Traditional dusting and dust mopping techniques frequently move dust and other contaminants from one area to another, such as from a bookshelf to the floor. It is important to recognize that moving the dust from one place to another wastes labor and reduces efficiencies. Dusting and dust mopping activities that do not capture soils completely stir them into the air where people can then be exposed to the particles.

Dust (micro-fiber cloth)

1. Gather equipment.
2. Wear personal protective equipment per label directions.
3. Be sure to use appropriately sized attachments if using a vacuum.
4. Dust from top to bottom.
5. Be thorough and get hard to reach areas.
6. Never move personal items.

DUST MOPPING AND VACUUMING

HHPC Requirements

1. A micro-fiber flat mop is preferred over a dry or chemically treated cotton mop.
2. If using a micro-fiber mop, choose the widest mop possible taking into consideration the area, obstructions, unevenness of the floor, etc.
3. If using a vacuum, be sure to use a wide area hard floor attachment to maximize soil removal and to minimize labor.

Dust Mopping (mop or vacuum)

1. Assemble equipment and supplies.
2. Put on appropriate personal protective equipment, as stated on the product label and MSDS.
3. Using a putty knife, carefully remove any gum or other debris stuck to the floor.
4. Start from a far corner and work toward the door.
5. When using a micro-fiber flat mop, use a continuous motion, without lifting the mop from the floor.
6. Typically begin next to the wall. When turning, pivot so that the leading edge remains the same. Overlap the previously mopped path by 2 to 4 inches to ensure complete coverage.
7. When completely finished, pick up the collected debris using a counter brush and dust pan or vacuum.
8. When the micro-fiber no longer attracts soil, it will need to be laundered. Vacuum bags should be checked periodically and changed out when they become half-full.

ENTRYWAYS

Entryways are the first line of defense in limiting contaminants from entering buildings. Therefore, special effort should be focused in these areas to keep the contaminants out of the building. Proper maintenance of entryway systems can increase the life of the flooring systems (carpet, stone, resilient tile, etc.). From an economic and safety standpoint, a proper entryway maintenance program stops dirt at the door and will reduce floor care labor used to maintain floor finishes and sealers. Appropriate walk-off entry mats reduce liability and costs associated with people slipping and falling as a result of wet, dirty floors particularly during inclement weather or from excessive amounts of dirt and grit build up.

HHPC Requirements (cloth or vacuum)

1. Ensure that interior matting is at least 12 to 15 feet in length; especially during inclement weather.
2. When using ice-melting products it is preferable to use compounds that do not contain sodium chloride.

Healthy High Performance Cleaning Procedures

FLOOR CARE

The procedures for floor care in a Healthy High Performance Cleaning program are similar in most instances to those of a traditional program. Beyond the traditional issues, floor care in a Healthy High Performance Cleaning program addresses the selection of the procedures themselves. The life cycle assessment of the selected finish should factor in the durability and the frequency of stripping and recoating.

In a Healthy High Performance Cleaning program the primary effort should be a pollution prevention strategy, or one that minimizes the need to strip and recoat a floor. Thus, a specific focus should be on preventative measures, such as:

- Keep outside entryways clean to prevent soils from being tracked into the building. This may include sweeping, use of a power sprayer, etc.
- Use matting systems at all entrances to capture soils and moisture from shoes. It is preferable that the mats be large enough for each shoe to hit the mat two times (typically a minimum of 12 to 15 feet).
- Frequent vacuuming of entryway mats and grating systems.
- Frequent dust mopping of resilient tile floors or vacuuming, especially close to entryways and other sources of particulates (i.e. near copier rooms).
- Periodically clean under floor mats to reduce the potential for moisture to lead to bacterial and fungal growth. When floor mats get wet, replace them with clean dry mats.
- An intensive cleaning and frequent cleaning of the entryways to capture soils at the entryway rather than to remove it after it has spread throughout the entire building.

Floor Stripping

HHPC Requirements (floor stripping)

1. Notify occupants beforehand if a strip-out is scheduled.
2. Select environmentally preferable products. Mix and use products according to label directions.
3. Ventilate area and building during and after stripping.
4. Especially when stripping floors, it is preferable to conduct these activities on a weekend or some other extended time period when occupants will not be in the building. This allows maximum time for the building to be ventilated (flushed with fresh air) prior to the return of the occupants.

Floor Stripping Procedures

1. Prep the area by placing wet floor signs, caution tape and other blockades around area to be stripped.
2. Assemble equipment and supplies.
 - Assemble two mop heads and handles. If not color coded, label "Strip Mop" and the other "Rinse Mop."
 - Assemble two mop buckets and wringers. Label one bucket "Strip" and the other "Rinse."
 - Place the appropriate stripping pad on the rotary floor machine. Do Not use a black stripping pad. Fill the strip bucket with lukewarm water. Fill the rinse bucket with clean, cold water.
 - Place all equipment in the area where the work will begin.
3. Remove free standing objects. Vacuum and remove walk-off mats.

HHPC Requirements (floor finish / sealer application)

1. Apply finishes or sealers with a clean rayon mop head.
2. Use clean buckets with clean wheels.
3. Line bucket with fitted trash liner.
4. Use finish or sealer as recommended.
5. Apply even coats.
6. Don't force dry finish with a fan.

Spray Buffing Tips

- Spray buff solution enhances gloss, helps remove black marks and repairs scratches. Be sure to buff with a clean buffing pad.
- Try to spray buff the surface on a regular basis, 1-3 times per week.
- Use restraint when applying solution. One "shot" is usually enough.
- Carry the spray bottle in a convenient place. Holsters or attachments that mount onto your floor buffer are available.
- Take good care of your pads. Check and flip when they get soiled. Wash, rinse and hang to dry at the end of the shift.

Healthy High Performance Cleaning Procedures

HHP C Requirements (for Buffing and Burnishing)

1. Make sure that adequate floor finish exists.
2. Select the appropriate restoration products. Water-based, low VOC products are preferred.
3. Apply product in a jet spray instead of a wide-angle mist to minimize the amount that becomes airborne and inhaled or over sprayed. Do not over apply.
4. Be sure that the pad matches the rotary scrubbing machine speed and the finish type.

Buffing Procedures

1. Assemble equipment and supplies.
2. Put on appropriate Personal Protective Equipment, as stated on the product label and MSDS.
3. Post wet floor signs or other blockades.
4. Dust mop and damp mop the floor. The use of a microfiber flat mop is preferred.
5. Mount a red buffing pad on the rotary floor machine. Be sure to start with a fresh pad.
6. Apply spray buff solution in a jet spray being very careful not to use too much or overspray.
7. If using a 175 RPM machine, make three passes using a swinging motion over the work area, using appropriate pad.
8. If using a 1000 – 1500 RPM machine make a single pass in a straight line over the area.
9. Change pads as necessary.
10. Dust mop the floor after the entire area has been buffed.
11. Clean equipment and return it to its proper place.
12. Remove wet floor signs and/or other blockades.

SPILLS

Action Items:

1. Clean spills while still fresh.
2. Use the proper cleaning solutions and use only what is necessary.
3. Dispose properly.
4. Ensure that occupants know whom to contact in case of spills.

Generally it is preferable to address spills as soon as possible to minimize impact on both health and the environment. Work with building occupants to pick-up spills themselves or to communicate quickly so that cleaning personnel can quickly address the spill.

Customizing Your Floor Care Program

Resilient floor coverings manufactured by Forbo are engineered to provide outstanding value in service, and to look good over many years of use. In order to realize their maximum value over the long term however, they must be properly installed and cared for. In the same way that a car needs gas, oil, and regular servicing to run smoothly, a floor covering needs a regular servicing program to offer the ultimate performance.

When developing a customized floor care program, one issue that should be considered is accommodating people within a building or space that may have special needs. Giving consideration to this issue not only demonstrates a focus on protecting health, it also epitomizes the concept of a Healthy High Performance Cleaning Program. This includes the need to identify the most vulnerable population and the method for designing programs to create the healthiest environment.

The floor care guidelines that follow are intended to serve only as a general guide and were developed with a focus on striking a balance between appearance and cost. The frequency and specific type of procedures required will vary depending on the application, type and volume of traffic, equipment and personnel resources available, and the desired appearance of the floor.

Forbo Flooring has received cooperation from JohnsonDiversey to identify floor care products known to perform well with our floor coverings. Contact Forbo Flooring and/or JohnsonDiversey for assistance in developing a customized Healthy High Performance Cleaning Program that will optimize efficiency and create the healthiest environment for your facility. **If you prefer to use another manufacturer's floor care products, be sure to use a corresponding cross-referenced product.**

This manual provides easy-to-read floor care guidelines that cover most applications of Forbo products. If you need additional information, or have questions regarding a specific procedure, the following toll-free numbers have been established for your convenience.

JohnsonDiversey
1-800-558-2332

Forbo Flooring Technical Services
1-800-842-7839

Thank you for choosing Forbo Flooring for your floor covering needs.

Forbo Flooring does not warrant or guarantee the performance of other manufacturers' products mentioned in this document. For specific information regarding Forbo's limited five year product warranty, please refer to the specifications published by Forbo or contact Forbo Flooring for a copy of the warranty.

Forbo Flooring
Humboldt Industrial Park
P.O. Box 667
Hazleton, PA 18202
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General Floor Care Guidelines

SAFETY FIRST

Wet floors may be slippery. Exercise caution when conducting wet cleaning procedures, especially in healthcare applications where protective footwear is worn. Always use proper signage and prohibit traffic until floors are thoroughly dry.

1. Color Selection

The color of a floor covering can play a significant role in the apparent cleanliness of the floor. Light colors tend to show dark colored soil, and dark colors tend to show light colored soil. Patterned or marbled floor coverings generally have better soil concealing characteristics than plain floorcoverings.

In applications where regular floor care may not be possible, the color and pattern of the floor covering will influence how long the floor will retain an acceptable appearance level between cleaning procedures. In areas where there is a higher risk of staining, a color that will help to mask potential stains should be chosen.

2. Entrance Systems

Because the majority of dirt (as high as 80%) entering any building comes in on people's footwear, it makes sense to incorporate an effective entrance system. A good entrance system will not totally prevent soil from entering a building, but it will substantially reduce soiling and make floor care easier.

The entrance system can include specifically designed mat wells (such as Forbo's Nuway), loose laid mats that can be cleaned and changed on a regular schedule (such as Forbo's Coral), or a combination. An entrance system should extend far enough from the entrance so that the average person will take 4-10 steps while on the entrance system. It is also important that the entrance system be maintained correctly in order to ensure that it is fulfilling its function.

3. Petroleum and Anti-Oxidant Staining

Some rubber products, particularly dark colored ones like tires, casters, floor mats, and asphalt sealers that are commonly used in parking lots and walkways, contain chemicals that can permanently stain floor coverings. Although the discoloration is generally less marked with linoleum flooring than with vinyl flooring, precautions should always be taken in areas such as hospitals, supermarkets, or automobile showrooms where potential discoloration is a concern. For example, staining from tires can be prevented in an automobile showroom by placing a small mat under each tire. In hospitals or supermarkets, non-staining wheels should be specified for rolling equipment. All mats or rugs should also be non-staining.

4. Chemical Damage

All floorcovering materials are subject to damage or staining from certain chemicals. For applications where damage or staining may be a concern, a flooring product that offers the best resistance to the specific chemicals involved should be selected. A stain resistant chart for commonly used chemicals is available for all Forbo flooring products.

Chemical spills should always be cleaned as soon as possible in order to prevent or minimize damage to the floor covering. The application of a floor sealer and floor finish may be helpful in preventing permanent stains if the finish is removed before the stain has penetrated to the flooring material. The floor finish can then be replaced with additional coats of finish.

5. Spills

Spot clean spills as soon as possible. If necessary, rinse the area with clean cool water and allow the floor to dry thoroughly before permitting traffic. In addition to the possibility of damage or staining of the floor covering when spills occur, safety is also a concern. Make sure all floor care personnel are aware of the potential liability associated with spills, as well as the need for immediate attention.

6. Heel Marks

Black heel marks can be removed from linoleum using a fine nylon pad moistened with the selected polish. On vinyl flooring materials, use a clean white cloth with mineral spirits. Rinse thoroughly with a clean cloth and water. Allow to dry.

7. Cigarette Burns and Gum

A cigarette stubbed out on a linoleum floor only chars the surface, and the resulting mark can normally be removed by using fine steel wool. After cleaning, an application of floor finish will protect the repaired spot. On a vinyl floor covering, however, the heat of the cigarette will often melt the material and may leave a permanent mark on the floor. Gum can be removed with a smooth putty knife and mineral spirits.

General Floor Care Guidelines

8. Physical Damage

All resilient floor covering materials are susceptible to certain types of physical damage. Stationary objects such as furniture should have adequate floor protectors. If the pressure exerted by an object on the floor covering exceeds the floor covering's rated capacity, permanent indentations may occur.

Care must be taken when moving furniture or other heavy objects. Do not slide heavy objects across the floor. When moving heavy objects, protecting the floor covering with thin sheets of masonite or plywood may be required. Failure to use adequate precautions may result in scratches, cuts, or other severe damage to the floorcovering.

Rolling equipment should have broad, flat wheels with rounded edges and without ridges. Wheel locks should be disengaged prior to moving equipment.

9. Disinfectants, Sanitizers, Sterilants

Quaternary ammonium compounds are commonly used in hospital disinfection programs. Generally, when mixed and used properly, they will have little or no effect on the physical properties of most floorcoverings. Phenolic disinfectants are very caustic and pose a greater risk of damage to floorcoverings or other surfaces that they come into contact with. Potential damage includes discoloration or damage of the flooring surface, and leaving a slippery residue that may cause a hazardous condition. Where protective footwear is used, the chance of slipping is increased. If phenolic disinfectants are used, the floorcovering should be thoroughly rinsed with clean water after each application. After rinsing, the floor should be wet vacuumed. Following this recommendation will reduce the risk of slipperiness and damage to the floorcovering. Forbo's warranty does not cover damage caused by phenolic disinfectants.

10. Proper Use of Floor Care Chemicals

The improper use of high pH cleaners and strippers may damage resilient flooring products. Frequent treatment or inadequate rinsing may cause cracking, shrinking, and/or discoloration. Linoleum flooring should NEVER be cleaned or stripped with high pH chemicals because permanent damage may occur.

Abrasive powders or cleansers should not be used on Forbo floorcoverings

11. Floor Care Equipment

Keep all equipment clean and in good repair. Wash and rinse mops, pads, applicators, and brushes after each use. Use a dedicated mop for each procedure, i.e. one only used for cleaning, one only used for rinsing, and another only used for finish application.

12. Cleaning Machine Pads

The Color Codes indicating grades of pads will vary depending on the manufacturer, and also according to the type of machine that is used, i.e. standard, high speed or ultra high speed.

For example:	3M	Johnson/Diversey
Fine grade, for dry burnishing non-buffable polishes	White	Mint
For medium grade, spray cleaning	Red	Mint
For heavy duty cleaning	Blue	Purple
Course grade, for stripping	Blue	Purple
High speed burnishing	Check With Product Manufacturer	

NOTE: The use of a black stripping pad is not recommended with Forbo floor coverings. Misuse can cause damage to the flooring material. A black stripping pad can be used on an existing non-cushioned floor covering to remove the finish for application of another resilient floor covering.

Floor Care Guidelines for Forbo Sheet & Tile Linoleum with Topshield marmoleum® & walton

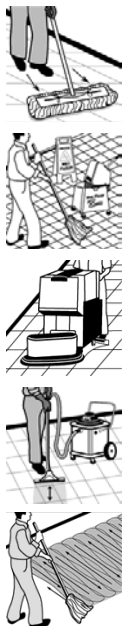


Linoleum is made from natural raw materials consisting of linseed oil, wood flour, rosin binders, dry pigments, mixed and calendared onto either a natural jute backing (sheet products) or a polyester backing (tile products). The Forbo Marmoleum and linoleum product range includes: Marmoleum sheet, Marmoleum decibel sheet, Marmoleum CP Sheet, Walton sheet, Marmoleum Dual Tile and Marmoleum Composition Tile (MCT).

Forbo Marmoleum and linoleum products feature Topshield finish. Topshield is an innovative factory finish that eliminates the need for initial finish application and reduces the use of chemicals, while enabling lower cleaning costs and better long term appearance retention than any other resilient flooring. Topshield consists of a strong, durable primer along with a top layer that provides a highly effective shield against soiling. The cross-linked primer ensures smoothness and durability.

Forbo Marmoleum and linoleum products with Topshield are **OCCUPANCY READY** following installation. No additional finish is required. When cleaning these products, do not remove the existing Topshield finish. If desired at a later time, the top layer can be cost-effectively renovated to renew the visual appearance of the product.

NOTE: WAIT AT LEAST 5 DAYS AFTER INSTALLATION BEFORE CONDUCTING WET CLEANING PROCEDURES.



INITIAL CLEANING

For new installations exposed to normal construction soil and traffic.

1. Remove all surface soil, debris, sand and grit by sweeping, vacuuming or dust mopping.
2. Scrub the floor with a neutral pH detergent/cleaner, such as Johnson Wax Professional Stride, mixed according to label directions. Apply the cleaning solution with a mop and bucket; allow the solution to remain on the floor, then scrub with a rotary electric scrubber or automatic scrubber with a non-abrasive red scrubbing pad.
3. Do NOT over-saturate the floor.
4. If not using an automatic scrubber, pick up the scrubbing solution with a wet vacuum (preferred) or a squeegee and a mop.
5. Rinse the entire floor surface with a clean mop using clean, cool water and allow the floor to dry thoroughly before allowing traffic.
6. Although no additional finish is required, one to three coats of additional finish may be applied if desired.
7. If desired, spray buff with a spray buff solution, such as Snapback, then dry buff with a white pad, followed by dustmopping.

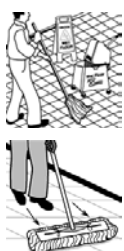
NOTE: Because of the unique Topshield surface, additional floor finish is not necessary. The application of additional finish will however, increase the thickness of the wear surface, which may improve resistance to some stains, as well as provide additional gloss if desired. Consideration for applying additional finish, either alone or in combination with Johnson Wax Professional LinoBase Sealer, should be given if: (1) Additional gloss is desired, or (2) Exposure to unknown chemicals is a concern.



DAILY CLEANING

1-3 times per day, depending on the application, type of traffic, and hours of operation.

1. Clean the entire flooring surface with a treated dust mop.
2. Stains or spills should be wiped or mopped up immediately with a damp mop using a neutral pH detergent, such as Johnson Wax Professional Stride. Be sure to allow the floor to dry thoroughly before allowing traffic.



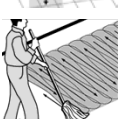
REGULAR CLEANING

Approximately every 3-7 days, depending on the application, type of traffic, and hours of operation.

1. Clean the entire flooring surface with a treated dust mop.
2. Damp-mop the floor with a neutral cleaner, such as Johnson Wax Professional Stride, and rinse the entire floor surface with a clean mop using clean, cool water. Allow the floor to dry thoroughly before allowing traffic.
OR
Use the Johnson Diversey PACE Cleaning System with microfiber pads (JDI Healthy High Performance Cleaning System).

Floor Care Guidelines for Forbo Sheet & Tile Linoleum with Topshield marmoleum® & walton

topshield



PERIODIC CLEANING

As needed, depending on the application, type of traffic, and hours of operation.

1. Clean the entire flooring surface with a treated dust mop.
2. Top scrub the floor with a neutral pH detergent/cleaner, such as Johnson Wax Professional Stride, mixed according to label directions. Apply the cleaning solution with a mop and bucket; allow the solution to remain on the floor, then scrub with a rotary electric scrubber or automatic scrubber with a non-abrasive red scrubbing pad.
3. Do NOT over-saturate the floor.
4. If not using an automatic scrubber, pick up the scrubbing solution with a wet vacuum (preferred) or a squeegee and a mop.
5. Rinse the entire floor surface with a clean mop using clean, cool water & allow the floor to dry thoroughly.
6. Spray buff with a spray buff solution, such as Johnson Wax Professional Snapback, then dry buff with a white pad followed by dustmopping.

NOTE: Weather, traffic, and geographical location will influence the required frequency of this procedure. For example, in areas where there are large amounts of snow and chemicals used in the winter months it will likely be necessary to perform this procedure more frequently. In dry climates, or where there is less dirt traffic, it may not be necessary to perform this procedure as frequently.

RENOVATION

As needed if the flooring has been damaged or when periodic cleaning procedures no longer produce the desired result.

1. Clean the entire flooring surface with a treated dust mop.
2. Heavy Scrub the floor using a stripper solution such as Johnson Wax Professional LinoSafe Stripper, mixed according to label directions. Apply the stripping solution with a mop and bucket and, following label directions, allow the solution to remain on the floor, then scrub with a rotary electric scrubber or automatic scrubber with a green or blue scrubbing pad. The use of brown or black stripping pads is not recommended.
3. Do NOT over-saturate the floor.
4. If not using an automatic scrubber, pick up the scrubbing solution with a wet vacuum (preferred) or a squeegee and a mop.
5. Rinse the entire floor surface with a clean mop using clean, cool water & allow the floor to dry thoroughly.
6. Apply 2-3 thin coats of Johnson Wax Professional Carefree Matte finish or, for a higher gloss, Johnson Wax Professional Carefree finish.

CAUTION:

The Topshield factory coating can be damaged by traditional wet stripping methods. The caustic nature of many traditional strippers will cause a color change in Marmoleum and linoleum, normally yellowing or browning, particularly on lighter colors. Also, as the stripping solution sits in contact with the linoleum, the linoleum absorbs the stripping solution, causing it to expand and become softer. In this softened state, further damage to linoleum can easily occur with the use of heavy duty stripping pads normally used for traditional wet stripping.

Forbo Marmoleum and linoleum flooring should never be subjected to traditional, aggressive wet stripping. These floors should be cared for by a staff trained to understand the following:

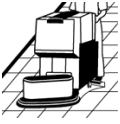
- Forbo Marmoleum and linoleum flooring with Topshield is **OCCUPANCY READY** following installation. Removal of the factory finish, recommended by some manufacturers, is **not necessary nor recommended** for Forbo linoleum flooring products.
- A regular floor care program, as described above, should be followed closely. If there are any questions, Forbo representatives are available to conduct a floor care review prior to the initial cleaning.
- A well-trained staff using an effective program of regular care will virtually eliminate the need for stripping, and is the recommended approach to Marmoleum and linoleum floor care.

For additional information or for your local supplier, call:

Forbo Flooring
1-800-842-7839
www.forboflooringna.com

Johnson Diversey
1-800-558-2332
www.johnsondiversey.com

Floor Care Guidelines for Forbo Sheet Vinyl eternal, smaragd[®], eternal wood decibel



INITIAL CLEANING

For new installations exposed to normal construction soil and traffic.

1. Remove all surface soil, debris, sand and grit by sweeping, vacuuming or dust mopping.
2. Scrub the floor with a neutral pH detergent/cleaner, such as Johnson Wax Professional Stride, mixed according to label directions. Apply the cleaning solution with a mop and bucket; allow the solution to remain on the floor, then scrub with a rotary electric scrubber or automatic scrubber with a non-abrasive red scrubbing pad.
3. Do NOT over-saturate the floor.
4. If not using an automatic scrubber, pick up the scrubbing solution with a wet vacuum (preferred) or a squeegee and a mop.
5. Rinse the entire floor surface with a clean mop using clean, cool water and allow the floor to dry thoroughly before allowing traffic.
6. Although no additional finish is required, one to three coats of additional finish may be applied if desired.
7. If desired, spray buff with a spray buff solution, such as JohnsonWax Professional Snapback, then dry buff with a white pad followed by dustmopping.

DAILY CLEANING

1-3 times per day, depending on the application, type of traffic, and hours of operation.

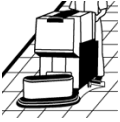
1. Clean the entire flooring surface with a treated dust mop.
2. Stains or spills should be wiped or mopped up immediately with a damp mop using neutral pH detergent, such as Johnson Wax Professional Stride. Be sure to allow the floor to dry thoroughly before allowing traffic.

REGULAR CLEANING

Approximately every 3-7 days, depending on the application, type of traffic, and hours of operation.

1. Clean the entire flooring surface with a treated dust mop.
2. Damp-mop the floor with a neutral cleaner, such as Johnson Wax Professional Stride.
OR
Use JohnsonDiversey PACE Cleaning System with microfiber pads (JDI Healthy High Performance Cleaning System).

Floor Care Guidelines for Forbo Sheet Vinyl eternal, smaragd[®], eternal wood decibel



PERIODIC CLEANING

As needed, depending on the application, type of traffic, and hours of operation.

1. Clean the entire flooring surface with a treated dust mop.
2. Top scrub the floor with a neutral pH detergent/cleaner, such as Johnson Wax Professional Stride, mixed according to label directions. Apply the cleaning solution with a mop and bucket; allow the solution to remain on the floor, then scrub with a rotary electric scrubber or automatic scrubber with a non-abrasive red scrubbing pad.
3. Do NOT over-saturate the floor.
4. If not using an automatic scrubber, pick up the scrubbing solution with a wet vacuum (preferred) or a squeegee and a mop.
5. Rinse the entire floor surface with a clean mop using clean, cool water and allow the floor to dry thoroughly.
6. Spray buff with a spray buff solution, such as Johnson Wax Professional Snapback, then dry buff with a white pad, followed by dustmopping.

NOTE: Weather, traffic, and geographical location will influence the required frequency of this procedure. For example, in areas where there are large amounts of snow and chemicals used in the winter months it will likely be necessary to perform this procedure more frequently. In dry climates, or where there is less dirt traffic, it may not be necessary to perform this procedure as frequently.

RENOVATION

As needed if the flooring has been damaged or when periodic cleaning procedures no longer produce the desired result.

1. Clean the entire flooring surface with a treated dust mop.
2. Heavy Scrub the floor using a stripper solution such as Johnson Wax Professional LinoSafe Stripper mixed according to label directions. Apply the stripping solution with a mop and bucket and, following label directions, allow the solution to remain on the floor, then scrub with a rotary electric scrubber or automatic scrubber with a green or blue scrubbing pad. The use of brown or black stripping pads is not recommended.
3. Do NOT over-saturate the floor.
4. If not using an automatic scrubber, pick up the scrubbing solution with a wet vacuum (preferred) or a squeegee and a mop.
5. Rinse the entire floor surface with a clean mop using clean, cool water and allow the floor to dry thoroughly.
6. Apply 2-3 thin coats of Johnson Wax Professional Carefree Matte finish or, for a higher gloss, Johnson Wax Professional Carefree finish.

NOTE: Phenolic disinfectants are very caustic and pose a greater risk of damage to floorcoverings or other surfaces that they come into contact with. Potential damage includes discoloration or damage of the flooring surface, and leaving a slippery residue that may cause a hazardous condition. Where protective footwear is used, the chance of slipping is increased. If phenolic disinfectants are used, the floorcovering should be thoroughly rinsed with clean water after each application. After rinsing, the floor should be wet vacuumed. Following this recommendation will reduce the risk of slipperiness and damage to the floorcovering. Forbo's warranty does not cover damage caused by phenolic disinfectants.

For additional information or for your local supplier, call:

Forbo Flooring
1-800-842-7839
www.forboflooringna.com

Johnson Diversey
1-800-558-2332
www.johnsondiversey.com

Floor Care Guidelines for Forbo Slip-Resistant Sheet Vinyl tractionstep® safety flooring (smooth & studded)



INITIAL CLEANING

For new installations exposed to normal construction soil and traffic.

1. Remove all surface soil, debris, sand and grit by sweeping, vacuuming or dust mopping.
2. Scrub the floor with a neutral pH detergent/cleaner, such as Johnson Wax Professional Stride, mixed according to label directions. Apply the cleaning solution with a mop and bucket; allow the solution to remain on the floor, then scrub with a rotary electric scrubber or automatic scrubber equipped with a soft bristle brush.
3. Do NOT over-saturate the floor.
4. If not using an automatic scrubber, pick up the scrubbing solution with a wet vacuum (preferred) or a squeegee and a mop.
5. Rinse the entire floor surface with a clean mop using clean, cool water and allow the floor to dry thoroughly before allowing traffic. Using an automatic scrubber or wet vacuum to remove the rinse water will aid in shortening the drying time.
6. Although no additional finish is required, one or two coats of additional finish may be applied for easier cleaning.



NOTE: The addition of too much floor finish will hinder the slip-resistant performance of the flooring material.



DAILY CLEANING

1-3 times per day, depending on the application, type of traffic, and hours of operation.

1. Sweep or vacuum the entire floor.
2. Stains or spills should be wiped or mopped up immediately with a damp mop using neutral pH detergent, such as Johnson Wax Professional Stride. Be sure to allow the floor to dry thoroughly before allowing traffic.



REGULAR CLEANING

Approximately every 3-7 days, depending on the application, type of traffic, and hours of operation.

1. Sweep or vacuum the entire floor.
2. Damp-mop the floor with a neutral cleaner, such as Johnson Wax Professional Stride.



Floor Care Guidelines for Forbo Slip-Resistant Sheet Vinyl tractionstep® safety flooring (smooth & studded)



PERIODIC CLEANING

As needed, depending on hours of the application, type of traffic, and hours of operation.

1. Sweep or vacuum the entire floor.
2. Top scrub the floor with a neutral pH detergent/cleaner, such as Johnson Wax Professional Stride, mixed according to label directions. Apply the cleaning solution with a mop and bucket; allow the solution to remain on the floor, then scrub with a rotary electric scrubber or automatic scrubber equipped with a soft bristle brush. [for commercial kitchen applications the addition of a degreaser may be necessary for best results]
3. Do NOT over-saturate the floor.
4. If not using an automatic scrubber, pick up the scrubbing solution with a wet vacuum (preferred) or a squeegee and a mop.
5. Rinse the entire floor surface with a clean mop using clean, cool water and allow the floor to dry thoroughly before allowing traffic. Using an automatic scrubber or wet vacuum to remove the rinse water will aid in shortening the drying time.

NOTE: Weather, traffic, and geographical location will influence the required frequency of this procedure. For example, in areas where there are large amounts of snow and chemicals used in the winter months it will likely be necessary to perform this procedure more frequently. In dry climates, or where there is less dirt traffic, it may not be necessary to perform this procedure as frequently.

RENOVATION

As needed if the flooring has been damaged or when periodic cleaning procedures no longer produce the desired result.

1. Sweep or vacuum the entire floor.
2. Heavy Scrub the floor using a stripper solution such as Johnson Wax Professional LinoSafe Stripper mixed according to label directions. Apply the stripping solution with a mop and bucket and, following label directions, allow the solution to remain on the floor, then scrub with a rotary electric scrubber or automatic scrubber equipped with a soft bristle brush.
3. Do NOT over-saturate the floor.
4. If not using an automatic scrubber, pick up the scrubbing solution with a wet vacuum (preferred) or a squeegee and a mop.
5. Rinse the entire floor surface with a clean mop using clean, cool water and allow the floor to dry thoroughly. Using an automatic scrubber or wet vacuum to remove the rinse water will aid in shortening the drying time.
6. Apply 2-3 thin coats of Johnson Wax Professional Carefree Matte finish or, for a higher gloss, Johnson Wax Professional Carefree finish.

For additional information or for your local supplier, call:

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1-800-842-7839
www.forboflooringna.com

Johnson Diversey
1-800-558-2332
www.johnsondiversey.com

Floor Care Guidelines for Forbo ESD Sheet Vinyl & Tile

colorex® sd/ec and tractionstep®



NOTE: The following guidelines are for ESD Control applications. For non-ESD Control applications, follow the Floor Care Instructions for Forbo Sheet Vinyl floors.

INITIAL CLEANING

For new installations exposed to normal construction soil and traffic.

1. Remove all surface soil, debris, sand and grit by sweeping, vacuuming or dust mopping.
2. Scrub the floor with a neutral pH detergent/cleaner, such as Johnson Wax Professional Stride, mixed according to label directions. Apply the cleaning solution with a mop and bucket; allow the solution to remain on the floor, then scrub with a rotary electric scrubber or automatic scrubber with a non-abrasive red scrubbing pad.
3. Do NOT over-saturate the floor.
4. If not using an automatic scrubber, pick up the scrubbing solution with a wet vacuum (preferred) or a squeegee and a mop.
5. Rinse the entire floor surface with a clean mop using clean, cool water and allow the floor to dry thoroughly before allowing traffic.
6. For ESD Control applications, Do Not apply a floor finish. A satin gloss may be obtained by burnishing Colorex tile.



DAILY CLEANING

1-3 times per day, depending on the application, type of traffic, and hours of operation.

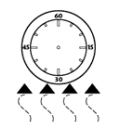
1. Clean the entire flooring surface with a treated dust mop.
2. Stains or spills should be wiped or mopped up immediately with a damp mop using neutral pH detergent, such as Johnson Wax Professional Stride. Be sure to allow the floor to dry thoroughly before allowing traffic.



REGULAR CLEANING

Approximately every 3-7 days, depending on the application, type of traffic, and hours of operation.

1. Clean the entire flooring surface with a treated dust mop.
2. Damp-mop the floor with a neutral cleaner, such as Johnson Wax Professional Stride.
OR
Use JohnsonDiversey PACE Cleaning System with microfiber pads (JDI Healthy High Performance Cleaning System).
3. Colorex tile may be burnished as necessary to restore gloss.



Floor Care Guidelines for Forbo ESD Sheet Vinyl & Tile colorex® sd/ec and tractionstep®



PERIODIC CLEANING

As needed, depending on hours of the application, type of traffic, and hours of operation.

1. Clean the entire flooring surface with a treated dust mop.
2. Top scrub the floor with a neutral pH detergent/cleaner, such as Johnson Wax Professional Stride, mixed according to label directions. Apply the cleaning solution with a mop and bucket; allow the solution to remain on the floor, then scrub with a rotary electric scrubber or automatic scrubber with a non-abrasive red scrubbing pad.
3. Do NOT over-saturate the floor.
4. If not using an automatic scrubber, pick up the scrubbing solution with a wet vacuum (preferred) or a squeegee and a mop.
5. Rinse the entire floor surface with a clean mop using clean, cool water and allow the floor to dry thoroughly before allowing traffic. Using an automatic scrubber or wet vacuum to remove the rinse water will aid in shortening the drying time.
6. A satin gloss may be restored by burnishing Colorex tile.

NOTE: Weather, traffic, and geographical location will influence the required frequency of this procedure. For example, in areas where there are large amounts of snow and chemicals used in the winter months it will likely be necessary to perform this procedure more frequently. In dry climates, or where there is less dirt traffic, it may not be necessary to perform this procedure as frequently.

RENOVATION

As needed if the flooring has been damaged or when periodic cleaning procedures no longer produce the desired result.

1. Clean the entire flooring surface with a treated dust mop.
2. Heavy Scrub the floor using a stripper solution such as Johnson Wax Professional LinoSafe Stripper mixed according to label directions. Apply the stripping solution with a mop and bucket and, following label directions, allow the solution to remain on the floor, then scrub with a rotary electric scrubber or automatic scrubber with a green or blue scrubbing pad. The use of brown or black stripping pads is not recommended.
3. Do NOT over-saturate the floor.
4. If not using an automatic scrubber, pick up the scrubbing solution with a wet vacuum (preferred) or a squeegee and a mop.
5. Rinse the entire floor surface with a clean mop using clean, cool water and allow the floor to dry thoroughly before allowing traffic.
6. A satin gloss may be restore by burnishing Colorex tile.

For additional information or for your local supplier, call:

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1-800-842-7839
www.forboflooringna.com

Johnson Diversey
1-800-558-2332
www.johnsondiversey.com

Floor Care Guidelines for Forbo Flotex Textile Sheet & Tile

flotex® sheet and tile

The unique construction of Forbo Flotex Flocked Textile sheet and tile flooring is what allows it to release soiling like no other textile flooring can. Unlike the looped and twisted fibers of a conventional carpet pile, the smooth straight fibers of Flotex do not trap particles of soil, allowing them to be removed without difficulty during cleaning. Most spills can be cleaned with plain water and, because Flotex is completely water-proof, there is no need to worry about water damage to either the pile or the floor beneath. This document will provide you with guidelines that, if followed, will keep your flooring looking beautifully clean for many years to come.

GENERAL GUIDELINES

- All flooring surfaces are exposed to dirt beginning the day of installation, so implementing a floor care program early on is important. A properly designed and executed care routine can avoid the need to spend extra budget dollars on restoration cleanings.
- **Identify Traffic Areas:**
By defining the traffic areas in a facility, a better determination can be made regarding an appropriate floor care plan. A single foot traffic is defined as “a pedestrian walking across a measured section of flooring, one time.”
Traffic areas are:
 1. **High Traffic Areas** [800,000-2,000,000 traffics] - Outside entrances, hallways, break rooms, cafeterias, corridors, elevator lobbies, stairways, main aisles, waiting areas, etc. and ANY AREA CONSIDERED ESSENTIAL TO THE PUBLIC IMAGE OF THE COMPANY.
 2. **Medium Traffic Areas** [400,000-800,000 traffics] - Secondary aisles, research areas, conference rooms, classrooms, atriums, etc.
 3. **Light Traffic Areas** [400,000 traffics] - Offices, cubicles, storage rooms, executive areas, etc.
- **Clean for Health:**
Flotex requires regular care to keep it clean and prevent the accumulation of dirt and soil that can lead to unhealthy conditions. Without exception, when IAQ complaints are investigated through testing of the affected area and it is found that bacterial or fungal levels are high, these findings always relate directly to contamination from food particles or human bacteria. Proper cleaning, such as daily vacuuming and routine hot water extraction, can reduce this contamination to virtually nonexistent levels. **The following list of disinfectants that are approved by OSHA and the EPA can be safely used on Flotex so long as label directions are followed:**

<u>Brand Name</u>	<u>Manufacturer</u>	<u>EPA#</u>
Ascend Dual-Quat Disinfectant	Huntington Professional	920965-01
TOR II Neutral pH Germicide	Huntington Professional	920963-01
TOR-HB Detergent/Disinfectant	Huntington Professional	
Amphyl® Disinfectant Cleaner	Reckitt Benckiser	675-43
Amphyl® Disinfectant Deodorant Spray	Reckitt Benckiser	777-72-675
Medaphene Plus Disinfectant Deodorant	Dymon, Inc.	11694-98
Medaphene Disinfectant Deodorizing Spray	Dymon, Inc.	11694-98
Phono Cen Spray Disinfectant Deodorant	Central Solutions	211-32
Lysol® I.C. Disinfectant Spray	Reckitt Benckiser	777-72-675
Citrace Hospital Germicidal Deodorizer	Caltech Industries, Inc.	56392-2
- Use a high quality walk-off mat, such as Coral Mats, at all entrances.
- Vacuum high traffic areas daily.
- Identify sources of soiling and react to spills immediately, before they dry.
- **Be certain not to leave any detergent residue when cleaning. Any chemicals applied to the flooring must be removed!** No more than 1 oz. per gallon should be used. **The most common problem when caring for Flotex is the over use of cleaning chemicals.** The build up of chemicals and cleaners will de-luster the Flotex fibers and leave a dull appearance. Chemical buildup also attracts dirt faster and speeds soiling.

Floor Care Guidelines for Forbo Flotex Textile Sheet & Tile

flotex® sheet and tile

INITIAL CLEANING

For new installations exposed to normal construction soil and traffic.

1. **Vacuum** using a dual motor or twin fan upright vacuum with a rotating brush with high suction. The brush should be about 1/8" below the vacuum cleaner casing to ensure proper agitation. Make five to seven passes with the vacuum cleaner to ensure that all loose dirt is removed. **Vacuum action should be fast forward and slow backward.**
2. Spot clean by using the "Scrape, Scrub and Rinse" procedure:
 - a. Scrape up spills using a spatula or blunt edged scraper.
 - b. Apply a liberal amount of cold water to the spot first, then hot water second. If the spot was caused by something hot, such as coffee, it may require hot water to remove.
 - c. If necessary, apply the appropriate cleaner (see the chart below) to a white cotton towel and rub it into the spot. Do not be afraid to use aggressive scrubbing to remove set-in spills. A soft wire brush can be used to remove scuff marks or other set in spills.
 - d. Using a spatula, scrape the water, any cleaner, and the remains of the spill into a paper towel or cloth. Keep scraping with the spatula until the spill is completely removed.
 - e. Rinse the area thoroughly with water to ensure that any cleaning solution is completely removed.
 - f. A Hoover Steam Vac or other extraction machine may be used to perform a final rinse step in spot cleaning. Rinse and extract all cleaning products, leaving no residue.
 - g. Do not allow traffic on areas that were spot cleaned before the Flotex has completely dried.

DAILY CLEANING

1. Color code the facility floor plan or blueprints to indicate high, medium, and low traffic areas. For each area, vacuum using the following frequency:
 - High Traffic** - Daily.
 - Medium Traffic** - Every Other Day.
 - Low Traffic** - Twice Per Week.
2. **Vacuum** using a dual motor or twin fan upright vacuum with a rotating brush with high suction. The brush should be about 1/8" below the vacuum cleaner casing to ensure proper agitation. Make five to seven passes with the vacuum cleaner for high traffic areas and four passes for medium and low traffic areas to ensure that all loose dirt is removed. **Vacuum action should be fast forward and slow backward.**
3. Walk off mats should be vacuumed daily.

NOTE: All equipment should be in good working order. Repair or replace equipment in disrepair immediately.
4. Spot Clean by using the "Scrape, Scrub and Rinse" procedure:
 - a. Cleaning spills as soon as possible will dramatically reduce overall care and will also minimize any staining that may occur if the spill is let to soak in and dry.

NOTE: Oily or sticky spills should not be left, since they can cause patchy discoloration.
 - b. The best time to identify spills is during regular vacuuming.
 - c. Scrape up spills using a spatula or blunt edged scraper.

NOTE: Always work from the outer edge towards the center of the spot.
 - d. Apply a liberal amount of cold water to the spot first, then hot water second. If the spot was caused by something hot, such as coffee, it may require hot water to remove.
 - e. If necessary, apply the appropriate cleaner (see the chart below) to a white cotton towel and rub it into the spot. Do not be afraid to use aggressive scrubbing to remove set-in spills. A soft wire brush can be used to remove scuff marks or other set in spills.

NOTE: The short, vertical nature of Flotex fibers allows for greater accessibility to soiling deposits. Therefore, Flotex requires much less detergent than conventional floors. No more than 1 oz. per gallon should be used.
 - f. Using a spatula, scrape the water, any cleaner, and the remains of the spill into a paper towel or cloth. Keep scraping with the spatula until the spill is completely removed.
 - g. Rinse the area thoroughly with water to ensure that any cleaning solution is completely removed.

Floor Care Guidelines for Forbo Flotex Textile Sheet & Tile

flotex® sheet and tile

DAILY CLEANING (cont.)

- h. A Hoover Steam Vac or other extraction machine may be used to perform a final rinse step in spot cleaning. Rinse and extract all cleaning products, leaving no residue.
- i. Do not allow traffic on areas that were spot cleaned before the Flotex has completely dried.

If the spot returns, either the cleaner used was not fully rinsed from the flooring and it caused rapid resoiling, or the spot at the yarn base was bigger than the surface spot. Either condition can be easily corrected by thoroughly rinsing with warm water, then extracting.

Staining Agent	Recommended Cleaning Agent
Antacids, Beer, Beverages (Fruit Juice), Ketchup, Chalk, Clay, Cough Syrup, Honey, Jelly, Liquor, Maple Syrup, Milk, MilkShakes, Infant Formula, Soft Drinks, Toothpaste, Vomit, Water Colors	Water
Butter, Candy, Canned Fruit, Chocolate, Gravy, Ice Cream, Kool-Aid, Margarine, Mayonnaise, Peanut Butter, Salad Dressing, Soy Sauce, Tomato Paste, Wine	All Purpose Spot Remover
Hand Lotion, Ink, Lipstick, Oil-Based Stains, Paint, Toner	Paint, Oil, and Grease Remover
Glue, Gum, Tar, Adhesives, Seam Sealers	Adhesive Remover
Coffee, Tea, Tobacco Juice	Tannin Remover
Blood, Urine, Vomit	Spot Remover with Deodorizer
Betadine, Iodine	Beta-dine Remover/Beta-Klean by Core Products
Rust	Rust Remover

PERIODIC CLEANING - HOT WATER EXTRACTION

As needed, depending on the application, type of traffic, and hours of operation.

Typical frequency:

High traffic areas every eight to twelve weeks

Medium traffic areas twice a year

Low traffic areas once a year

NOTE: In winter months for entry ways, clear-rinse extract the flooring bi-monthly to remove dirt or salt buildup. Use two or three dry passes for each wet pass.

1. **Vacuum** using a dual motor or twin fan upright vacuum with a rotating brush with high suction. The brush should be about 1/8" below the vacuum cleaner casing to ensure proper agitation. Make five to seven passes with the vacuum cleaner for high traffic areas and four passes for medium and low traffic areas to ensure that all loose dirt is removed. **Vacuum action should be fast forward and slow backward.**
2. Heavily soiled areas may require scrubbing with a nylon brush or a rotary machine in order to break up soil deposits prior to hot water extraction.
3. Use a self-contained portable extraction machine that includes high pressure nozzles to force out the water, brushes to agitate the fibers and an adjustable extraction head to pick up water. The extraction machine should be able to heat the water to between 150° and 180° at the spray nozzle.
4. Extract thoroughly, using water only. Set the machine to its lowest setting to ensure maximum agitation and contact with the fibers.
5. Don't be afraid to repeatedly spray and scrub areas where soiling proves more difficult to remove. The construction of Flotex can withstand aggressive agitation.
6. Perform a clear-water rinse following the deep cleaning extraction.
7. **Follow each wet pass with a minimum of three dry passes.**
8. Use snail fans or air movers for the final drying of the floor surface. Allow a minimum of three hours drying time after the last extraction before traffic is allowed on the floor surface again.

Floor Care Guidelines for Forbo Flotex Textile Sheet & Tile

flotex® sheet and tile

RESTORATION - "FLOOD AND SCRUB"

As needed when periodic cleaning procedures no longer produce the desired result.

NOTE: This procedure is recommended for Flotex Sheet ONLY; it is NOT RECOMMENDED for Flotex Tiles.

1. **Vacuum** using a dual motor or twin fan upright vacuum with a rotating brush with high suction. The brush should be about 1/8" below the vacuum cleaner casing to ensure proper agitation. Vacuum the area, using 20 to 30 passes on the same area to effectively extract loose dirt. **Vacuum action should be fast forward and slow backward.**
2. Using 5-gallon buckets, flood the area with hot water and the detergent mix. Do not use more than 1 oz. of detergent per gallon of water. Apply enough water so that it stands on top of the carpet pile. The flow from the scrubbing machine tanks is insufficient for cleaning.
3. Using a standard speed rotary scrubbing machine with a medium-grade bristle brush, scrub the entire area. Don't be afraid to repeatedly spray and scrub areas where soiling proves more difficult to remove. The construction of Flotex can withstand aggressive agitation.
NOTE: A thirteen or fifteen inch size scrubbing machine works best.
4. Rinse and **extract thoroughly**, using a portable extraction machine and water only. The machine should have a wand and should be able to heat the water to between 150° and 180° at the spray nozzle. Set the machine to its lowest setting to ensure maximum agitation and contact with the fibers.
5. **Follow each wet pass with a minimum of three dry passes.**
6. Use snail fans or air movers for the final drying of the floor surface. Allow a minimum of three hours drying time after the last extraction before traffic is allowed on the floor surface again.

For additional information or for your local supplier, call:

Forbo Flooring
1-800-842-7839
www.forboflooringna.com

Johnson Diversey
1-800-558-2332
www.johnsondiversey.com

Floor Care Guidelines for Forbo Entrance Systems

coral®

DAILY CLEANING:

1 to 3 times a day depending on the application, type and volume of traffic and hours of operation.

It is essential to remove dry soiling at least once a day, more often if necessary, to stop it from building up. The most effective method is to use vacuum cleaners that incorporate a mechanically driven rotating brush or suction-only machines with a rotating brush attachment.

Vacuum slowly and in all directions across the entry flooring to get the full effect of the combined suction and brushing. If vacuuming doesn't remove the dry soiling, check for these causes:

- Worn brushes or the wrong brush height - it is essential that the brush makes contact with the pile of the entry flooring.
- Brush not rotating properly - a loose drive belt will weaken the power of the brushing.
- Blocked or obstructed airways affecting suction power.
- Dust bag/collector in need of emptying.

REGULAR CLEANING:

As needed depending on the application, type and volume of traffic and hours of operation.

High traffic areas need additional attention to remove concentrated surface soiling and reduce the appearance of 'traffic lanes'. If the methods below are used regularly they can decrease the frequency of periodic cleaning, especially on light or plain colors.

Dry extraction:

This method of cleaning uses a moist compound that is impregnated with water, detergent and safe-to-use solvents. After dry vacuuming the area to be cleaned, brush the compound through the pile. This must be done using a designated applicator with counter-rotating brushes. Leave the compound for a short while to release and absorb the soiling, then give the area a thorough dry vacuuming to remove the compound. This can be repeated as many times as necessary to remove the soiling. Be careful to avoid a build up of compound after several applications.

Cylindrical brush extraction:

This method also uses machines with counter-rotating brushes, but this time a proprietary carpet cleaning solution is brushed into the pile and the dirty water returned straight to the machine. After dry vacuuming the area to be cleaned, pass the machine over it as many times as needed to remove visible soiling. Detergent residues must then be removed by using the machine to rinse the area with clean warm water only.

PERIODIC CLEANING:

As needed depending on the application, type and volume of traffic and hours of operation.

Periodically, the entry flooring should be treated with a deeper cleaning process called 'Hot water extraction'. This removes soiling from the base of the pile and restores the surface texture to optimize its "clean-off" performance. Factors like the type and amount of traffic, as well as the effectiveness of Daily Cleaning and Regular Cleaning will govern how often this deep cleaning is needed. This process can be carried out using either a hot water spray extraction machine or a 3-in-1 spray and brush machine.

Avoid problems by:

- Using a maximum water temperature of 140° F (60° C).
- Using a neutral cleaner recommended for textile products (follow manufacturer's instructions for dilution). Use as little detergent as possible.
- Ensuring that all detergent residues are removed by thoroughly rinsing with clean water.
- Making sure the area is well ventilated to minimize drying time.
- Allowing the entry flooring to thoroughly dry before allowing traffic.

Floor Care Guidelines for Forbo Entrance Systems

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SPOT CLEANING:

When spills happen, it is important to address them as quickly as possible. Cleaning spills quickly will make them easier to clean and minimize the risk of any potential damage.

Dry spills

- Using something blunt, such as a plastic scraper, gently remove any loose soiling from the surface of the pile and then dry vacuum to clean any remaining particles from within the pile.

Thickened substances

- Gently clear away the spill from the surface with a blunt scraper. Treat what is left of the spill with a proprietary carpet spot cleaner (for polyamide pile floorcoverings) and rinse with clean water. Blot again and repeat the treatment, rinsing and blotting as many times as necessary, then allow the area to thoroughly dry before allowing traffic.

Wet spills

- Use an absorbent material to blot up as much of the liquid as possible. Treat what is left of the spill with a proprietary carpet spot-cleaner (for polyamide pile floorcoverings) and rinse with clean water. Blot again and repeat the treatment, rinsing and blotting as many times as necessary, then allow the area to thoroughly dry before allowing traffic.

Removing chewing gum

- Two types of chewing gum removers are available; hardening agents and softening agents. For removal of chewing gum from Coral, use a chewing gum remover that will harden the gum. Scrape the gum from the mat and vacuum afterwards.

Avoid problems by:

- Cleaning oily and sticky spills quickly because they will cause a patchy discoloration.
- Cleaning dry spills that contain substances that could leave a stain normally, and then following the cleaning procedure for dry spills by thoroughly cleaning the spot using a hot water extraction machine with plenty of water.
- Rinsing thoroughly with clean water after using detergent in order to prevent premature re-soiling.
- Cleaning spills as they occur.
- Using wet extraction cleaning to ensure that all residual soiling and detergents are removed when multiple or large spills occur.

CAUTION:

Avoid using chemicals that have a pH lower than 7, contain chlorinated hydrocarbons or bleaching/oxidizing agents on all Coral products.

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Floor Care Guidelines for Forbo Entrance Systems



GENERAL GUIDELINES

During the winter months, remove the foot grilles and clean the frames and mat wells once per week. During other seasons, cleaning once per month should be sufficient. Each time the frames and pans are cleaned, make sure there is no residue or debris remaining under the grilles. This will avoid warping of the foot grilles because of an uneven substrate and prevent long term problems. Never use chemicals containing chlorinated hydrocarbons and bleaching/oxidizing agents on Nuway grilles.

DAILY CLEANING:

It is essential to remove dry soiling at least once a day. The most effective method is to use vacuum cleaners that incorporate a mechanically driven rotating brush or suction-only machines with a rotating brush attachment.

1. Use a stiff brush to loosen and remove dry particles and fine soiling from the surface of the product. Use a vacuum to collect and remove loose soiling.
2. Alternatively, use a vacuum only to remove soil ensuring that the vacuum head moves along the component length to maximize soil removal.

NOTE: it is important to make sure that the vacuum head has sufficient depth to penetrate the different surfaces in order to remove soil from the wiper strips and the aluminum/PVC components.

3. For dry spills, brush into a receptacle or vacuum to remove. For small wet spills, use a clean cloth or other absorbent material to soak up as much of the spill as possible. For large wet spills, use a wet/dry pick-up vacuum or a hot water extraction cleaning machine to remove dirt.
4. For chewing gum removal, ideally remove before it becomes hardened and compacted into the matting surface. Proprietary gum removal gels are readily available to assist removal. The Nuway components are able to withstand regular gum removal without affecting performance or structural integrity.

NOTE: in removing chewing gum, the area affected will appear cleaner than the surrounding matting. The gum removal gel requires the use of a spatula; care should be taken not to damage the surface by using excessive force.

If vacuuming doesn't effectively remove the dry soiling, check for these causes:

- Worn brushes or the wrong brush height - it is essential that the brush makes contact with the pile of the entry flooring.
- Brush not rotating properly – a loose drive belt will weaken the power of the brushing.
- Blocked or obstructed airways affecting suction power.
- Dust bag/collector in need of emptying.

PERIODIC CLEANING:

As needed depending on the application, type and volume of traffic and hours of operation.

Periodically, more thorough cleaning of the grilles in place can be conducted if needed. Dry extraction or solution brush extraction may be used. Before beginning the extraction process, use a stiff brush to loosen and remove dry particles and fine soiling from the surface of the product and then use a vacuum to collect and remove loose soiling.

1. Dry extraction uses a moist compound that is impregnated with cleaning chemicals which can be applied using a stiff brush or mechanically driven applicator with counter rotating brushes. The compound should be left to absorb the soil for a short period and then removed by vacuuming.
2. Solution brush extraction uses machines with counter rotating brushes which introduce a cleaning solution to the product surface and returns the soiled solution straight to the machine.

NOTE: it is important to ensure surface moisture is extracted from the products' surface to avoid premature soiling.

3. Periodically lift up the Nuway matting modules to allow thorough cleaning. This also allows for inspection of the mat well to check on the condition as well as facilitating reversal of modules if appropriate.
 - a. Vacuum the mat surface to remove soil prior to lifting up modules. Use a large screwdriver to carefully lift individual matting modules from the mat well.
 - b. Clean out soil filtrated to the base of the mat well and frame. Depending on the degree of soiling, clean the matting using the above methods or, in excessive soil situations, hot water extraction or jet wash methods may be more appropriate.

NOTE: it is important that the modules are fully dry before replacing.

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