W.E. GREER LTD.

"OUR REPUTATION IS SPOTLESS"

Sanitation Citation

Index

A

Chemical Cleaning Basics

Chemical Cleaning Basics

Factors in Selecting a Cleaner

In the selection of any chemical cleaner or any technique of cleaning, there are *two* basic considerations of equal importance. The first consideration is the *type of soil* that you are trying to remove. The second is the *type of surface* you are trying to remove the soil from.

As an example, oven cleaner may be effective for the removal of heavy soil to a baked enamel surface. The oven cleaner may do an equal cleaning job on like type soil on your hands but obviously you would not use oven cleaner to clean your hands.

Types of Soils

There are *two* basic classifications of soil.

1) **Organic** soil, such as oil, grease or any vegetable or animal based oil.
2) **Inorganic** soil, such as scale build-up in commercial dishwashers, rust, encrustations in toilet bowls or any mineral deposit.

Types of Surfaces

There are *two* basic classifications of surfaces.

1) **Metal or metallic** surfaces which can be ferrous (steel or iron) or non-ferrous (aluminum, copper, etc.).
2) **Non-metal** surfaces, which could encompass a very wide range including carpet, concrete, skin, glass, wood, plastic, etc.

W.E. GREER LTD.

Nature of Cleaning

There are *four* ways a cleaning function can take place:

1) **By Solvency -** This is a method where the cleaner used actually dissolves the soil particles, taking them into its own system and distributing the soil within the solvent. Examples could be carpet stain removal of oil- based soil, parts washing, engine shampooing, tar, sand removal, etc..
2) **By Detergency -** This is a method where the cleaner actually lifts the soil from the surface and distributes and suspends the particles throughout the cleaner. Examples could be wall washing, kitchen degreasing, handwashing, etc..
3) **By Mechanical Action -** This is a method where physical action literally brushes or sweeps the soil from the surface. Examples could be turbulator carpet vacuuming, sand blasting, parking lot sweeping, etc..
4) **By Chemical Reaction -** This is a method where a chemical reacts chemically with the soil and renders it as a non-adherent to the surface. Examples could be toilet bowl cleaning, rust removing, scale removal from shower stalls, etc..

Types of Cleaners

There are *two* basic types of chemical cleaners:

1) **Solvent-based** cleaners, which as mentioned before, are designed mainly to remove organic soil generally in the animal fat or petroleum based classification.
2) **Water-based** cleaners, which can be subdivided into:
   a) acid cleaners which are normally used for the removal of inorganic soil
   b) alkaline cleaners which are normally used for the removal of organic soil.

Chemical Cleaning Basics

Other Factors Involved with Cleaning

Precleaning may be necessary to remove one type of soil before cleaning another. Examples could be stain removal or traffic lane cleaning prior to carpet extraction, etc..

1) **Rinsing** – In some instances rinsing is absolutely essential to a proper and complete cleaning technique. Examples could be rinsing of floors prior to the application of wax or floor finish, dishwashing, hand, face or body washing, etc...
2) **Drying** – Drying may be necessary for a proper cleaning technique. Examples could be hand, hair or body washing, metal cleaning to eliminate rusting, etc..

W.E. GREER LTD.

Alkaline Cleaning

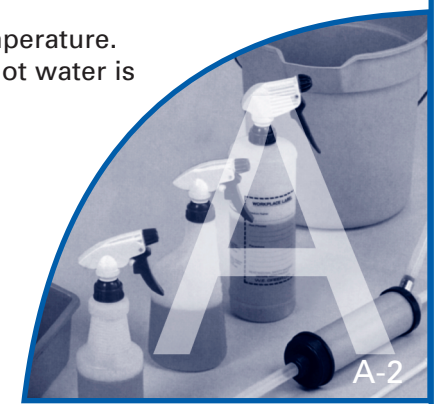
In that most of your cleaning involves the use of alkaline type cleaners, we will deal primarily with this segment. As previously mentioned, alkaline cleaners work through the process of detergency. This is a method of cleaning where the cleaner used actually lifts the soil from the surface and distributes and suspends the particles throughout the cleaner. The alkaline cleaner generally consists of one or more alkaline salts plus surfactants with many variations. Generally speaking, a good alkaline cleaner will provide:

1) Good detergency.
2) Alkaline reserve to neutralize acidic soil.
3) Dispersion and emulsification properties.
4) Water conditioning properties.
5) Inhibitors to prevent attack on surfaces.
6) Minimal corrosion properties.
7) Good storage stability.
8) Desired foam levels.

Factors in Alkaline Cleaning

There are *five* basic factors that influence the performance of an alkaline cleaner:

1) **Time –** Contact time is important. Too long of contact time can be detrimental. Read label instructions.
2) **Agitation –** Physical action or movement enhances most cleaning functions.
3) **Concentration –** The cleaning efficiency will increase with concentration – to a point. Rule – dilute per label instructions.
4) **pH –** Generally, cleaning efficiency improves as the pH goes up, however, label instructions should be followed.
5) **Temperature –** The cleaning efficiency is doubled for every 20°F rise in temperature. Room temperature water is ideal. Cold water cleaning is not efficient and hot water is not advisable unless recommended by the manufacturer.



Chemical Cleaning Basics

The Meaning of pH

Water is seldom exactly neutral; usually it is alkaline and occasionally it is acid. The amount of alkali or acid present can be determined by analysis and is reported as total alkalinity or total acidity. In addition to the quantity measurement, however, there is also an intensity measurement of acidity and alkalinity; this is called the "pH value" of the solution.

A neutral condition exists when this pH is 7.0; ie. the solution is neither acid nor alkaline. When the pH value falls below 7.0, it indicates a greater intensity of acidity. When the value exceeds 7.0, it indicates a greater intensity of alkalinity. Thus, pH is a number which indicates the intensity of either acidity or alkalinity of a water solution.

To illustrate that pH is not a quantity measure, Table A-1 shows different pH values of common acids and alkalis - all at concentrations of 100 ppm. As an example, a solution containing 100 ppm of carbonic acid has a pH of 4.6, whereas a solution with the same amount of sulfuric acid has a pH of 2.8. This difference is due to the fact that sulfuric is a "stronger" acid than carbonic. Likewise, it can be seen that a solution containing 100 ppm of bicarbonate of soda has a pH of 7.7, whereas the same quantity of caustic soda in solution has a pH of 11.4. This shows that caustic soda is a "stronger" alkali than sodium bicarbonate.

This scale adapted to show intensity of acidity or alkalinity (pH value) is somewhat misleading for a change of 1.0 pH actually means that the intensity (either acid or alkaline) is multiplied by ten. This is more clearly shown by Table A-2 in which pH 7.0 is given a value of 1.

Table A-1

pH Values (at 100 ppm)

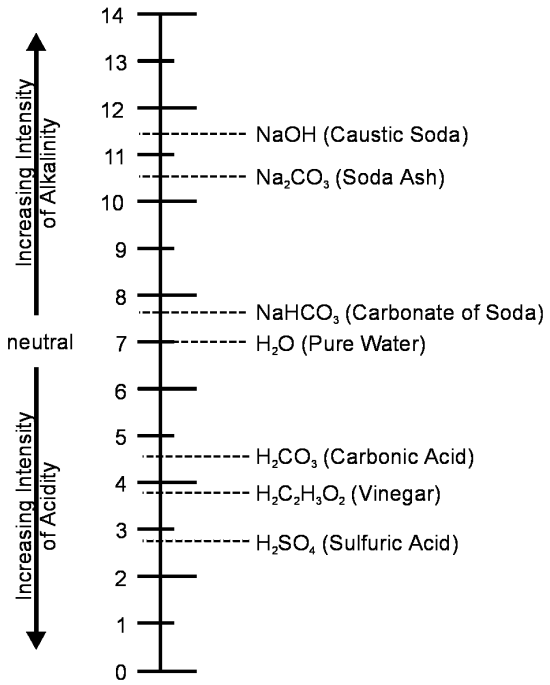
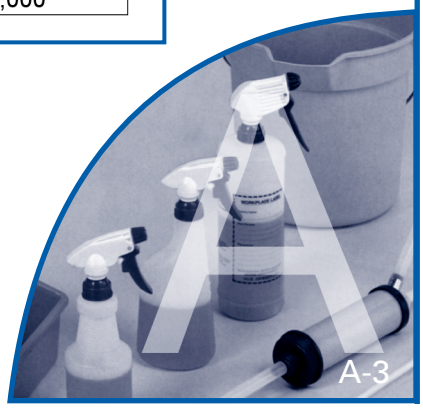


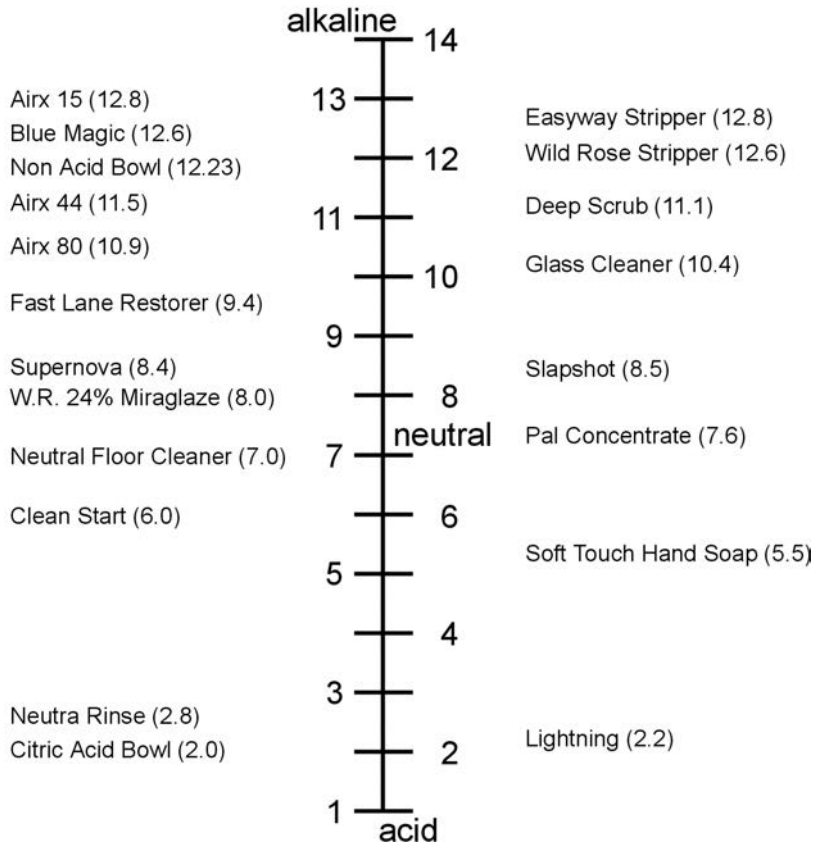
Table A-2

pH Value	Values Showing Intensity of Alkalinity and Acidity
14	10,000,000
13	1,000,000
12	100,000
11	10,000
10	1,000
9	100
8	10
7	1
6	10
5	100
4	1,000
3	10,000
2	100,000
1	1,000,000
0	10,000,000



Chemical Cleaning Basics

Cleaning Products - pH Scale **Table A-3**



pH levels are for concentrate before diluted (once mixed with water, pH is closer to neutral).

W.E. GREER LTD.

Floor Chemical Chemistry

Floor Chemical Chemistry

Strippers

There are *two* basic groups of water-based strippers:

1) **Ammoniated** or **non-ammoniated** strippers commonly used with conventional floor machines with pads or brushes.

   Ammonia as an additive to strippers is a low cost method of raising the pH. Floor finishes are commonly all-metal interlock that break down in the presence of high pH strippers. Other additives act as wetting agents, water softeners and soil suspenders to complete the action. Obviously, because ammonia is volatile, it will evaporate very quickly from the stripping solution if hot or even warm water is used.

   Non-ammoniated strippers are traditionally more expensive because they have a more costly additive that replaces ammonia.

   Aerosol strippers are effective for use on baseboards or areas that a floor machine and pad won't reach. They are effective but expensive. However, if proper procedures are followed in applying finish, there should be no need for this type of product.

2) Mop strippers designed to remove floor finish and wax without excessive mechanical action.

   Mop-on strippers are relatively new to the market. They use some very highly effective water soluble solvents to accomplish the finish removal along with some of the traditional ingredients found in regular strippers. They are expensive but are labor savers.

W.E. GREER LTD.

Neutralizers

There are *two* basic types of neutralizers used to reduce the pH from an alkali condition to a neutral pH:

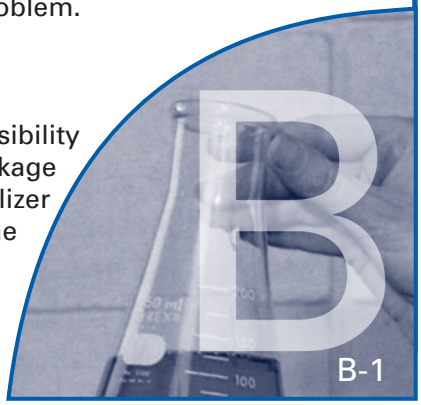
1) **Liquid mild acids**

   Vinegar is a commonly used neutralizer that will accomplish the reduction of pH from a high or sometimes caustic pH to a neutral pH, which is desirable because adhesion of seal or floor finish is best on a neutral floor. Neutralized floors will give you better adhesion resulting in better overall appearance and longer life.

   Glacial acetic acid is more commonly used because of its commercial strength, but more importantly because it has proper label direction and it is not usable for cooking or home use. This type requires time to evaporate before applying seal or finish. This time could be as long as four hours. If seal or finish is applied too soon, the excess alkali problem could turn into an overly acidic problem.

2) **Powdered mild acids**

   Powdered neutralizers are normally portion pack products that reduce the possibility of over or under dilution. Commonly, they are premixed at the rate of one package to six U.S. gallons of water. (The evaporation time required in the liquid neutralizer is not required if a powdered neutralizer is used as per instructions because the dilutions are more often than not accurate and leave neither an alkaline nor acid residue.)



Floor Chemical Chemistry

Neutralizing should be followed by a clear water rinse. Failure to follow this procedure is one of the most common errors in floor preparation and one of the primary causes of adhesion problems with seals and finishes.

Semi - Permanent Seals

Resilient tile floor seals are commonly over-used and contribute very often to major floor maintenance problems.

Sealing is a very important and necessary floor maintenance procedure, however, seal must only be applied to porous surfaces. The amount of seal applied will vary depending upon the porosity of the floor. As a general rule, seal should be applied in thin even coats on the porous tile surface until a satin gloss appears. This appearance is an indication that the pores in the tile are filled. Over-application will result in a waste of product and labor and bring the level of seal higher than necessary.

New porous resilient tile floors should be sealed for obvious reasons. In addition to the obvious, the cracks between the tiles should be sealed to prevent moisture penetrating to the back of the tile.

Water-based seals of good quality are considered semi-permanent. Traditional strippers do not remove these types of seals easily or evenly. Seal is commonly applied over floor finish and this procedure often results in very difficult stripping procedures. Seal should only be applied to porous surfaces that are free of finish, alkaline residue or acid residue.

TIP: Seal porous floors using only as much seal as absolutely necessary and do not over use.

W.E. GREER LTD.

Neutral Floor Cleaners

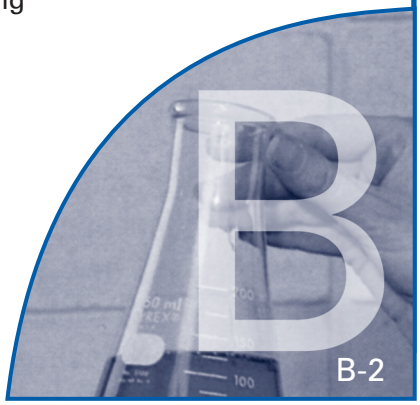
The cleaner used in a resilient floor maintenance program normally cannot be used effectively as a general purpose cleaner. General purpose cleaners are typically of a pH that is too high for a floor care program.

The cleaner used in a proper floor care program must be in the neutral range. If too acidic or alkaline, the floor finish will deteriorate slightly or significantly, depending upon the pH of the cleaner, and reduce the life of the floor finish.

All good quality cleaners, whether they be a low or high pH, consist of the following basic ingredients:

1) surfactant (surface active agent or wetting agent)
2) soil suspenders
3) chelating agents or sequestrants (water softeners)
4) builders

When using a properly balanced neutral detergent in a scrubbing procedure, clear water rinsing is only necessary prior to the application of more floor finish. Neutralizing of a neutral cleaner obviously is not necessary.



Floor Chemical Chemistry

TIP: Properly followed floor maintenance procedures can reduce or completely eliminate the stripping and subsequent neutralizing procedures that will lead to drastic labor and chemical savings and allow time to perform other sometimes neglected cleaning tasks.

W.E. GREER LTD.

What's in a Floor Finish?

Understanding the Basic Ingredients Helps Avoid Floor Care Problems

INTRODUCTION
Chemists and floor care professionals often speak different languages. The chemist talks about polymerization, melting points and monomers. And the floor care professional talks about durability, wet-looking gloss and burnish response.

Chemists specializing in floor finish development have learned the importance of communicating and listening to floor care professionals. Professionals are the ones who use the floor finishes. It is their needs that chemists must satisfy.

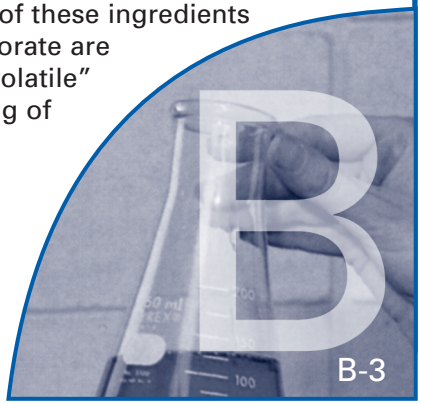
Floor care professionals are very cooperative in teaching us chemists about their floor finish procedures, application methods, and equipment. Most floor care experts are interested in learning more about the floor finishes they use.

Two questions floor care professionals often ask are, 1) what is in a floor finish? and 2) why is it in there? Let's look at the answers to these questions to better understand how to prevent and solve expensive floor care problems.

WHAT ARE FLOOR FINISHES?
A floor finish is a liquid which is applied to a resilient tile floor and dries to a hard, durable and smooth film. This film is about the thickness of waxed paper and is expected to protect and extend the life of the floor while providing an attractive appearance and slip resistant surface.

WHAT'S IN A FLOOR FINISH?
High quality floor finishes may contain as many as twenty-five ingredients. Some of these ingredients evaporate while others remain on the floor after drying. The ingredients that evaporate are called "volatile" ingredients, those that stay on the floor are referred to as, "non-volatile" components. The volatile ingredients assist in the film formation, drying and curing of the finish and then evaporate. The non-volatile ingredients are the solid materials which stay on the floor and make up the floor finish film.

The ingredients used to make the floor finishes combine to produce a balanced blend of physical and performance characteristics include: hardness, gloss, clarity, scuff resistance, slip resistance, water and detergent resistance, buffability, removability, recoatability, and toughness. There are five basic categories of floor finish ingredients, (1) polymer emulsions, (2) film formers, (3) modifiers, (4) preservatives and (5) water.



Floor Chemical Chemistry

POLYMER EMULSIONS

A polymer is a giant molecule made from a large number of similar small molecules, called monomers, which are joined together chemically. The chemical process of making a polymer is called polymerization. When a polymer is made from two or more monomers, it is called a copolymer. Many polymers are named for its monomer ethylene.

Chemists suspend the giant floor finish polymer in water and they become polymer emulsions. Most floor finish manufacturers treat the monomer and processes used to make their polymer emulsions as a trade secret. However it is generally known that most floor finish polymer emulsions are made from acrylic or styrene type monomers.

The polymer emulsions are the workhorse of a floor finish. They are the backbone upon which all of the other ingredients are connected. There are virtually thousands of potential combinations of polymers which can be used to make floor finishes. The choice of the polymers used in floor finishes influences nearly every performance characteristic, including: durability, gloss, slip resistance, leveling, clarity, water and detergent resistance, recoatability, mark resistance, removability and powder resistance.

W.E. GREER LTD.

FILM FORMERS

Polymer emulsions without film formers would produce dry, loose crystals on the floor surface. Improper film formation can produce a variety of floor care problems including: poor adhesion and powdering, poor gloss, streaking, cratering, fisheyes, blushing, orange peeling and poor leveling. Some of the ingredients that contribute to proper film formation are coalescing agents, plasticizers, wetting and leveling agents and antifoamers.

1) **Coalescing Agents**

Coalescing agents such as glycol ethers, glycol ether esters and ester-alcohols allow the polymer molecules suspended in the emulsion to coalesce (come together) into a continuous film without flaws or imperfections on the floor. Coalescing agents stay behind for a short time after the water has evaporated to soften and bring the polymer molecules together into a continuous and tough film.

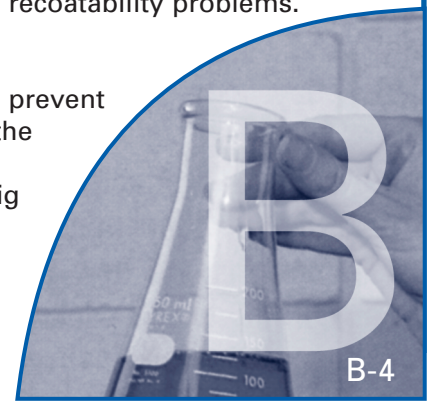
A precise amount of coalescing agent is needed for proper film formation. For this reason it is important for floor care professionals to minimize evaporation by keeping floor finish containers and mop buckets, covered or closed when not in use. Floor care problems associated with a loss of these coalescing agents include: poor adhesion, low gloss and poor durability.

2) **Plasticizers**

Floor finish polymers would crack and break without plasticizers to make them flexible and impact resistant. Chemists are careful to design floor finishes with accurate amounts of plasticizer. "Over plasticized" floor finishes can produce tackiness, poor soil resistance and plasticizer migration. "Under plasticized" floor finishes can create powdering, low gloss, slippery floor and recoatability problems.

3) **Leveling and wetting agents**

The polymers in floor finishes are bulky and have high surface tension which prevent proper flowing and leveling of the finish. Leveling and wetting agents lower the surface tension of the finish allowing it to spread and flow over the surface uniformly and evenly. Tiny amounts of these surface active agents provide big benefits by preventing the finish from pulling apart and puddling during the drying process.



4) **Antifoaming Agents**

Water based floor finishes contain small amounts of surfactants and emulsifiers which can produce bubbles and foam in the dried film.

Antifoaming agents are added to floor finishes to rapidly break these bubbles and stop them from producing ugly imperfections.

W.E. GREER LTD.

MODIFIERS

The polymer emulsions selected for floor finishes meet a broad range of performance requirements. But chemists have found non-volatile ingredients which can be added to the polymer emulsion to modify and improve the performance of the floor finish. For instance, gloss, clarity, hardness, buffability, scuff and scratch resistance, slip resistance and durability can all be improved when modifiers like resins, wax emulsions, urethanes, ultraviolet absorbers and metal crosslinkers are added.

1) **Alkali Soluble Resins**
   There are three primary alkali soluble resins which are used in floor finishes. They include, (1) rosin, (2) acrylic and (3) styrene-maleic anhydride resins. These resins are added to floor finishes primarily to improve leveling, clarity and gloss. However, they also affect many other properties including removability, detergent resistance, color, recoatability and water resistance.

2) **Wax Emulsions**
   The wax emulsions added to floor finishes are synthetic polyethylene waxes which have replaced natural waxes because of their improved consistency in color, performance and availability. Their major contribution to the floor finish is improved slip resistance, durability, toughness and high speed buffability.

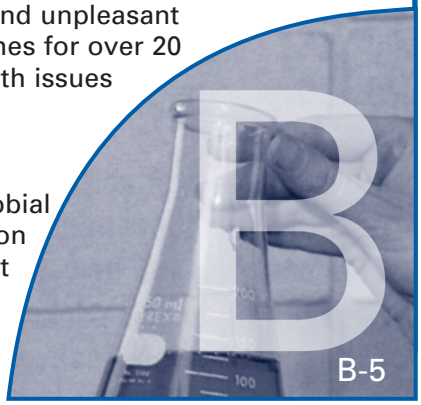
3) **Waterborne Urethanes**
   These are used in floor finishes where chemical and water resistance, impact resistance, and flexibility are required. When combined with polymer emulsions, they also provide improved adhesion to old and worn floor surfaces. Three objections often mentioned when high levels of waterborne urethanes are used in floor finishes are their cost, tendency to discolor and removability.

4) **Ultraviolet Stabilizers**
   The effect of ultraviolet radiation on synthetic polymers is similar to its effect on the human skin. The ultraviolet radiation can cause yellowing and drying out of the finish. Floor finishes contain tiny amounts of stabilizers to prevent yellowing and discolorations caused by ultraviolet radiation.

5) **Crosslinkers**
   Crosslinkers connect the different polymer chains in the floor finish emulsion. Their primary purpose is to provide both durability and removability of the floor finish film. Zinc compounds commonly are used to crosslink acrylic polymer floor finishes.

PRESERVATIVES

Some of the ingredients in floor finishes are sensitive to attack by microorganisms. These attacks can destroy the floor finish and cause discolorations, destruction of the floor finish emulsion and unpleasant odors. Formaldehyde has been the primary antimicrobial agent used in floor finishes for over 20 years. But most modern floor finishes now contain new replacements, due to health issues raised by formaldehyde.



Antimicrobial agents are added to protect the finish by preventing the growth of microorganisms during manufacturing and storage. However, the amount of antimicrobial agent in a floor finish is usually not sufficient to protect against cross contamination during use. This is why floor care professionals should keep their finishing equipment clean, and insist on never pouring used finish into new finish.

Another type of preservative added to floor finishes is the antifreeze agent, which provides freeze-thaw stability.

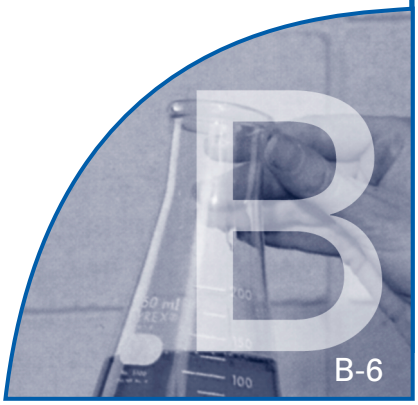
Floor Chemical Chemistry

WATER
Floor finishes are made with deionized water to provide a stable and friendly environment for all the floor finish ingredients. The use of deionized water assures that colorful impurities found in some water systems do not dry into the floor finish film causing slight discolorations or reductions in gloss or clarity.

CHEMISTRY AND CARE COMBINE
The ingredients described here are a good cross-section of what many floor finishes contain, but they are not the only ones.

Teamwork between chemists and floor care professionals has produced modern finishes far superior to those of the past. But it takes more than a superior finish to defend against the abrasive soils tracking into buildings. It also takes a well-planned and well-executed floor care program that is designed to do the job right. Knowing the ingredients in a finish and why they are used can help cleaning managers select the proper finish and prevent expensive floor care problems.

W.E. GREER LTD.



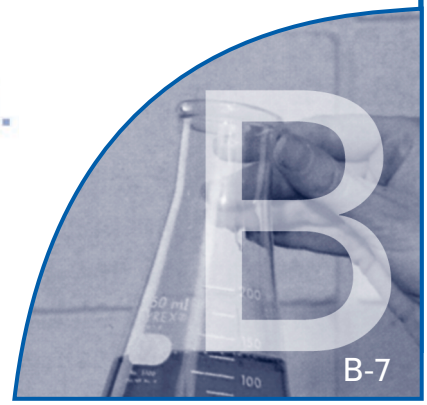
Floor Chemical Chemistry

Cost Dilution Chart

Cost/Dilution

Cost per Gallon (%$)	Mix 1:4	Mix 1:8	Mix 1:10	Mix 1:12	Mix 1:16	Mix 1:20	Mix 1:32	Mix 1:40	Mix 1:64	Mix 1:128	Mix 1:256
2.00	.400	..222	.181	.153	.118	.095	.060	.049	.031	.016	.008
2.50	.500	.227	.227	.192	.147	.119	.076	.061	.038	.019	.010
3.00	.600	.333	.272	.231	.176	.143	.091	.073	.046	.023	.011
3.50	.700	.388	.318	.269	.206	.167	.106	.085	.054	.027	.014
4.00	.800	.444	.363	.308	.235	.190	.121	.098	.062	.031	.016
4.50	.900	.500	.409	.346	.265	.214	.136	.110	.069	.035	.018
5.00	1.000	.555	.454	.385	.294	.238	.152	.122	.077	.039	.019
5.50	1.100	.611	.500	.423	.323	.261	.167	.134	.085	0.43	.021
6.00	1.200	.666	.545	.461	.353	.286	.182	.146	.092	.047	.023
6.50	1.300	.722	.591	.500	.382	.310	.197	.159	.100	.050	.025
7.00	1.400	.777	.636	.538	.412	.333	.212	.171	.108	.054	.027
7.50	15.00	.833	.681	.577	.441	.357	.227	.183	.115	.058	.029
8.00	1.600	.888	.727	.615	.471	.381	.242	.195	.123	.062	.031
8.50	1.700	.944	.773	.654	.500	.404	.258	.207	.131	.066	.033
9.00	1.800	1.000	.818	.692	.529	.429	.273	.220	.138	.070	.035
9.50	1.900	1.050	.863	.731	.559	.452	.288	.232	.146	.074	.037
10.00	2.000	1.110	.909	.769	.588	.476	.303	.244	.154	.078	.09
10.50	2.100	1.166	.955	.808	.618	.500	.318	.256	.162	.081	.041
11.00	2.200	1.222	1.000	.846	.647	.524	.333	.268	.169	.085	.043
11.50	2.300	1.278	1.045	.885	.676	.548	.348	.280	.176	.089	.045
12.00	2.400	1.333	1.091	.923	.706	.571	.364	.293	.185	.093	.047
12.50	2.500	1.388	1.136	.962	.735	.595	.379	.305	.192	.097	.049
13.00	2.600	1.444	1.181	1.000	.765	.619	.394	.317	.200	.101	.051
13.50	2.700	1.500	1.227	1.038	.794	.642	.409	.329	.208	.105	.053
14.00	2.800	1.555	1.273	1.077	.823	.667	.424	.341	.215	.109	.054
14.50	2.900	1.611	1.318	1.115	.852	.690	.439	.354	.223	.112	.056
15.00	3.000	1.666	1.364	1.154	.882	.714	.455	.366	.230	.116	.058
15.50	3.100	1.722	1.409	1.192	.912	.738	.470	.378	.238	.120	.060
16.00	3.200	1.777	1.454	1.231	.941	.761	.485	.390	.246	.124	.062
16.50	3.300	1.833	1.500	1.269	.971	.785	.500	.402	.254	.128	.064
17.00	3.400	1.888	1.545	1.308	1.000	.810	.515	.415	.262	.132	.066
17.50	3.500	1.944	1.591	1.346	1.029	.833	.530	.427	.269	.136	.068
18.00	3.600	2.000	1.636	1.385	1.059	.857	.545	.439	.277	.140	.070
18.50	3.700	2.055	1.681	1.423	1.088	.881	.561	.451	.285	.143	.072
19.00	3.800	2.111	1.727	1.462	1.118	.905	.576	.463	.293	.147	.074
19.50	3.900	2.166	1.773	1.500	1.147	.929	.591	.476	.300	.151	.076
20.00	4.000	2.222	1.818	1.538	1.176	.952	.606	.488	.308	.155	.078

W.E. GREER LTD.



W.E. GREER LTD.

Carpet Care Program

- Key - Area Maintenance (or Interim Cleaning)
- Preventative Maintenance
- Major Types of Carpet Maintenance Products
- Carpet Sanitizing Cleaners
- Common Carpet Problems & their Care
- Spotting Guide for Professionals
- Spotting Solutions
- Spotting Guide
- Approximate pH Values
- Maintenance Frequencies - Carpets
- Carpet Fabrication Methods

Carpet Care Program

Key-Area Maintenance (or Interim Cleaning)

Key-area carpet cleaning refers to the cleaning methods that maintain carpet at acceptable levels between frequent vacuuming and scheduled deep cleaning with extraction equipment.

The frequency of interim cleaning varies. Factors that influence key area cleaning include the color of the carpet (soil can show up dramatically on certain colors and shades of carpet), the fluctuating traffic flow, and the soil build-up in carpets. The type of carpet, the type of soil track-in, the budget, and the desired level of appearance also influence the cleaning schedule.

Key-area cleaning does not remove excessive amounts of soil load and therefore may not be suitable to clean an extremely dirty carpet. When interim cleaning is performed with the desired frequency and correctly, it can help to maintain a high level of carpet appearance. It is also a method that is simple for most cleaning workers to perform. Interim cleaning procedures are referred to as “first aid for appearance”.

Key-area cleaning methods are particularly effective in areas of high traffic, areas that are difficult to shut down for wet cleaning methods, or where reduction of moisture in the carpet cleaning process is a high priority. These areas are high visibility areas and “first impression” areas. These areas have concentrated traffic and soil that is funneled along the carpet and shows traffic and soil patterns if not maintained properly.

W.E. GREER LTD.

1) **Carpet Bonnets or Spin Pads**
   Bonnet or pad cleaning features the use of a standard speed single disk rotary floor machine (usually 175 rpm). A pad driver is attached to the floor machine at the clutch plate to hold and drive the bonnet or spin pad. Either a yarn bonnet or a synthetic carpet pad is treated with cleaning solution and placed underneath the driver pad on the floor machine.

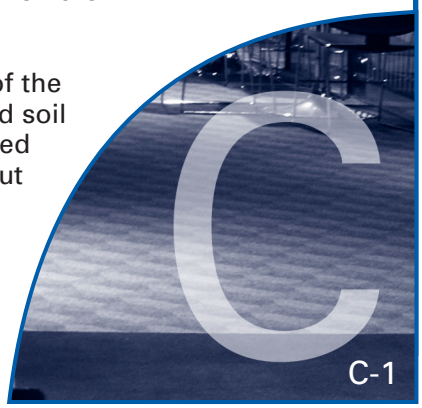
   Bonnets are thick, mop-like products that are blended of cotton and synthetic yarn and designed to both clean and absorb cleaning solution on the carpet. Synthetic pads are thinner disks and similar to the buffing pads used in hard floor maintenance. Pads are made of white, non-woven, polyester fibre and are designed to clean and absorb without abrasion.

   Chemical cleaning solutions formulated for the bonnet cleaning operation generally have two major requirements: the cleaning solution should be low suds or sudsless and it should contain a high proportion of carpet cleaning solvents and a lower amount of detergents. The solvents remove greasy soil and detergents clean the fibers. A pH range of 7 to 9 is recommended for the cleaning chemical.

   The cleaning solution may be spray-misted directly on the carpet area to be cleaned or applied through a shampoo tank that it dispenses through a “flow-through” type of assembly on the machine. An aerosol product may also be used to apply cleaner from a specially mounted applicator on the floor machine.

   Soil is loosened from the carpet through the chemical and mechanical action of the process and is absorbed into the bonnet or pad. The process wipes up attached soil and grease off the top portion of the carpet. Bonnets and pads need to be turned over or replaced periodically as they become soiled. Later the soil is cleaned out of the bonnet or pad by rinsing or washing it thoroughly. No vacuuming is required after bonnet buffing cleaning procedure has been performed.

   Drying time is affected if the cleaning operator uses the spray-type method versus the tank flow-though method. The spray-type method has virtually no drying time, the tank flow method requires approximately 30 minutes to one hour dry time on the carpet.



Carpet Care Program

2) **Dry Foam Cleaning**
Another method of key-area cleaning is dry foam cleaning. In this process, carpet shampoo solution is generated into a cleaning foam. This dry foam is massaged into the carpet using a brush attached to the foam machine, then removed into a vacuum shoe. Some dry foam machines are fitted with a vacuum so that the foam generation, brushing and vacuum pick-up are accomplished during one pass. Other machines require a separate vacuum pick-up, after the dry foam machine has completed the cleaning process.

The shampoo used in the dry foam machine breaks down greasy soils and absorbs some sandy soil that is removed through the vacuum process.

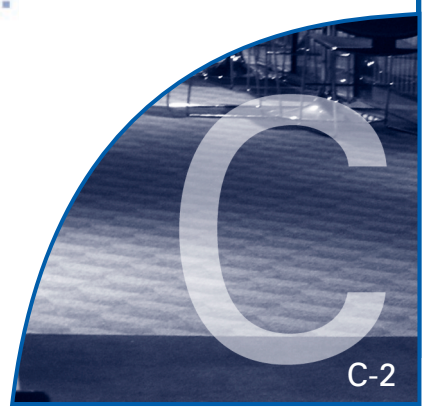
3) **Extraction Cleaning**
Most carpet fibre manufacturers and carpet mills recommend periodic, thorough cleaning of carpets performed by well-trained and experienced carpet cleaning personnel. Hot water extraction is the method of deep rinse cleaning the entire carpet. Hot water extraction has also been called “steam cleaning” but actual live steam (gas created at water’s boiling point) is not employed in the cleaning process. Hot water extraction is a deep cleaning process that removes embedded soils that have been carried or blown into the carpet.

A hot water extraction machine has a pump which dispenses water, under pressure, though spray nozzles into the carpet. The spray is an emulsion of heated water, solvents and detergents that are designed to dissolve greasy soils. The spray rolls sand and dirt into an attached vacuum shoe that sucks the dirty solution back into a holding tank on the extraction machine. Generally the cleaning process is aided by an attached scrub brush that is located between the spray nozzles and the vacuum shoe on the cleaning head of the extractor. The brush scrubs greasy, attached soils from the carpet fibre.

The removed soil is held in the tank until it may be disposed of later in a sanitary drain, toilet or proper waste facility. Solutions should not be dumped on to the ground outside, in storm sewers or in the streets.

In hot water extraction cleaning, using detergents that are too strong or too alkaline may damage the carpet. A pH of 10 is preferred for many carpets (see the section about pH). With fine wool carpets, an acid pH detergent or an acid rinse following the cleaning process is recommended. Care must be taken with wool carpet not to over-wet the fibre and cause shrinkage. If there is any question about the proper cleaning solution, contact the manufacturer of the carpet.

W.E. GREER LTD.



Carpet Care Program

TIPS FOR KEY-AREA CLEANING

When carpet is extracted using the hot water extraction method, remember the following:

1) Vacuum the area to be extracted thoroughly, before you use the extraction equipment. A cleaning solution will only carry a certain amount of soil. Don't use the valuable solution, time and equipment of the hot water extraction process to remove loose soil that could have been removed by vacuuming. Use the extraction process to clean deep, embedded soil.
2) Apply a traffic lane pre-spotter on heavily soiled areas prior to extraction. Wait the recommended time before beginning the cleaning process.
3) Avoid over-wetting the carpet. Prolonged dampness may promote growth of mildew and bacteria in the carpet or cause the carpet to delaminate from its two backings.
4) Dry the carpet as quickly as possible. Speed drying is aided by using carpet drying fans to move air across the carpet.

W.E. GREER LTD.

Preventative Maintenance

Preventative maintenance refers to reducing or preventing soiling of the carpet. The three elements of preventative carpet care:

1) **Catch dirt at the door**
2) **Remove loose soil frequently (vacuuming)**
3) **Spot carpets effectively**

1) **Catch Dirt at the Door**

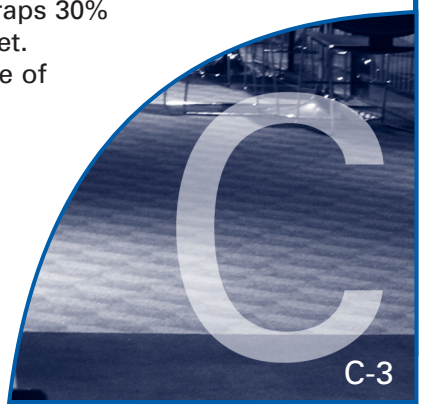
Approximately 70% of carpet soil is tracked in from outdoors via foot traffic. The rest of the building stays cleaner if dirt is collected and held at the entry point. To catch dirt at the door, there are two important strategies. The first is to keep entrances clean outside. Clean entrances that are free from dust and litter outside reduce what may be tracked or blown into the building and carried throughout the building. Frequent sweeping and cleaning around building entrances will reduce the amount of damaging soil that enters any facility.

Sweeping entrances is accomplished with brooms or mechanical and powered sweepers. Washing the entrances is aided by waterbrooms, pressure washers and automatic scrubbing machines.

The second element that keeps dirt at the door is to provide adequate, clean mats and matting at all entrances to the building. Entrance mats and walk off mats catch and hold large amounts of tracked-in outside soil, at the door. A 12 to 15 foot entrance mat traps 30% of the incoming soil within the first three feet, and 85% is trapped within 15 feet. Also, place walk-off mats in front of service elevators which are also the source of soil entering a building from the outside.

2) **Remove Loose Soil Frequently (Vacuuming)**

Vacuuming is very important to the maintenance of carpet in a commercial facility. Much of the soil tracked into a facility is dry soil. Vacuuming removes loose dust, dirt and soil before it is worked down into the carpet. Soil that builds up deep in a carpet is removed by vacuuming and is more difficult to clean out of the carpet.



Carpet Care Program

HOW TO INCREASE VACUUMING EFFECTIVENESS

- Vacuum frequently in entrances and heavy traffic (funnel) areas.
- Change vacuum bags before they affect cleaning efficiency.
- Provide clean, efficient filters on vacuums.
- Make sure that the brush is in contact with the carpet.
- Check that the height adjustment on the vacuum is not too low or too high.
- Check that the belt is not loose and is driving the brush.
- Avoid beater bars on glued down carpet.

Essential Elements of a Vacuum Cleaner

- Commutator (acts as a rotating switch) turns the motor and fan
- Power of a fan is doubled if a second stage is added
- Air blowing past cools the motor
- Dust bag acts as filter

3) **Spot Carpets Effectively**
Spills and spots damage the appearance of the carpet and cannot be planned. It is important to have an emergency spot response as part of the building cleaning program.

W.E. GREER LTD.

Major Types of Carpet Maintenance Products

1) **Shampoo - Carpet**
Emulsions of detergent and solvents specially formulated to clean carpet with the use of a single disk machine fitted with a shower-feed brush and a shampoo tank. Frequently misused term that refers to any carpet cleaning product.

2) **Shampoo - Dry**
Aerated or frothed cleaning solution used in carpet shampooing machines. Foam lather is brushed into carpet and removed with a vacuum.

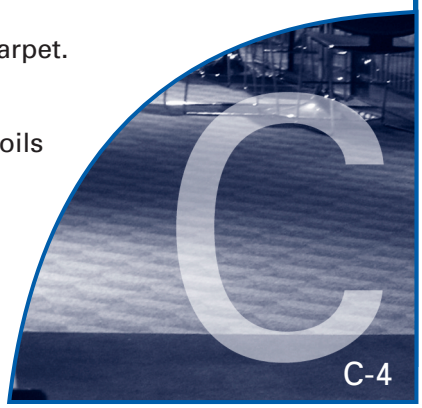
3) **Shampoo - Extraction**
Cleaning solution that is used in the solution tanks of carpet extractors and “steam machines”.

4) **Soil Retardant**
Various types of products that are applied to carpet to resist soiling and staining.

5) **Spotter**
A wide variety of products designed to remove spots, spills and stains from carpet.

6) **Traffic Lane Pre-Spotter**
Fast acting solution designed to begin breaking down heavy and embedded soils prior to performing other cleaning procedures such as extracting, bonnet cleaning or dry compound cleaning.

7) **Brownout**
A liquid product that eliminates cellulosic browning from the tips of carpet. Brown appearance is caused by an accumulation of lignin which has wicked up from the wet cellulosic backing usually following a wet carpet cleaning procedure.



8) **Candle Wax & Chewing Gum Remover**
An aerosol propellant freezes gum and wax hard enough to be chipped out of the carpet without damage to the fibre.

9) **Carpet Deodorizer**
Products manufactured to mask or eliminate odors that may be held in carpet fibers. May be applied directly to the carpet odor area or added to the solution in a wet cleaning process.

10) **Carpet Sanitizer & Cleaner**
EPA approved cationic product that reduces harmful germ and bacteria levels in carpet to safe levels. The product may be used in extraction and bonnet cleaning. Cleans and sanitizes at the same time.

11) **Defoamer**
Product used in connection with foaming cleaning solutions which reduces the suds in recovery tanks of carpet cleaning equipment. Used in the recovery tank not the solution tank.

12) **Shampoo-Bonnet**
Cleaning solution used in connection with a single disk floor machine and a carpet bonnet or spin pad.

W.E. GREER LTD.

Carpet Sanitizing Cleaners

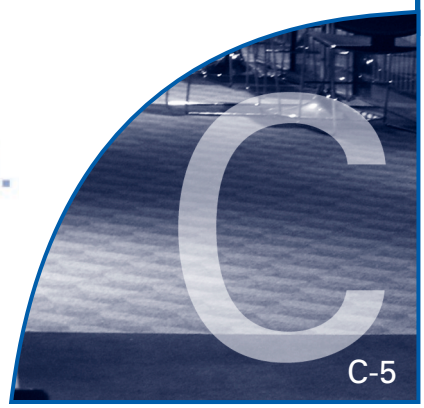
The soil in carpet is frequently laden with harmful microorganisms. Bacteria grow in a warm, dark, moist environment. This is the condition present down in the carpet fibre. The bacteria and pathogenic microorganisms that grow in the carpet fibre may be reduced each time the carpet is cleaned with a wet cleaning solution.

To reduce harmful bacteria levels, it is necessary to use an EPA approved Carpet Sanitizer. Sanitizers reduce bacteria to safe levels. They are not disinfectants or germicides that completely kill all existing harmful bacteria. EPA has not approved a disinfectant for carpets. But they have approved carpet sanitizers.

To guarantee that you are using a carpet sanitizer when you bonnet or extract a carpet, check to see that it contains an EPA number on the bottle. Be sure to follow label instructions carefully when using a sanitizer. It is a violation of federal law to use an EPA approved product other than as directed on the label.

Sanitizing when carpet is cleaned adds another level of safety to those who come in contact with the carpet.

W.E. GREER LTD.



Carpet Care Program

Common Carpet Problems and their Care

1) **Buckling and Puckers**

Problem:
A carpet may develop a series of ripples or ridges. This may be caused by dampness between the floor and the carpet after periods of high humidity or cleaning with moisture. It is also caused by an extremely low density foam or rubber pad which allows a severe distortion of the carpet under foot-traffic. Inadequate stretching of the carpet during installation will also cause buckling.

Correction:
Moisture problems are frequently eliminated when the carpet dries thoroughly. Drying may be aided with the use of carpet drying fans and proper ventilation. Buckling caused by moisture may be corrected when re-stretching the carpet by a competent carpet installer.

2) **Burns**

Problem:
When carpet fibre is burned there is only one solution.

Correction:
Cut off the dark burnt fibre. Charred tips may be cut with curved fingernail scissors. Otherwise, the burned area may need to be cut out and replaced by a carpet repair specialist or a do-it-yourself kit.

3) **Fading**

Problem:
All carpets slowly lose some color over time. The color loss is due to gradual natural and artificial forces in the environment. Although fading cannot be eliminated, there are several strategies that will prolong the color life in carpet.

Correction:
Vacuum the dirt in a carpet frequently. Replace HVAC filters regularly. Maintain the humidity at a low level. Reduce the carpet's exposure to direct sunlight. If the carpet will be exposed to direct sunlight, it is recommended to purchase solution-dyed carpet pile fibers (nylon or olefin).

4) **Footprints**

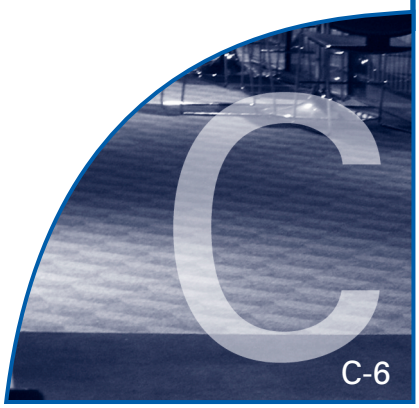
Problem:
Most deep cut pile carpet will show footprints, shoe impressions and other signs of traffic.

Correction:
Select low pile, dense loop construction carpet.

5) **Pile Crushing**

Problem:
The pile of all carpets will become compacted or crushed with traffic.

Correction:
Vacuuming and other forms of cleaning help to minimize and partially restore crushed pile. Grooming high pile carpet with a shag rake or a carpet brush will also help.



6) **Shading**

Problem:
The apparent shading a color from light to dark is characteristic of dense cut pile carpets. Saxonys and plush carpets are particularly prone to color shading. Shading is caused by the way light reflects from the surface of the carpet. The top of the carpet reflects less light than the sides of the carpet. When the carpet strands lean over they reflect more light from one direction than tufts leaning in the opposite direction because more tips are seen. This is generally viewed as a rich luxurious look to carpet.

Correction:
If a more uniform shading is preferred, make the final vacuum strokes across a carpet all from the same direction. A shag rake may also be used to give a uniform look. Purchase a carpet with a tight loop pile construction that will not show shading.

7) **Shedding**

Problem:
Cut pile carpets normally shed loose fibers during the first few days or weeks following installation. Carpets made from staple fibre shed more than continuous filament nylon pile yarn. The loss of fibre is a very small amount compared to the total fibre volume of the carpet.

Correction:
Regular vacuuming will remove loose fibre without damaging the carpet. During the time following new carpet installation check vacuum bags frequently to ensure proper vacuum efficiency.

W.E. GREER LTD.

8) **Snags**

Problem:
Snags occur most frequently in loop pile constructions when the tuft is caught and pulled out of the carpet.

Correction:
Never pull a carpet snag. Carefully clip them off immediately. If a long run occurs, contact the carpet dealer or installer. Frequently they may be re-tufted or glued back into place.

9) **Sprouts**

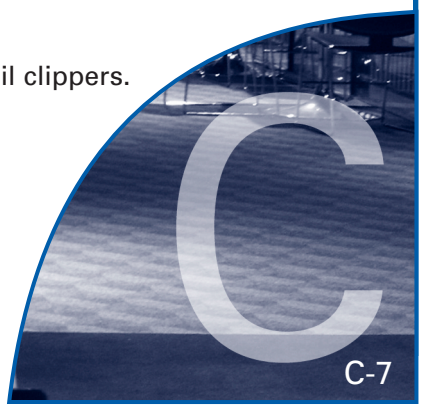
Problem:
Sprouts are yarn tufts that stick up higher than they should. They most frequently occur in cut pile construction.

Correction:
Stand the carpet pile erect and clip the excess strand with scissors or fingernail clippers. Do not cut with a knife. You may pull the tuft from the carpet in the process.

10) **Static**

Problem:
Annoying static shock is caused by friction, traffic and dry air.

Correction:
Dry room air may be corrected with a humidifier. Anti-static treatments are available to spray on a carpet periodically.



11) **Water Damage**

Problem:
Sometimes a carpet is flooded. This occurs due to broken water pipes, natural disasters or as a result of fire fighting. Flooded carpet may frequently be saved.

Correction:
Remove all standing water. Thoroughly extract the soaked - in water with a carpet extractor (steam machine type) machine. Use a sanitizing carpet cleaning solution in the machine to reduce bacteria levels. Dry the carpet with a combination of air mover fans, warm air in the room and good ventilation. A mild acid rinse with an extraction machine will eliminate or prevent alkaline browning from water damage.

12) **Watermarking**

Problem:
Watermarking is a unique form of a non-reversible shading where large areas of the carpet appear light or dark. The shaded areas are random and are not caused by light source shading. They are called water marks because they look like puddles of water on the carpet. Watermarks are an appearance caused by tuft areas leaning in opposite directions (pile reversal). Extensive studies conducted world-wide have shown that the cause of this condition is unknown and not related to manufacturing defects or cleaning procedures.

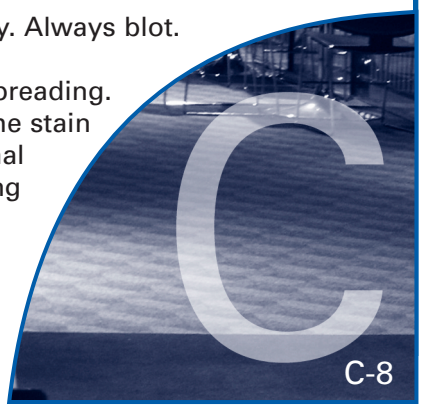
Correction:
This is a non-reversible condition.

W.E. GREER LTD.

Spotting Guide for Professionals

Spills and stains should be treated IMMEDIATELY. The longer a spot remains, the more difficult it will be to remove.

Directions:
1) Blot up spills with clean, white, absorbent materials (towels, napkins, tissues, etc.).
2) Remove solid built-up materials with a rounded tablespoon, spatula, or edge of a dull knife.
3) Pre-test spot-removal agents in an inconspicuous area (under a sofa cushion, on an area of carpet under or behind a piece of furniture). Apply several drops of solution on the article and rub gently with a clean, white towel. If color transfers to the cloth, or a color change occurs, a professional cleaner should be consulted or alternate spotting solution used.
4) Do not over-wet. Use small amounts of the cleaning agents and blot frequently. Always blot. Do not rub or brush.
5) Work from the outer edge of the spot towards the center to prevent rings or spreading.
6) Beginning with step 1, treat the stained area with each spotting solution until the stain is removed. It may be necessary to complete the entire series of steps. The final step is always to gently rinse the area with water, then absorb all the remaining moisture with absorbent towels.
7) Be patient. Some stains respond slowly. All spots and stains cannot be removed from every fabric due to differences in fibers, dyes, construction, finishes, composition of the stain, length of time the stain has remained on the article, etc. Some stains require professional treatment.



Carpet Care Program

Spotting Solutions

Solvent Cleaning Solution - Use in small amounts – can be harmful to sizings, backings or stuffing materials. Do NOT use gasoline, lighter fluid, carbon tetrachloride or other flammable or toxic solvents.

Detergent Solution (AIRx 81) – Mix one teaspoonful of a colorless, mild detergent in a cup of lukewarm water.

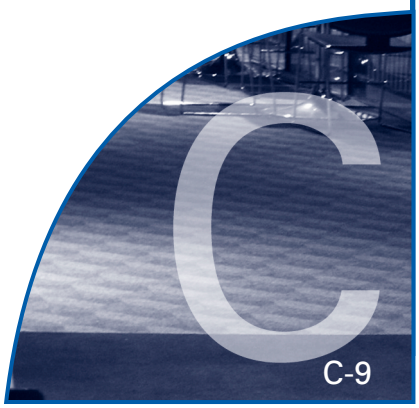
Alkaline Solution – Mix one tablespoon of clear household ammonia with one-half cup of water or 7% solution.

Vinegar Solution – Mix one-third cup of white household vinegar with two-thirds cup of water. Professional cleaners may use up to 28% acetic acid solution or a tannin solution.

Enzyme Detergent (AIRx 65) – Mix a solution of enzyme detergent following the directions on the label. Do NOT soak or over-wet. Allow the solution to remain on the stain for the recommended length of time before removing. Professional cleaners may prefer to use digestors separate from detergents.

Bleach – Use hydrogen peroxide or sodium perborate, present in Snowy or Clorox II. Do NOT use chlorine bleach.

W.E. GREER LTD.

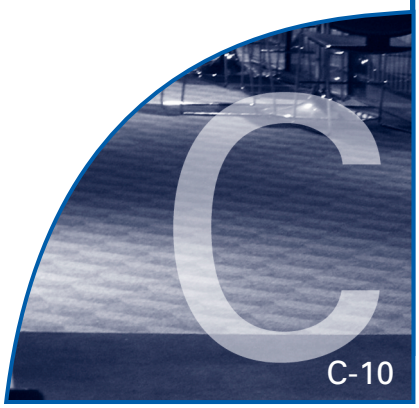


Carpet Care Program

Spotting Guide

SPOT	STAIN	CONTAINS	STEPS
Beer	Colorless to light yellow, slightly stiff	Hops, malts, alcohol, albumin, tannin	1. Apply detergent solution, blot. 2. Apply vinegar solution, blot frequently. 3. Rinse with water, blot until dry.
Blood	Reddish when fresh, dries to dark brown with irregular edge	Albumin, fat, fibrin, iron	1. Apply cool detergent solution, blot. 2. Apply cool ammonia solution, blot. 3. Apply enzyme detergent, blot. 4. Rinse thoroughly with water, blot until dry. 5. If stain remains, apply rust remover or oxalic acid solution. 6. Bleaching with 3-5% hydrogen peroxide may be necessary.
Butter & Margarine	Greasy, yellowish – red, sometimes built-up	Vegetable dye, corn oil, milk, salt, preservatives, vegetable fats	1. Apply cleaning solvent, blot. 2. Apply detergent solution, blot until dry. 3. Apply vinegar solution, blot. 4. Rinse with water, blot until dry.
Candle Wax	Stiff and built-up	Petroleum, animal fats and oils, vegetable fats and oils, basic dyes	1. Scrape off as much as possible with spatula or dull knife. 2. Apply cleaning solvent. 3. Apply POG, blot. 4. Apply cleaning solvent, blot. 5. Alternate: Place a brown paper bag over wax and iron on bag shifting until removed.
Ketchup/ Tomato Sauce	Reddish-brown, absorbed and built-up	Tomatoes, salt, sugar, spices, tannin, vinegar, onions	1. Apply cool detergent solution, blot. 2. Apply ammonia solution, blot. 3. Apply enzyme detergent, blot. 4. If stain remains, bleach with 3-5% hydrogen peroxide or sodium perborate. 5. Rinse thoroughly with water, blot until dry.
Chewing Gum	Grayish or pink, rubbery, sticky, built-up	Flavoring, sugar	1. Harden gum with ice cube until it is brittle enough to scrape off with dull knife or spatula. 2. Apply dry cleaning solvent to remove remaining traces or use a commercial chewing gum remover.
Chocolate	Brown with irregular edge, absorbed or built-up	Oil, grease, cocoa, butter, coloring, sugar, milk	1. Scrape off as much as possible with spatula or dull knife. 2. Apply cool detergent solution, blot. 3. Apply ammonia solution, blot. 4. Apply vinegar solution, blot. 5. Apply enzyme detergent, blot. 6. Rinse thoroughly with water and blot until dry.
Cocktails	Colorless or light brown, absorbed	Alcohol, tannin, sugar	1. Apply detergent solution, blot. 2. Apply vinegar solution, blot. 3. Rinse with water, blot until dry.
Coffee	Brown with irregular edge, darkening with heat and age	Tannin, sugar, fatty acids, alcohol, oils, milk, cream	1. Apply detergent solution, blot. (Use enzyme solution if cream was present.) 2. Apply vinegar solution, blot. 3. Apply enzyme detergent, blot. 4. Rinse with water, blot until dry. Ammonia will set stains on wool & silk, but may help in removal from other fabrics.
Cough Syrup	Usually absorbed with an irregular edge, sticky when wet, stiff when dry	Honey, sugar, syrup, menthol, alcohol, flavoring, coloring matter	1. Apply detergent solution, blot. 2. Apply ammonia solution, blot. 3. Apply vinegar solution, blot. 4. Apply enzyme detergent, blot. Rinse thoroughly with water, blot until dry.
Crayons	Built-up, sometimes shiny	Wax, grease, pigment, coloring matter	1. Apply cleaning solvent. 2. Apply POG, blot. 3. Apply dry cleaning solvent, blot. 4. Apply detergent solution, blot. 5. Rinse with water, blot until dry.
Egg (Raw)	White and/or yellow, built-up, coagulates with heat	Albumin, oils, fats, coloring matter	1. Blot up as much as possible. 2. Apply detergent solution, blot. 3. Apply cold ammonia solution, blot. 4. If stain remains, apply enzyme detergent. 5. Rinse with water, blot until dry.

POG means a safe spot and stain remover

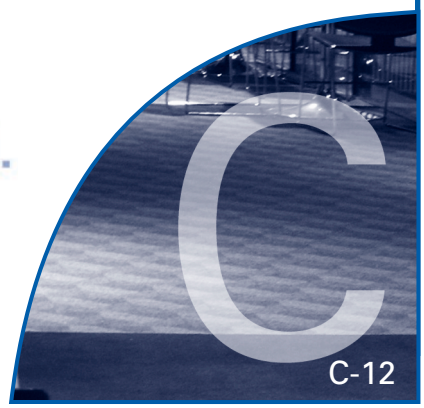


Carpet Care Program

SPOT	STAIN	CONTAINS	STEPS
Food Coloring	Absorbed, irregular edge	Coloring matter, propylene glycol	1. Apply detergent solution, blotting frequently. A dried stain will probably spread when wet 2. Repeat step 1 until color no longer transfers to towel. 3. Apply ammonia solution, blot. 4. Rinse thoroughly with water, blot until dry. 5. Alternate: Use saturated towel and iron in "dye transfer" system.
Fruit Juice	Light yellow or color of fruit, absorbed and splotchy with irregular edge	Tannin, acids, pulp, sugar, coloring matter	1. Apply detergent solution, blot. 2. Apply ammonia solution, blot. 3. Apply vinegar solution, blot. 4. Rinse with water, blot until dry. 5. If stain remains, apply enzyme detergent, blot. 6. Rinse, blot until dry.
Furniture Stain	Brownish or reddish, absorbed, with irregular edge	Petroleum distillate, coloring matter	1. Apply cleaning solvent. (NOTE: Water soluble paint strippers have had some success in the removal of this type of stain.) 2. Apply POG, blot. 3. Apply cleaning solvent, blot. 4. Apply detergent solution, blot. 5. Rinse with water, blot until dry. This stain is almost impossible to remove completely.
Glue	Stiff and shiny, usually built-up	Starches, gelatins, albumin	1. Apply water, blot. 2. Apply detergent solution, blot. 3. If stain remains, heat the detergent solution slightly and repeat step 2. 4. Rinse with water, blot until dry.
Grass	Green and/or brown smudges	Tannin, acids, oils, chlorophyll	1. Apply amyl acetate if available to remove chlorophyll, blot. 2. Apply enzyme detergent, blot. 3. Rinse with water, blot. 4. Apply ammonia solution, blot. 5. Apply vinegar solution, blot. 6. Rinse with water, blot until dry. Bleaching (or professional stripping) may be necessary.
Gravy	Brownish, absorbed and built-up	Meat extracts, starch, proteins, milk, flour, seasonings	1. Apply detergent solution, blot. 2. Apply ammonia solution, blot. 3. Apply vinegar solution, blot. 4. Apply enzyme detergent, blot. 5. Rinse with water, blot until dry.
Greases	Grayish or brownish, absorbed or built-up	Oils, sometimes soils	1. Apply cleaning solvent. 2. Apply POG, blot. 3. Alternate steps 1 and 2 until stain is removed. 4. If stain remains, apply detergent solution, blot. 5. Apply ammonia solution, blot. 6. Apply vinegar solution, blot. 7. Rinse with water, blot until dry. Bleaching (or professional stripping) may be necessary.
Ice Cream	Absorbed and built-up, stiff when dry	Cream, milk, egg, sugar, fruits, extracts, coloring matter	1. Apply detergent solution, blot. 2. Apply ammonia solution, blot. 3. Apply vinegar solution, blot. 4. Apply enzyme detergent, blot. 5. Rinse thoroughly with water, blot until dry. 6. Apply cleaning solvent, blot.
Ink (Ballpoint)	Any color, usually blue, absorbed	Basic or soluble dyes, insoluble organic solvents, oils, resins, gums, binding agents such as shallac, varnish or petroleum	1. Apply cleaning solvent. 2. Apply POG, blot. 3. Apply cleaning solvent, blot. 4. Apply amyl acetate if available, or acetone (except on acetate fibers). 5. If stain remains, apply rust remover or oxalic acid solution. 6. Bleaching (or professional stripping) may be necessary.
Ink (India)	Absorbed, usually black	Pigment (carbon black) dispersed in water with a binder	1. Apply cleaning solvent. 2. Apply POG, blot. 3. Apply cleaning solvent, blot. 4. Apply detergent solution, blot. 5. Apply ammonia solution, blot. 6. Rinse with water, blot until dry.

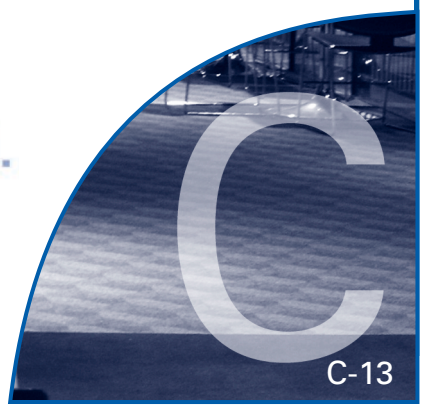
Carpet Care Program

SPOT	STAIN	CONTAINS	STEPS
Jam & Jelly	Reddish or bluish, absorbed and built-up	Pulp of fruit, sugar, tannin preservatives	1. Apply detergent solution, blot. 2. Apply vinegar solution, blot. 3. Rinse with water, blot. 4. Apply enzyme detergent, blot. 5. Rinse with water, blot until dry.
Lipstick	Red, pink, orange, soft and greasy	Pigment or dye in fat, waxes and oils	1. Scrape off with spatula or dull knife. 2. Apply POG, blot, making sure not to reapply stain onto fabric. 3. Apply cleaning solvent, blot. 4. Apply detergent, blot. 5. Apply ammonia solution, blot. 6. Apply vinegar solution, blot. 7. Rinse with water, blot until dry. Try to avoid wet cleaning on wool. Use POG and cleaning solvents as long as possible.
Merthiolate & Mercurochrome	Orange-red, absorbed	Dye in alcohol solution	1. Apply detergent solution, blot. 2. Apply ammonia solution, blot. 3. Apply vinegar solution, blot. 4. Rinse with water, blot until dry.
Mildew	Grayish or brownish, fungus with black spots	May permanently damage fibers	1. Apply enzyme detergent, blot. 2. Apply ammonia solution, blot. 3. Rinse thoroughly with water, blot. 4. Apply solution of oxidizing bleach (chlorine or perborate). Do not use chlorine bleach on wool or silk. 5. Rinse thoroughly with water, blot until dry.
Milk	Usually white, sometimes lighter in center with heavier build-up around edges	Fats, albumin, water	1. Apply cool detergent, blot. 2. Apply ammonia solution, blot. 3. Apply vinegar solution, blot. 4. Rinse with water, blot until dry. 5. Apply enzyme detergent, blot. 6. Rinse with water, blot until dry. 7. Apply cleaning solvent, blot.
Mucilage	Either built-up or slightly absorbed, stiff with an irregular edge when dry	Albumin, animal proteins and gums	1. Apply hot enzyme detergent solution, blot (for protein stain). 2. Apply ammonia solution, blot. 3. Rinse thoroughly with water, blot until dry.
Mud	Grayish, brownish, reddish or yellowish, absorbed and built-up	Soil with greases and oils, clay, iron	1. Brush or scrape off as much as possible. 2. Apply detergent solution, blot. 3. Apply ammonia solution, blot. 4. Rinse thoroughly with water, blot until dry. 5. If stain remains, apply POG and dry cleaning solvent alternately, blot until dry.
Mustard	Yellowish, aborbed or built-up	Mustard seed, vinegar, salt, tumeric, oils, spices, flavorings	1. Apply detergent solution, blot. 2. Apply vinegar solution, blot. 3. Apply enzyme detergent, blot. 4. If stain remains, rust remover (oxalic acid solution) or bleaching may be necessary. Do not use ammonia or alkalies.
Nail Polish	Usually pink or red, stiff, shiny & built-up	Red dye or pigment in a liquid cellulose acetate base, solvent, plasticizer	1. Apply cleaning solvent. 2. Apply POG, blot. 3. Apply amyl acetate, if available, or nail polish remover. PRETEST FIRST. 4. If stain remains, apply detergent solution, blot until dry. 5. Apply ammonia solution, blot. 6. Apply vinegar solution, blot. 7. Rinse with water, blot until dry.
Oils	Circular, elongated or cross-shaped, darkening with age.	Petroleum distillate or vegetable oil, polyglycerides, methylsilicate, preservatives	1. Apply cleaning solvent. 2. Apply POG, blot. 3. Apply cleaning solvent and POG, blotting frequently. 4. Apply detergent solution, blot. 5. Apply ammonia solution, blot. 6. Apply vinegar solution, blot. 7. Rinse with water, blot until dry.



Carpet Care Program

SPOT	STAIN	CONTAINS	STEPS
Paint (Oil)	Usually built-up and stiff	Pigments, drying oils, resins, volatile solvents. Check label on paint for specific thinner or solvent.	1. Apply cleaning solvent. 2. Apply POG, blot. 3. Apply cleaning solvent, blot. Alternate steps 2 & 3 until stain is removed. 4. If stain persists, weight down the stain with towels dampened with cleaning solvent for several hours to loosen, blot with solvent. 5. Apply several drops of detergent solution and work into the stain, blot. 6. Apply ammonia solution, blot. Alternate steps 2, 3 & 6 until stain is removed. 7. Rinse thoroughly with warm water, blot until dry.
Paint (water)	Absorbed or built-up, stiff when dry	Water, latex, pigments, emulsifiers, preservatives	1. Apply detergent solution, blot. 2. Apply ammonia solution, blot. 3. Rinse with water, blot until dry. 4. Apply POG, blot. 5. Apply cleaning solution, blot.
Rubber Cement	White or clear, built-up, possibly sticky or shiny	Rubber (synthetic or natural), resin, solvent	1. Roll the glue off if it has hardened sufficiently. 2. Apply dry cleaning solvent. 3. Apply POG, blot. 4. Apply cleaning solvent, blot. 5. Apply detergent solution, blot. 6. Rinse with water, blot until dry.
Rust	Reddish-brown, absorbed or built-up	Oxides of iron	1. Apply rust remover or warm oxalic acid solution. 2. Allow to stand for 10-15 minutes. 3. Repeat with hot solution. Rinse with ammonia. 4. Rinse; blot until dry.
Shoe Polish	Usually black or brown, absorbed or built-up	Waxes, resins, solvents, dyes, shellac, alcohol, tannin	1. Apply cleaning solvent. 2. Apply POG, blot. 3. Apply cleaning solvent, blot. 4. Apply detergent solution, blot. 5. Apply ammonia solution, blot. 6. Rinse thoroughly with water, blot until dry. 7. If stain persists, bleaching (or professional stripping) may be necessary.
Soft Drinks	Colorless, yellowish, reddish or brownish, darkening with age	Tannin, sugar, vegetable coloring, flavoring, fruit extracts	1. Apply cold detergent solution, blot. 2. Apply ammonia solution, blot. 3. Apply vinegar solution, blot. 4. Rinse with water, blot until dry.
Tar & Asphalt	Black, shiny, built-up or absorbed, distinctive odor	Coal tar or petroleum, sulfur compounds	1. Scrape off as much as possible with spatula or dull knife. 2. Apply cleaning solvent. 3. Apply POG, blot. 4. Rinse with cleaning solvent. 5. Apply detergent solution, blot. 6. Rinse with water, blot until dry.
Toothpaste	Whitish or greenish, absorbed or built-up	Soap, bleaching compound, flavoring, fluoride compound	1. Apply detergent solution, blot. 2. Apply vinegar solution, blot. 3. Apply ammonia solution, blot. 4. Rinse thoroughly with water, blot until dry.
Urine (may cause permanent dye removal from fibres)	Yellowish or brown, darkening with age, absorbed	Urea, uric acid, ammonia, organic acids, pigments, cholesterol, albumin	1. Blot up as much as possible if still wet. 2. Apply detergent solution, blot. 3. Apply ammonia solution, blot. 4. Apply vinegar solution, blot. 5. Rinse thoroughly with water, blot until dry. 6. If stain remains, apply rust remover or oxalic acid solution. 7. Bleaching with 3-5% hydrogen peroxide or sodium perborate might be necessary.
Vomit	Various colors, absorbed and built-up	Food mucus, albumin, acids	1. Blot up as much as possible if still wet. 2. Apply enzyme detergent, blot. 3. Apply ammonia solution, blot. 4. Apply vinegar solution, blot. 5. Rinse; blot until dry.
Wine	Reddish or purplish, absorbed	Alcohol, sugar, tannins, coloring matter	1. Apply detergent solution, blot. 2. Apply vinegar solution, blot. 3. Apply ammonia solution, blot. 4. If necessary, bleach with 3-5% hydrogen peroxide or sodium perborate. 5. Rinse thoroughly, blot until dry.

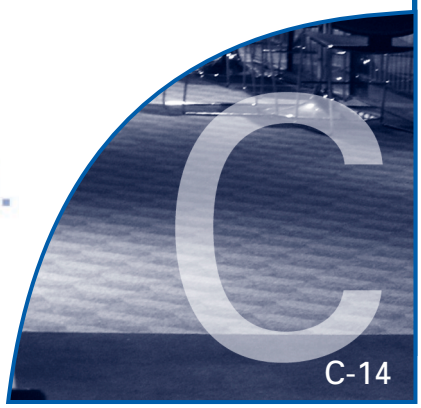


Carpet Care Program

Approximate pH Values

Foods	
Apples	2.9 – 3.3
Apricots	3.6 – 4.0
Asparagus	5.5 – 5.8
Bananas	4.5 – 4.7
Beans	5.0 – 6.0
Beer	4.0 – 5.0
Beets	4.9 – 5.5
Blackberries	3.2 – 3.6
Bread, white	5.0 – 6.0
Butter	6.1 – 6.4
Cabbage	5.2 – 5.4
Carrots	4.9 – 5.3
Cheese	4.8 – 6.4
Cherries	3.2 – 4.0
Cider	2.9 – 3.3
Corn	6.0 – 6.5
Crackers	6.5 – 8.5
Dates	6.2 – 6.4
Eggs, fresh white	7.6 – 8.0
Flour, wheat	5.5 – 6.5
Gooseberries	2.8 – 3.0
Grapefruit	3.0 – 3.3
Grapes	3.5 – 4.5
Hominy (lye)	6.8 – 8.0
Jams, fruit	3.5 – 4.0
Jellies, fruit	2.8 – 3.4
Lemons	2.2 – 2.4
Limes	1.8 – 2.0
Maple Syrup	6.5 – 7.0
Milk, cows	6.3 – 6.6
Olives	3.6 – 3.8
Oranges	3.0 – 4.0
Oysters	6.1 – 6.6
Peaches	3.4 – 3.6
Pears	3.6 – 4.0
Peas	5.8 – 6.4
Pickles, dill	3.2 – 3.6
Pickles, sour	3.0 – 3.4
Pimento	4.6 – 5.2
Plums	2.8 – 3.0

Biologic Materials	
Blood, plasma, human	7.3 – 7.5
Spinal fluid, human	7.3 – 7.5
Blood, whole, dog	6.9 – 7.2
Saliva, human	6.5 – 7.5
Gastric contents, human	1.0 – 3.0
Duodenal contents, human	4.8 – 8.2
Feces, human	4.6 – 8.4
Urine, human	4.8 – 8.4
Milk, human	6.6 – 7.6
Bile, human	6.8 – 7.0

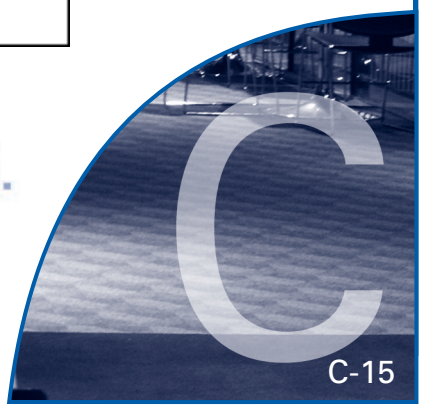


Carpet Care Program

Maintenance Frequencies - Carpets

Suggested guidelines. Frequencies should be modified to reflect traffic and soiling conditions, equipment used and customer's appearance standards.

	Maintenance Procedure	Heavy Traffic Areas	Moderate Traffic Areas	Light Traffic Areas
DAILY	*Use both regularly*			
	Vacuuming	at least daily	2-3 times/week	weekly
	Spot search removal	daily	daily	daily
INTERIM	*Select one or more based on customer's equipment and preferences:*			
	Spin Bonnet Cleaning	at least weekly	twice a month	every 1-3 months
	Prespraying	when extracting or dry foam shampooing, on heavily soiled areas		
	Dry Foam Shampooing	at least monthly	every 2 months	every 3 months
	Fast Extraction	at least monthly	every 2 months	every 3 months
RESTORATIVE	*Select one or more based on traffic, soiling, customer's equipment and preferences:*			
	Prespraying	when extracting or shampooing, on heavily soiled areas		
	Extraction	every 3-6 months	every 6-9 months	yearly
	Rotary Shampoo	every 6 months	every 9 months	yearly
	"Power Cleaning" includes Prespray, Rotary Shampoo, Extract	on heavily soiled and matted carpets when soil load cannot be removed with rotary shampooing or extraction alone		
	Soil Retardant Treatment	after rotary and/or extraction cleaning		
SPECIAL NEEDS	Static Control	after interim or restorative cleaning, or when static becomes a problem		
	Prespraying	when extracting or spin cleaning, or as needed		
	Dry Foam Shampooing	when browning is a problem		
	Fast Extraction	when odors are a problem		



Carpet Care Program

Carpet Fabrication Methods

Carpets today are fabricated - combining the pile and backing into one integral fabric - by a variety of methods. They include:

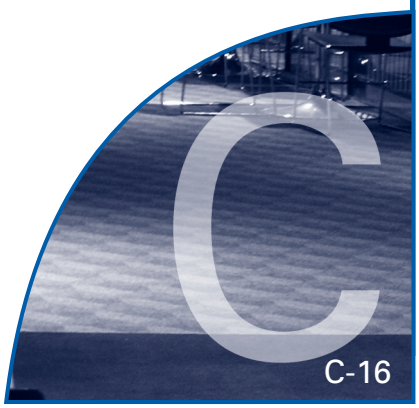
Tufting
Stitching tufts of pile yarn into a pre-woven backing material with a tufting machine, which operates basically like a gigantic sewing machine. Utilizing hundreds of needles, plus electronic and other devices governing the needles for pattern effects, this method now accounts for more than 90% of carpets sold.

Weaving
The traditional way of making carpet on a loom, interlacing the yarns forming the backing and the pile - are the warp. The yarns going across the carpet are the weft, or filling. Looms used for carpet weaving are the velvet, Axminister, and Wilton. Woven carpets continue to be important in contract installations where certain textures and intricate patterns are specified.

Knitting
A method by which carpets are made on a specialized knitting machine using different sets of needles to loop together the pile, backing, and stitching yarns.

Needlepunching
A manufacturing method by which the fibers are punched or needled into a structural material and then compressed into a felt-like fabric. Used mainly in indoor - outdoor carpet types.

Flocking
A method of embedding very short fibers in a backing, usually done electrostatically, producing a cut pile surface with a velvety look.



D

W.E. GREER LTD.

Washroom Care Program

Traffic Pattern
Suggested Supplies and Equipment
General Procedures

"OUR REPUTATION IS SPOTLESS"

W.E. GREER LTD.

Washroom Care Program

Every building is constructed to fill a need. Whether that need is to provide space for administration, manufacturing, health services or recreation, the character of the building, and its occupants, is projected by the sanitation level of its washrooms. Although few people will complain about poorly maintained washrooms, all people are sensitive to a lack of cleanliness.

To some building administrators, cleaning maintenance represents a nonproductive department and therefore adds to ever-increasing operating costs. However, if they would analyze the benefits of a well-planned sanitation program, they would realize it is the lowest price they can pay for good public relations… dividends in employee, patient, student and tenant satisfaction… as well as public health.

An efficient and economical washroom sanitation program combines the efforts of management and the custodial or housekeeping staff. Management must supply the proper materials and equipment, and cleaning personnel must use (or be trained to use) these materials and equipment skillfully. Properly planned washroom sanitation is not expensive, but the lack of it can be costly.

Your W.E. Greer sales consultant will help train your custodial personnel in the fundamentals of modern cleaning methods. They are professional sanitation consultants who will gladly assist you in developing a custodial training program to suit your requirements. They can also assist you in the selection of proper washroom equipment.

W.E. GREER LTD.

Traffic Pattern

In planning a new, or renovating an old washroom, establish the proper traffic flow by locating fixtures, dispensing equipment and receptacles in the following approximate order:

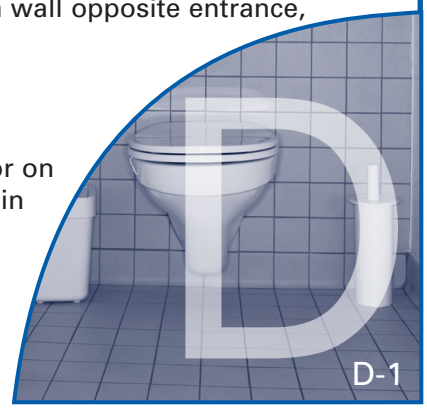
1) In ladies washroom, mount sanitary napkin vendor in a conspicuous place on wall opposite entrance, provide disposal units mounted off floor inside toilet stalls.

2) Urinals (wall-hung).

3) Toilets (wall-hung) – toilet seat cover dispensers wall-mounted behind toilet or on partition… toilet tissue dispensers attached to side of partitions… purse shelf in ladies' toilet compartments.

4) Washbasins (wall-hung) – sufficient clearance should be allowed between basins (according to building codes).

5) Soap dispenser over each washbasin.



6) Towel dispensers (surface-mounted or recessed) and/or automatic hand dryers adjacent to washbasins.

7) Waste receptacles (surface-mounted or recessed) either below or adjacent to towel dispensers... as close to exit as practical.

8) Hat and coat hooks (wall-mounted) near mirrors.

9) Mirrors (wall-hung) with adjacent shelf below to accommodate purses, books, etc.

By strategic placement of washbasins, towel dispensers, waste receptacles and mirrors, traffic congestion can be reduced and washroom efficiency increased.

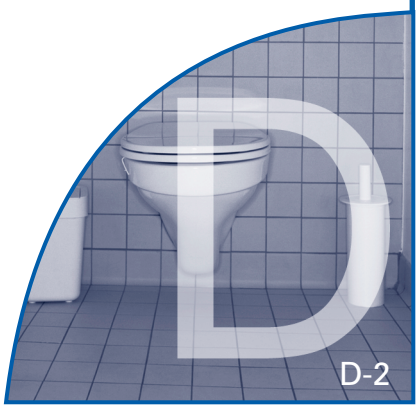
W.E. GREER LTD.

Suggested Supplies and Equipment

- Mopping buckets and wringer for detergent-germicide solution and rinse water.
- Wet mop of adequate size.
- Treated dust mop – handle long enough for high dusting.
- Pail for detergent-germicide solution.
- Cleaning cloths and glass cleaning towels.
- Cleaner for scum removal.
- Bowl cleaner.
- Toilet bowl urinal brush or hand wash.
- Long-handled dustpan and toy corn broom with same length handle.
- Rubber gloves.
- Sponges for applying cleaning solution and for rinsing.
- Putty knife and/or special aerosol to remove gum from floor.
- Abrasive pad – to remove corrosion.
- Room deodorant.
- Housekeeping cart.
- Plunger.
- Waste receptacle on casters for collecting trash and used paper towels.
- Bottle with spray top – for cleaning solution or clean water.
- Toilet paper, towels, sanitary napkins, toilet seat covers, etc.
- Soap.
- Deck scrub brush.
- Garbage bags for waste receptacles.

THREE TIME SAVING PRINCIPLES

1) Apply cleaners that require time to react on heavily soiled surfaces.
2) Clean those items which can be cleaned with the same equipment at one time before going on to next type of surface - clean mirrors and other glass before washbasins, etc. Putting down equipment and picking up new tools take time.
3) A regular routine should be set up so that the cleaning professional knows exactly what to do in proper order.



Washroom Care Program

General Procedures

1. **Assemble Equipment and Supplies**
   All equipment and supplies necessary for cleaning washroom are assembled and taken to room at one time. If supply closet is in or adjacent to washroom, little time will be taken.

2. **Put Germicidal Bowl Cleaner in Toilets and Urinals.**
   Flush toilets and urinals. Put detergent-germicide cleaner into each fixture so that cleaner may be working while other cleaning functions are taken care of.

3. **High Dust**
   Walls, vents, tops of doors and partitions, etc.

4. **Replenish Supplies**
   Refill all towel, sanitary napkin, tissue and soap dispensers. Replace-refill deodorizers. (Dispensers usually require filling only every 28-30 days - indicate on work schedule days for refilling). Check working condition of units. If electric hand dryers are used, check that they function properly. Type of soap dispenser will determine how it is refilled. Check valve for proper operation. If clogged, clean according to manufacturer's instructions.

W.E. GREER LTD.

5. **Pick Up Waste from Floor**
   Use dustpan and broom to pick up paper and trash from floor. Use putty knife to remove gum or other deposits from floor.

6. **Clean Light Fixture Over Mirrors, then Mirrors, Piping under Washbasins**
   Dampen treated glass cleaning towels; wipe off light fixture over mirror. Clean mirror with dampened towel in one hand and dry with towel in other. Clean one light fixture and mirror beneath, moving around room until all are serviced. Clean other glass surfaces in room; also piping under washbasins, etc., using cloth dipped in detergent-germicide solution.

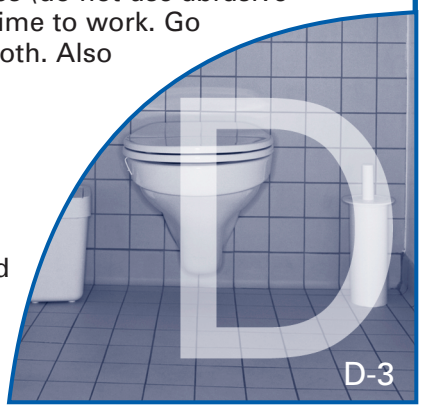
7. **Empty Waste Receptacles and Replace Plastic Liner as Required**
   Towel containers, sanitary napkin disposal units, etc... Wipe interiors with cloth and detergent-germicide where necessary. Exteriors of metal accessories are cleaned best with a neutral cleaning solution to avoid damage to finish. Do not use abrasive cleaner.

8. **Sweep Floor**
   Pick up loose soil with proper tool for conditions.

9. **Clean Washbasins**
   Use cleaner and sponge, thoroughly wash basins, faucets and exterior surfaces (do not use abrasive cleaners on faucets). Apply cleaner to one bowl after other, giving detergent time to work. Go back to first basin; rinse all surfaces, faucets and pipes. Dry and polish with cloth. Also check faucets for dripping, ease of use; check for drain flow.

10. **Prepare Detergent-Germicide Cleaner**
    Prepare cleaning solution according to manufacturer's directions.

11. **Spot Clean Walls and Partition**
    Dip sponge in cleaning solution; squeeze out so sponge is just damp; go around room wiping off shelves above and wall behind washbasins, dispensers, waste receptacles, edges of partitions, doors and door frames. Spot clean walls and partitions. Rinse out sponge in cleaning solution when needed.



Washroom Care Program

Walls should be washed frequently. If walls and floor are finished with waterproof materials, room may be hosed down periodically, providing floor has drain.

12. **Prepare Fresh Pail of Detergent-Germicide Cleaner**
    (as in no. 10 above)

13. **Clean Interior of Toilets**
    Saturate brush or hand swab with cleaning solution and thoroughly clean interior. Starting in inner lip of bowl, hidden groove around upper ledge of bowl; wash down into trap; flush toilet; rinse brush or swab (Use acid bowl cleaner weekly to remove any stains and prevent buildup of uric acid salts). Periodic inspection of underside of rim, using mirror and flashlight, will reveal encrustations or spots which can be removed with swab and acid bowl cleaner. Open clogged holes with wire. Wash one bowl after another until all have been cleaned.

14. **Clean Interior of Urinals**
    Start at top of inside and work down. Clean with brush or swab saturated with cleaning solution. Flush and proceed to next urinal. Make periodic inspection for encrustations with mirror and flashlight. If stains and encrustations have formed, give special cleaning. Uric acid crystals that form "urine stone" in drain pipe must be dissolved and released. Remove drain cap; pour solvent or acid bowl cleaner in drain and let stay one-half hour. Work drainpipe brush up and down in pipe to remove loosened material; use special scale solvents, not harsh scouring powder. Wash one urinal after another until all have been cleaned.

15. **Clean Exterior of Toilets**
    Move down line, washing and disinfecting tops and bottoms of seats and exterior surfaces with sponge and detergent-germicide cleaner. Cleaning includes metal parts of the toilet fixture and if not wall-hung, base of toilet to floor.

    If metal is corroded, use steel wool and coarse scouring powder to remove green corrosion. If cleaned daily with solution, metal will not become corroded. Never use coarse abrasives or scouring powder, for these will scratch surface.

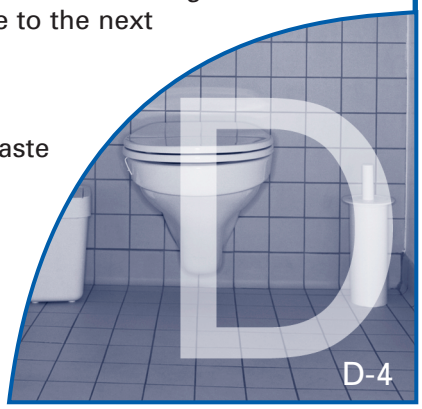
W.E. GREER LTD.

16. **Clean Exterior or Urinals**
    Move down line, washing and disinfecting exterior of urinals, pipes and fixtures with sponge and detergent-germicide cleaner.

17. **Rinse Toilet and Urinals**
    Some manufacturers of germicidal solutions advise against rinsing surfaces after the cleaning process. If clear water rinse is used, wring out sponge and go from one fixture to the next until all have been rinsed.

18. **Clear Floor of All Obstructions**
    Clean equipment, except pail and wet mop, and return to supply closet. Put waste receptacles out of way.

19. **Prepare Solution for Cleaning Floor**
    Use detergent-germicide cleaner, same as used for toilet fixtures. Follow manufacturer's instructions.

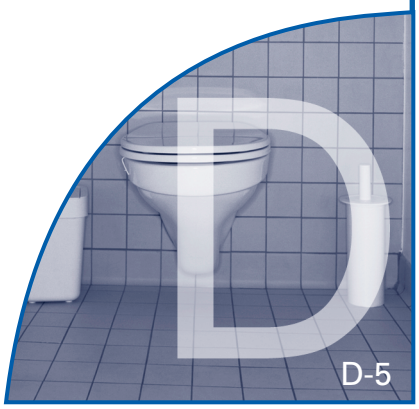


20. **Wet Mop Floor**
Apply cleaning solution around toilets and urinals, giving it time to remove uric acid from floor adjacent to fixtures while mopping rest of floor. Dip mop in cleaning solution; allow excess to run off into pail; do not wring out; apply solution to area around toilet fixtures. Go to far end of room and work toward door, damp mopping floor. As area around toilet fixtures is reached, wash floor thoroughly; wring mop out in cleaning solution and pick up loosened soil with mop.

If floor has been neglected, it may be necessary to hand scrub with deck brush on long handle or with scrubbing machine, especially around toilet fixtures. Such heavy scrubbing should be done periodically. Clean baseboard with sponge squeezed out in cleaning solution.

It is important that the program be memorized and followed exactly, which greatly increases the custodian's efficiency. Good communications between management and the custodial staff should call for the procedure to be written on a card for the custodian or posted on a bulletin board to which he has convenient access.

W.E. GREER LTD.



W.E. GREER LTD.

W.E. Greer's Guide for Windows

"OUR REPUTATION IS SPOTLESS"

W.E.Greer's Guide for Windows

PURPOSE:
To provide clean, translucent windows.

REQUIRED SUPPLIES & EQUIPMENT:

- Squeegee
- Window brush or strip washer
- Window cleaner's bucket
- Chamois
- Window cleaning detergent
- Scraper
- Clean wipers or rags

PROCEDURE:

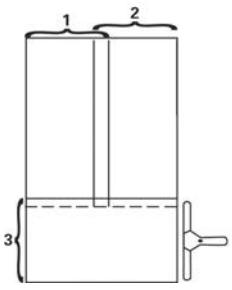
1. Gather all necessary supplies.
2. Mix window cleaning solution in the bucket. Apply solution to the window evenly with a window brush or strip washer. Ensure the entire area is covered.
3. Place the squeegee at the top of the window and glide it to the corner. Glide the squeegee downward to the bottom corner. Use a consistent, even pressure on the squeegee at all times. Repeat across the window.
4. Wipe off the squeegee with a rag or chamois and begin at the top of the window again. Slant the squeegee downward on the dry, cleaned side of the glass. Continue down to the bottom. Repeat this until the window is completely cleaned.
5. Wipe the sills clean and dry with wipers or rags.
6. Clean up – Wash out the bucket and dry it. Wash out chamois with clean water and hang up to air dry. Wash rags. Rinse squeegees and wipe them dry. Store squeegees in a cool, dry place. Do not store squeegees on their blades.
7. Wash hands.

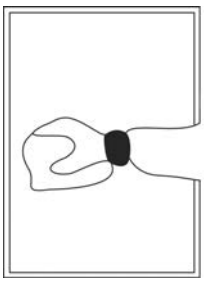
Pointers:

- Area to squeegee must be wet. To wet window, use properly diluted window cleaning concentrate.
- Use a window brush to apply enough solution to keep the window wet while using squeegee.
- If window dries, apply more solution. The squeegee will not work on a dry surface!
- Tilt squeegee slightly to prevent dripping onto dried area.
- Overlap each pass of the squeegee.
- Wipe squeegee after each pass.

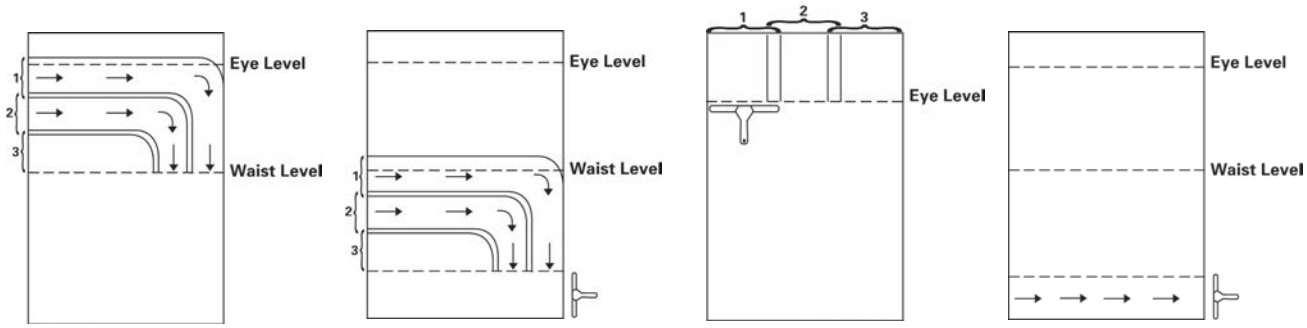
Small Windows

1. Use squeegee.
2. Or spray with the window cleaner and wipe with a clean dry towel.



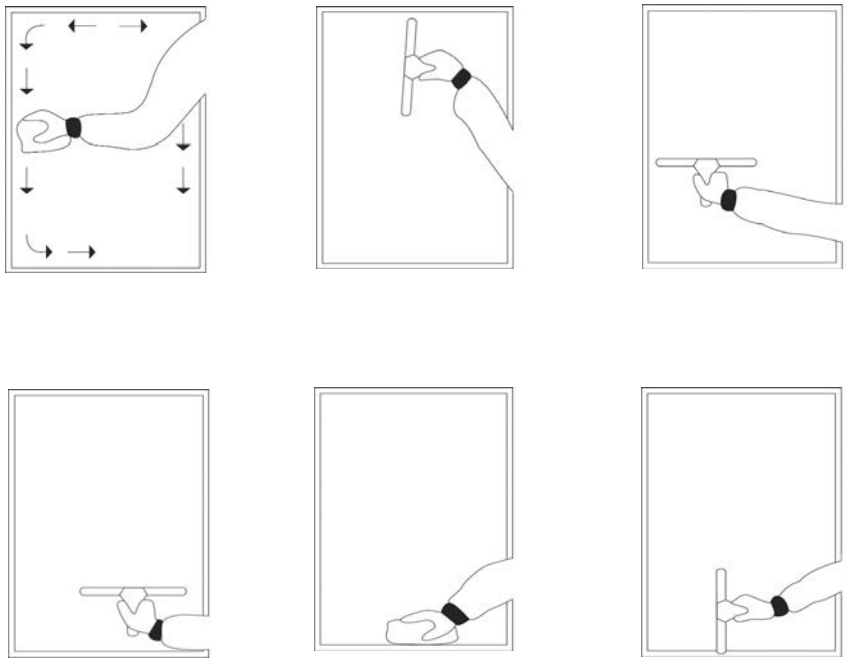


W.E.Greer's Guide for Windows



Large Windows

1. When the glass is well scrubbed with a wet sponge, go around the window against the frame with the sponge to pick up any debris you may have pushed against the frame.
2. Tilt the squeegee to an angle so about two inches of the rubber touches the glass, then start at the top corner and draw the squeegee along the top edge across the window. Using the squeegee tilted at this angle is called "cutting the water".
3. Wipe the squeegee blade with a chamois or sponge. Next, start on the dry surface close to the frame, draw the squeegee down to about three inches of the bottom of the glass.
4. Repeat this stroke until you have squeegeed all the glass. Be sure to overlap each stroke. Wipe squeegee blade after each stroke.
5. Soak up excess water with well rinsed sponge.
   Cut the water as you did in step 2. Next start on the dry surface close to the frame you have just squeegeed, draw the squeegee across the bottom of the glass.



Floor Care Program

Floor Care Program

Introduction

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

Floor finishes are applied to floor coverings for three reasons:

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

A little known fact about floor finishes is how thin they really are. Five coats of a 22% finish properly applied is about the thickness of the cellophane wrapper on a pack of cigarettes. Yet we have tremendous expectations from floor finishes. A women's high heel shoe can place 20,000psi on the area of floor where her heel hits during a walking stride. It's really amazing finishes can survive under those conditions. But a lack of a floor maintenance program will never give the finish film a chance to perform or last as you might want.

As you read this you must understand three things.

1. **A proper floor program starts with your expectations**. If you have the expectation of keeping the floor looking like they are "wet" then you need to understand the amount of resources required to accomplish your expectation level. An expectation level like that requires an amount of resources that is fairly intense. Most people expect the "wet" look to be obtained from the proper choice of a floor film, and fail to grasp the amount of resources required in machines and labor to maintain a floor to a "wet" look. When the finish fails to perform up to their expectations, they blame the finish or the people that applied it. For example, look at large retailers. They are always laying finish and high speed burnishing. You may be able to obtain a "wet" look without high expense, but you better not have much traffic, and your results will be in proportion to your input.

2. **A floor maintenance program without the proper level of equipment is not a floor maintenance program at all**. In order to properly maintain a floor you must be willing to invest in equipment that meet your needs. The level of equipment will obviously vary with each situation, but don't expect a "wet" look without investing in a high speed burnisher. With over 80 years of experience in floor maintenance, we have seen every combination of programs. It is impossible to expect a cleaning professional to clean a school with 30,000 square feet of halls with a mop and a bucket, yet we are amazed when we get called into a new account and find they have no machinery to properly do the job yet wonder why they always have terrible looking floors.

Floor Care Program

Know Your Floors

The maintenance of floors would be simplified if only one substance and one procedure for cleaning all floors could be prescribed. This, of course, is not possible, since there are many different types of flooring, and each type requires a different treatment during the cleaning operation. Improper cleaning techniques can affect the finish of the floor surface, so it is essential that the materials used are not harmful to the particular surface.

To help you do the proper job of maintenance on your own building's floors, it is important for you to know their characteristics and features. Here is a non-technical discussion of the composition of floors, the effects of different kinds of cleaners and preservatives on floors and the proper procedures that must be observed in the cleaning and maintenance of the different flooring materials.

Resilient Tile Floors

1. **Asphalt Tile** is a mixture of asbestos fibers, lime rock, inert fillers, and colored pigments with an asphalt or resin binder. It is very brittle and, like linoleum, is bonded to the floor with mastic either directly or over a layer of felt. A plywood sub-flooring can be used to provide a smooth surface.

   Most soaps contain materials that form an emulsion when they come in contact with the component parts of the asphalt tile, which weakens the tile. A synthetic liquid detergent that does not contain soap should be used. Water seeping between the seams can loosen the binding between the tiles and sub floors. Use water sparingly and remove immediately during cleaning operations. Do not use solvents and oils as they attack asphalt tile, causing it to break down. Use a water emulsion resin finish, which is compatible with resilient tile floors and also provides an added measure of safety under foot.

2. **Rubber Tile** is composed of rubber that is colored by mineral pigments and sometimes contains asbestos fibers. Oil, solvents, strong soaps, and alkalies seriously affect rubber tile. It has a dense, smooth surface that resists abrasion, stains, acids and mild alkalis. It is durable and anti-slip.

3. **Vinyl and Vinyl Asbestos** – Essentially, vinyl tile is a compound of inert nonflammable, odorless, non toxic resins, having a thermo-plastic quality, which is compounded with other filler and stabilizing ingredients. Vinyl asbestos is comparable to asphalt tile except that vinyl-type resins are used as a binder instead of asphalt.

   Both of these materials are resistant to water, acids, alkalis, grease, and oil. They can be damaged by seepage of water between the tiles, which loosens them from the sub flooring. New vinyl and vinyl asbestos floors are coated with a silicone that resists wetting. These floors need dry buffing with a synthetic fiber-scrubbing pad to remove surface silicones before applying a water emulsion resin finish.

4. **Linoleum** is a mixture of linseed oil, resins, and ground cork pressed upon a burlap backing, or a mixture of wood fibers, linseed oils and resins attached to a felt backing. Both the backing and the adhesive that binds the linoleum to the sub floor are susceptible to water damage that loosens the linoleum from the floor. This results in curling of edges and eventual destruction of the floor surface. Keep the use of water on linoleum to an absolute minimum. Never flood the surface with water. Wash a small area at a time, so the water can be picked up quickly. Linoleum is also highly susceptible to alkali damage. Alkali will remove the linseed oil binder, drying out the floor, causing it to become brittle and crack.

Floor Care Program

Non-Resilient Tile Floor

1. **Terrazzo** is made of marble chips set in a mixture of Portland cement. The floor surface is highly polished and is easy to clean. A terrazzo sealer protects the floor from penetration by spillage and from wear by foot traffic. A new terrazzo floor may appear dull because of the formation of deposits of mineral salts. This is caused by the curing of the cement and will clear up easily through routine maintenance. Strong alkalis, soaps, and scouring powders are harmful to terrazzo.

2. **Marble** and **Travertine** are natural stone materials that have been polished and laid to form a smooth floor. Strong soaps and cleaners enlarge the pores of this stone and cause it to absorb dirt. Never use scouring powder.

3. **Ceramic Tile** and **Quarry Tile** – Ceramic tile is composed of clay mixed with water and fired in a kiln, whereas quarry tile is a natural stone. Both ceramic tile and quarry tile provide a smooth impervious surface that is not damaged by plain water. Avoid harmful cleaners that will eat away the concrete grouting surrounding the tile.

4. **Concrete floors** are made from a mixture of Portland cement, sand, and gravel or crushed rock. Concrete floors are somewhat porous; therefore, do not use strong soaps and alkalis because they cause chipping and also remove the sealant.

Wood and Cork Floors

1. **Wood Floors** – One of the most common wood floors is maple. It is, along with oak, known as hard wood and is more resistant to water and wear than other kinds of wood, such as pine, which is soft wood. Maple is a “close-grained” wood with very little apparent difference between the hard and soft layers of wood.

   Oak and pine have alternate layers of hard and soft materials and are known as “open-grained” woods. The softer portion of wood grain is readily damaged by traffic and can literally be eaten away by strong soaps and water. Water absorbed by wood floors causes them to warp and this creates openings between the boards. Use a solvent-type combination cleaner and surface finish instead of water.

   Separated boards permit the entry of dirt and moisture that cause boards to rot. Alternating contraction and expansion of wood due to warping and drying results in the loosening of floors from the sub floor. Heavy foot traffic, trucking, gouging by falling objects, or the dragging of heavy objects across wood floors cuts the surfaces until they are no longer smooth. Floors so damaged by such abrasive action are further damaged when exposed to water, oils or grease.

   A floor seal protects wood floors from moisture and operational equipment. Preservation and restoration of the floor seal is imperative to protect the wood and provide a smooth surface that is easier to keep clean. The seal is preserved with surface finish.

2. **Cork Flooring** consists of cork curlings and granulated cork compressed in molds. When properly installed, it is treated with a sealer and finished to obtain surface protection. When the seal and finish are worn through, the floor becomes porous and subject to deterioration. Cork floors are durable and will not dust, crumble, splinter or rot. They are susceptible to damage from water, oils and grease.

Floor Care Program

Floor Care Basics

Type- **ASPHALT** (MATRIX, ASPHALATIC RESINS, PIGMENTS, MINERAL FILLERS)
Resistance to Soil & Chemicals - Alkaline agents, mild acids, moisture.
Harmful Substances- gasoline, lighter fluid, solvent floor finishes and cleaners, turpentine.
Benefits - Durable
Precautions- Avoid oils or solvents: They will attack the binder and cause colors to bleed. Same as vinyl.

Use and Care:
1. Use mild detergent or soap.
2. Rinse with clean water.
3. Dry immediately with mop or wet/dry vac.

Type- **LINOLEUM** (CORK, OIL ROSIN BACKING, PIGMENTS, RESINS, WOOD FLOOR)
Resistance to Soil & Chemicals- grease, oils
Harmful Substances - abrasives, detergents, harsh alkaline, solvents.
Benefits - Durable
Precautions - Avoid excess wetting, use adequate furniture rests to avoid indentations.

Use and Care:
1. Use a mild detergent solution: avoid alkaline solution.
2. Rinse with clear water.
3. Remove water immediately with wet/dry vacuum.

Type - **RUBBER** (ASBESTOS FIBER, PIGMENTS, SYNTHETIC RUBBER)
Resistance to Soil & Chemicals - acids, many stains, milk alkalines.
Harmful Substances - alkaline, gasoline kerosene, naptha, oils, solvent agents, turpentine.
Benefits - anti-slip, durable, flexible (minimal cracking) Won't warp or buckle.
Precautions - Air will dry and crack rubber tile, avoid direct sunlight, lubrication oils cause colors to bleed, tiles can become dull and "Chalky".

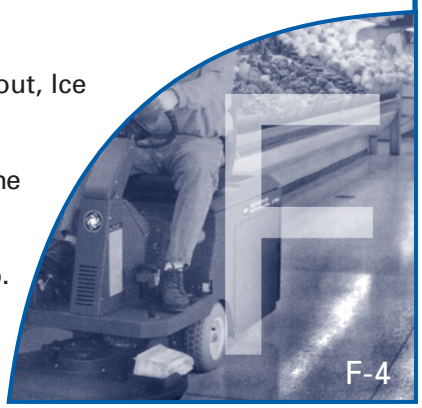
Use and Care:
1. Use a mild detergent solution.
2. Rinse.
3. Remove water promptly.

Type- **VINYL -** (FILLERS, MATRIX RESIN, PIGMENTS)
Resistance to Soil & Chemicals - alkaline, grease , mild acids, moisture, oil.
Harmful Substances - abrasives, grit, sand scouring agents, solvent floor finishes and cleaners.
Benefits - Can tolerate: constant wetting exposure to sun, extreme temperatures, durable, low cost.
Precautions - Avoid excessive wetting to prevent tile warping, avoid scratching, cannot remove, brittle at extremely low temperatures, use furniture rests to protect against indentations.

Use and Care:
1. Use a neutral detergent solution.
2. Rinse.
3. Dry with a wet/dry vacuum.

Type - **CERAMIC/QUARRY** (CLAY BAKED INTO THE HARDNESS OF STONE)
Resistance to Soil & Chemicals - alkaline salts, avoid agents harmful to cement grout, Ice melting compounds, oils, paint, epoxies, lacquers, soaps, steel wool.
Harmful Substances - Harsh alkaline agents.
Precautions - Ceramic tile is very durable but the grout base is susceptible to crystalline salt damage.

Use and Care:
1. Use neutral cleaners to avoid damage to grout; apply with mop.
2. Remove cleaning solution, rinse thoroughly.
3. Clean grout with grit brush.
4. Application of a sealer is not necessary.



Floor Care Program

Type - **CONCRETE** (CRUSHED ROCK, PEBBLES, SAND, WATER)
Resistance to Soil & Chemicals - Very poor resistance capabilities if not sealed.
Harmful Substances - Acids, salts.
Benefits - Durable, fire resistant, handles heavy traffic, low cost, low maintenance, smooth.
Precautions - Avoid colored coating in moisture or high traffic areas, neutralize excess alkalinity before painting or sealing, very porous; should be scaled immediately to avoid dusting and deep penetration of oil and dirt.

Use and Care*:*
1. Use a neutral cleaner.
2. For stubborn soil accumulations, use a slightly alkaline solution.
3. Never use an acid solution; concrete is soluble in acids.

Type - **MARBLE** (CARBONATE OF LIME, CRYSTALLIZED ROCK)
Resistance to Soil & Chemicals - Minimal resistance, capabilities, stains easily, with easy stain removal.
Harmful Substances - Acid cleaners, Ammonia, Harsh alkaline agents, metals, oils, sand, abrasives, soaps.
Benefits - Attractive.
Precautions - Seal with penetrating sealer.

Use and Care*:*
1. Use a neutral cleaner.
2. Rinse thoroughly.
3. Dry with soft cloth to avoid streaking.

Type - **TERRAZZO** (CRUSHED AGGREGATE, GRANITE, MARBLE, QUARTZ)
Resistance to Soil & Chemicals - Animal fats, resistance capability, extremely poor if not sealed.
Harmful Substances - Alkaline agents, epoxies, floor oils, paints, powdered scouring, cleansers, steel wool, strong acids.
Benefits - Attractive, cool in summer, durable, low maintenance, warm in winter.
Precautions - Very porous; coating advisable.

Use and Care:
1. Use a neutral detergent.
2. Damp mop.
3. Air dry.

Type - **WOOD TYPES** (MOST COMMON; MAPLE, OAK) THREE MAIN TYPES-BLOCK, PARQUET, PLANK.
Resistance to Soil & Chemicals - Resistance capability dependent upon how the floor has been sealed.
Harmful Substances - Abrasives, alkaline agents, dampness, oils, soap & detergents.
Benefits - Attractive, durable, floor adapts well to building renovation, warm.

Use and Care: Floor must be sealed before any maintenance program can be used.
1. Sweep, dust, mop (water treated) or damp mop in commercial settings.
2. Wood block flooring; use a neutral cleaner.
3. Never clean wood floor with excess soap and water.

Hard Floors

General Maintenance of Hard Floors

Dust Mopping

PURPOSE:
To remove litter, dust and light soil from floors as a daily maintenance procedure, or in preparation for wet mopping.

REQUIRED SUPPLIES & EQUIPMENT:
- Dust mop
- Dustpan & brush
- Putty knife

PROCEDURE #1:
1. **Dust mop area** - Use dust mop of appropriate size. Treat with a water-based treatment when working in heavier soil load area. Start at one end of area. Hold mop handle at approximately 45 degree angle. Push mop straight ahead. Avoid lifting mop from floor and moving it backwards. Remove gum with putty knife. Pivot at end of area and mop in opposite direction. Overlap about ten inches.
2. **Pick up trash and dirt** - Use dustpan and brush. Empty in trash chute or trash container.
3. **Service dust mop** - Take to janitor's closet. Close closet door and place mop head in a plastic liner and shake sharply several times. Replace mop head at the end of each shift and return soiled mop head to laundry.

W.E. GREER LTD.

Damp Mopping

PURPOSE:
To provide a clean, aseptic and attractive condition to all resilient tiled, or hard surfaces, such as terrazzo.

REQUIRED SUPPLIES & EQUIPMENT:
- Mop bucket with wringer
- Wet mop handle and looped-end banded mop
- Hand pad
- Set of "Wet Floor" signs
- Putty knife
- Dust mop
- Dustpan and brush
- Approved cleaning detergent solution appropriate to the area

PROCEDURE #2:
1. **Prepare area** - Set up "Wet Floor" signs. Move obstacles such as furniture.
2. **Dust mop floor** - Follow procedure 1. Use a clean dust mop.
3. **Apply mopping solution** - Place mop in cleaning detergent solution, wring out until mop is damp. Mop lengthwise along baseboard. Use "figure 8" stroke on balance of area. Turn mop often. Rinse mop frequently. Use the heel of the mop with a hand pad to remove stubborn spots. Wipe off baseboard immediately if any water has been splashed on them.
4. **Change solution and mop frequently** - Use the proper dilution of the correct cleaning detergent. Both mop head and solution should be changed every three or four rooms.

5. When floor has dried - **Remove signs**. Return furniture and other items cleared from the area to their proper positions.

Floor Scrubbing - Rotary Machine

PURPOSE:
To provide a clean, aseptic and attractive condition to all resilient tiled, or hard surfaces, such as terrazzo.

REQUIRED SUPPLIES & EQUIPMENT:
- Floor machine with solution tank and a pad drive assembly or brush
- Mopping outfit and wringer
- 2 wet mop handles and looped-end banded mop
- Hand pads and holder
- Set of "Wet Floor" signs
- Floor pads
- Putty knife
- Dust mop
- Dustpan and brush
- Approved cleaning detergent solution appropriate to the area
- Wet pick-up vacuum

PROCEDURE #3:
1. **Prepare equipment** - Fill solution tank with correct cleaning detergent solution. Fill double mop outfit 2/3 with clean, warm water. Transport equipment to work site.
2. **Prepare area** - Set up "Wet Floor" signs. Move obstacles such as furniture.
3. **Dust mop floor** - Follow procedure 2. Use clean dust mop.
4. **Scrub floor** - Operate the floor machine from side to side while dispensing solution. Overlap on each pass to be sure entire floor has been covered. Use care to avoid bumping baseboards and other fixed objects. Use hand pad and holder to scrub corners and other areas not accessible to floor machine.
5. **Pick up dirty solution** - Use wet pick-up vacuum or remove the dirty solution with the first mop. Dip the clean second mop into the clear water and rinse wringing mop out frequently. Cover entire area. Wipe off baseboards.
6. When floor has dried - **Remove signs**. Return furniture and other items cleared from the area to their proper positions.

W.E. GREER LTD.

Floor Scrubbing - Automatic Machine

PURPOSE:
To provide a clean, aseptic attractive condition to all resilient tiled, or hard surfaces, such as terrazzo.

REQUIRED SUPPLIES & EQUIPMENT:
- Automatic floor machine with pad driving assembly or brush
- Mop bucket with wringer
- Wet mop handle with looped-end banded mop
- Squeegee with handle
- Set of "Wet Floor" signs
- Floor pads
- Putty knife

- Dust mop
- Dustpan and brush
- Approved cleaning detergent solution appropriate to the area

PROCEDURE #4:

1. **Prepare equipment** - Fill solution tank with correct cleaning detergent solution. Fill mop bucket 1/2 with clean water. Transport equipment to work site.
2. **Prepare area** - Set up "Wet Floor" signs. Move obstacles such as furniture.
3. **Dust mop floor** - Follow procedure 1. Use clean dust mop.
4. **Scrub floor** - Use light brush pressure and scrub with the squeegee down. "Single scrub". Shut off solution a few feet prior to making any turns. Remove any puddles with wet mop or squeegee to a point that can be reached by the automatic machine.
5. When floor has dried - **Remove signs**. Return furniture and other items cleared from the area to their proper positions.

W.E. GREER LTD.

Floor Stripping - Rotary Machine

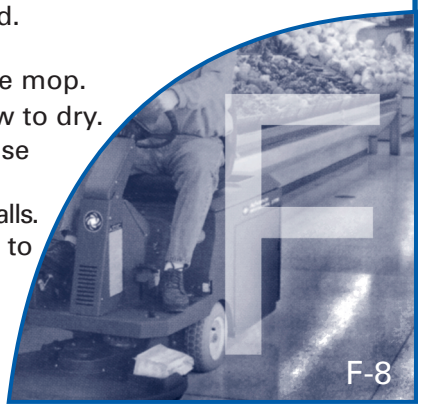
PURPOSE:
To remove soil and floor finish from the floor before applying new floor finish.

REQUIRED SUPPLIES & EQUIPMENT:

- Floor machine with pad drive assembly or brush
- Wet pick up vacuum
- Set of "Wet Floor" signs
- 2 mop buckets with wringers
- 2 wet mop handles with looped-end banded mop
- Dust mop
- Dustpan and brush
- Floor pads
- Putty knife
- Doorway mats
- Hand pads and holder
- Approved cleaning detergent solution appropriate to the area

PROCEDURE #5:

1. **Prepare equipment** - Fill mop buckets 1/2 with water. Add proper amount of floor stripping concentrate to one. Transport equipment to work site.
2. **Prepare area** - Select an area of about 200 square feet. Set up "Wet Floor" signs. Place mats so that soiled shoes can be wiped off instead of tracking dirt into area being cleaned.
3. **Dust mop floor** - Follow procedure 1. Use clean dust mop.
4. **Wet floor** - Generously spread the floor stripping solution over area with one mop. Allow the solution to set on the floor for the recommended time. Do not allow to dry.
5. **Machine scrub** - Place floor pad under machine or use brush. Scrub lengthwise along baseboards. Side to side over balance of area. Use hand pad to scrub along edges of area. Heel machine on badly soiled spots. Avoid splashing of walls.
6. **Pick up dirty solution** - Use wet pick-up vacuum. Do not allow dirty solution to dry on floor.
7. **Rinse and dry floor** - Using clean mop and clean water. Cover area liberally with rinse water. Pick up rinse water with vacuum. Wipe baseboards.



Floor Care Program

Floor Stripping - Automatic Machine

PURPOSE:
To remove soil and floor finish from the floor before applying new floor finish.

REQUIRED SUPPLIES & EQUIPMENT:
- Automatic floor machine with pad drive assembly or brush
- Wet pick up vacuum
- Set of "Wet Floor" signs
- Mop bucket with wringer
- Squeegee with handle
- Floor pads
- Dust mop
- Dustpan and brush
- Putty knife
- Approved floor stripper

PROCEDURE #6:
1. **Prepare equipment** - Fill solution tank with correct floor stripper solution. Fill mop bucket 1/2 with clean water. Transport equipment to work site.
2. **Prepare area** - Set up "Wet Floor" signs. Move obstacles such as furniture.
3. **Dust mop floor** - Follow procedure 1. Use clean dust mop.
4. **Wet floor** - Using maximum brush pressure and leaving the squeegee in an up position generously spread the floor stripping solution. Allow the solution to set on the floor for recommended time. Do not allow to dry.
5. **Restricted areas** - Follow procedure 5.
6. **Second pass** - Scrub floor with maximum brush pressure, squeegee down. Check rate of speed to ensure complete removal of all old finish. Remove any puddles with wet mop or squeegee to a point that can be reached by the automatic machine.
7. **Rinse** - Remove any remaining stripping solution from machine. Refill with clean water. Replace floor pad if used or rinse brushes. Using a medium brush pressure, double scrub as described above. No waiting time between passes. Remove puddles.

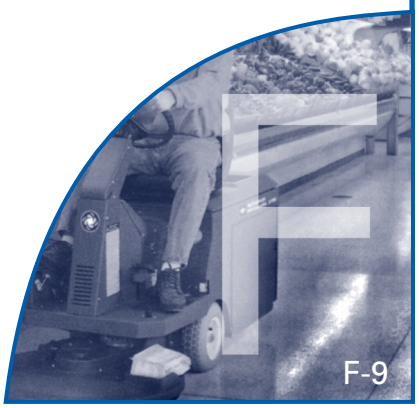
W.E. GREER LTD.

Applying Floor Finish

PURPOSE: To protect the various types of floor surfaces, and to maintain clean, safe and attractive floors.

REQUIRED SUPPLIES & EQUIPMENT:
- Clean mop bucket and wringer
- Set of "Caution" signs
- Supply of floor finish

PROCEDURE #7:
1. **Prepare equipment** - To save clean-up time, line bucket with plastic bag.
2. **Inspect floor** - Make sure floor is thoroughly dry and clean.
3. **Prepare area** - Set up "Caution" signs in public areas. Avoid blocking doors when possible. Place doorway mats at entrances.
4. **Apply first coat** - Start with clean, slightly dampened mop. Immerse mop in finish. Wring mop to eliminate dripping. Apply THIN coat. Start applying the floor finish by running the mop parallel to and next to the baseboard.



Cover remaining floor areas, using "figure 8" strokes. Use additional finish as needed. Be sure to cover all areas. Avoid splashing. Allow first coat to dry.

5. **Apply second coat** - Omit baseboards this time. Keep at least six inches away from baseboards. Apply THIN coat. This second application should be made using a "figure 8" pattern. Allow second coat to dry. Let dry as long as possible before opening to traffic.
6. **Additional coats** - If a high speed burnishing maintenance program is used, apply at least two additional coats of finish.

W.E. GREER LTD.

Spray Buffing Floors

PURPOSE:
To maintain clean, safe, hygienic and attractive floors.

REQUIRED SUPPLIES & EQUIPMENT:

- Floor machine (175-400 rpm) with pad drive assembly or brush
- Floor pads
- Dust mop
- Dustpan and brush
- Mop bucket with wringer
- Wet mop handle and looped-end banded
- Approved cleaning detergent solution appropriate to area
- Spray buff solution in dispensing container

PROCEDURE #8:

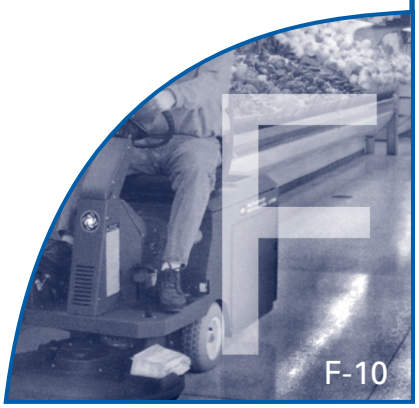
1. **Prepare area** - Set up "Wet Floor" signs. Move obstacles such as furniture.
2. **Dust mop floor** - Follow procedure 1. Use clean dust mop.
3. **Damp mop** - Follow procedure 2.
4. **Machine buff floor** - Place floor machine in position. Spray floor with solution and spread with machine. Use a side to side motion, be careful to avoid bumping walls and furniture. Allow a slight overlapping on each pass. Buff until haze is gone.
5. **Dust mop again** - Pick up any dust resulting from buffing operation. Use a clean dust mop.
6. When finished - **Remove signs**. Return furniture and other items cleared from the area to their proper positions.

High Speed Burnishing

PURPOSE:
To maintain clean, safe, hygienic and attractive floors.

REQUIRED SUPPLIES & EQUIPMENT:

- High speed buffer (500 - 2000 rpm) with pad drive assembly
- Floor pads
- Dust mop
- Dustpan and brush
- Mop bucket with wringer
- Wet mop handle and looped-end banded mop
- Approved cleaning detergent solution appropriate to area
- Spray buff solution in dispensing container



PROCEDURE #9:

1. **Prepare area** - Set up "Wet Floor" signs. Move obstacles such as furniture.
2. **Dust mop floor** - Follow procedure 1. Use clean dust mop.
3. **Damp mop** - Follow procedure 2.
4. **Machine burnish floor** - Place machine in position. Move in a straight line - forward and back. Allow a slight overlapping on each pass. One complete repetition - forward and back should be sufficient.
5. **Dust mop again** - Pick up any dust resulting from burnishing operation.
6. **When finished** - Remove signs. Return furniture and other items cleared from the area to their proper positions.

W.E. GREER LTD.

Tips and General Information

Mop Performance

The custodial mop is most commonly used for washing floors, applying floor finish and wiping up dust on floors. Finish mops are used to apply floor finish, dust mops are to dust otherwise clean floors, and wet mops to wash dirty floors.

Mop material can be cotton, rayon, nylon, polyester, polypropylene or a hybrid blend. Traditionally, 100% cotton mops were thought to be the best mops for washing floors due to their absorbency. The more soiled water a custodial worker can pick up, the cleaner the floor will become.

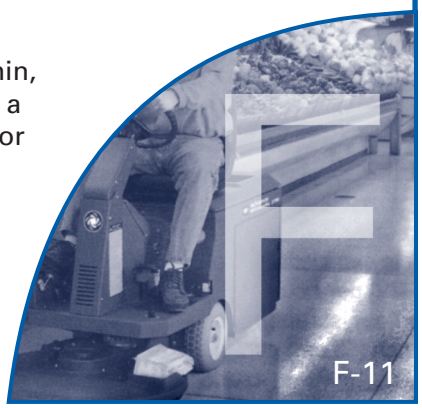
However, 100% cotton mops can leave behind lint. Cotton/rayon, cotton/polyester or other synthetic-blend mops tend to leave behind less lint than 100% cotton. Linting becomes a real concern when your crew applies floor finish. Any mop lint left behind becomes stuck and dried into clear finish layers.

Looped or Cut?

To solve this problem, mop manufactures designed certain mop styles with looped instead of cut strand ends. Looped-end yarn consists of one continuous strand sewn into the mop head at the beginning and end of each strand. Cut ends are not exposed to fray or shed lint with frequent use. Also looped ends tend to avoid getting caught on furniture. The use of a mop to apply finish is actually contrary to the original use of a mop - to absorb fluids. A finish mop is required to hold a certain amount of floor finish and then release the chemical onto the floor in a controlled, gradual manner. Mop manufacturers say that synthetic mop materials can be twisted tighter into yarn strands than all-cotton mop material. This tighter twist to the strands allows better holding and release of the floor finish.

Wet and finish mops come in loose or banded styles. A banded style mop has a thin, rectangular piece of material sewn across the bottom of the mop, holding it flat in a fan-like pattern. Some like this style because they believe they can clean larger floor areas with it. However, others don't like this style when applying floor finish. They say that the band at the end drags against the floor and creates lines in the dried finish layers.

Some mop styles come in colors other than white to help cleaning workers identify finish mops from wet mops.



Floor Care Program

Mops come in launderable and disposable styles. Disposable mops are ideal for mopping toxic or hazardous substances, to be discarded after use. However, some managers also find them to be cost effective in ordinary cleaning when the expense of laundering mops outweighs the expense of disposal.

Cleaning managers are more apt to use disposable-style dust mops. For example, one dust-mop style uses disposable synthetic-fiber cloths attached to a dust mop frame, to be used and thrown away when dirty.

Whether disposable or launderable, most dust mops are meant to be chemically treated before being applied to floors, to help pick up dust and dirt. Some dust mops come pretreated, but repeated launderings may reduce the effectiveness of this pretreatment.

W.E. GREER LTD.

Floor Cleaning Stripping Techniques

Teach your staff these proper stripping techniques.

Building managers, contractors and others are constantly seeking technical assistance to overcome problems their crews encounter while stripping, finishing or recoating floors.

Sometimes a problem results from the poor performance characteristics of a low quality chemical product purchased to hold down costs, even though the use of a more effective product would reduce follow-up maintenance time and overall costs. Other problems can result from a technician's failure to follow procedures essential to a sound floor maintenance program.

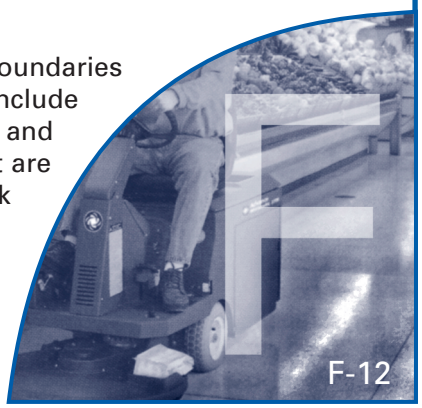
The following guidelines offer step-by-step directions for stripping floors to managers who may find them useful in training, in periodic reviews with supervisors or for inclusion in a procedures manual.

Preparing the surface

The first step in stripping a floor is proper preparation of the area to be stripped. Have your staff remove all displays, furniture, equipment and other objects that can be moved. Note the location of each item so it can be replaced properly. Scrape away gum, tape, labels, or other debris that may have adhered to the floor, but instruct your crew to carefully scrape debris without gouging or scarring the floor.

Direct your staff to dust mop the entire floor and place caution cones and barricades at each location where it is necessary to prevent traffic from entering the area during treatment. Lock access doors if possible.

Place liquid containment devices, such as water wedges, in doorways and other boundaries separating areas that you do not intend to strip. These non-strippable areas may include carpets, marble, wood or previously finished floors. Have your crew use duct tape and plastic sheeting to create barriers and zones between the work area and areas that are not to be stripped. Follow tile joint lines to create clean divisions between the work area and other areas.



Crew Safety

Before beginning work, technicians must be thoroughly briefed on material safety data sheets (MSDS) for the chemicals being used. Each technician must be completely trained before operating equipment.

Have your crew wear long pants and long sleeved shirts to prevent contact with splashed chemicals. Eye goggles or face shields and waterproof, chemical-resistant, nitrile gloves should be used. Staff footwear must protect the feet, ankles and lower legs and must be waterproof, and chemical resistant. Traction boots are useful and can be removed easily to allow crossing delicate floor surfaces when those are unavailable.

Direct your crew to place all equipment, tools and supplies near the stripping area. Park equipment on matting to prevent damage to floor surfaces. Have your staff charge all machine batteries fully and check vacuum equipment and squeegees. Tanks on all machines must be empty, power cords must be free of cuts or breaks, and plugs must have three terminals in place.

W.E. GREER LTD.

Application Techniques

Stripper solution may be dispensed from a mop bucket, a solution tank mounted on a floor machine or from an automatic scrubber. Instruct your crew to mix the stripper concentrate according to the manufacturer's directions on the labels. For unique conditions, first consult the manufacturer before stripping. Hot water aids in the penetration of the stripping solution but is not essential. Have your staff use a measuring pitcher or metered dispenser to ensure proper mix ratio.

Dirty mop heads in otherwise good condition may be used to apply stripper solution and disposed of later. Because it is impossible to rinse all stripping solutions from a mop head, have your crew store all such mop heads to be used again in a secure location so they aren't used for any other purpose.

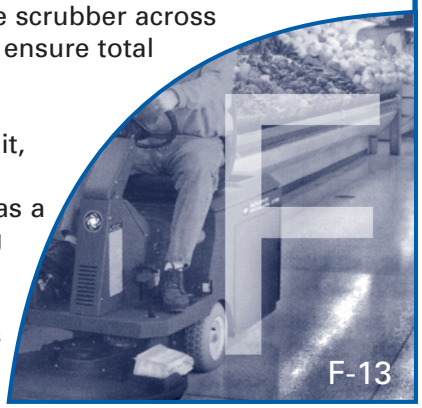
A new 24-ounce, cotton, cut-end mop head mounted on an appropriate handle must be submerged in stripping solution. Without wringing, it should then be placed directly on the floor. Instruct your crew to flood the floor with stripping solution but warn them of the slippery conditions created. Allow the solution to begin drying for at least 10 minutes, but do not let the solution dry completely before scrubbing the floor. If the solution does dry, reapply it and wait for another 10 minutes.

Strip in Stages

Large floor areas should be stripped in stages to maintain control over the process. Scrub the floor with a machine mounted with a stripping pad or brush. A splash guard fitted around the machine will prevent solution from spraying on walls and fixtures. Have the machine operator move the scrubber across the floor in sweeping, overlapping strokes. Scrub in one direction, then reverse to ensure total coverage.

When using an automatic scrubber the operator should walk slowly behind the unit, doing a double pass over all areas with the squeegee up and the vacuum off. To remove old finish from floor edges, corners and baseboards use equipment such as a hand scrubbing pad or baseboard or edge brush with a high performance stripping pad.

Have your crew scrub wet areas twice, then check along the floor edges and areas where finish was especially heavy to ensure that all finish has been removed.



Completion Test

To determine if all finish had been removed, pull back the solution with a water squeegee. Slide a putty knife several inches along the floor, pressing firmly but taking care not to gouge the floor, if white or blue jelly appears on the blade edge, the floor finish has not been completely removed. Your crew must scrub again.

When all areas check out, instruct your crew to remove the stripper solution with a wet/dry vacuum or automatic scrubber. Immediately after removal of the dirty solution, flood the floor with clean water. Have your crew remove the rinse water with a vacuum or scrubber, then repeat the rinse process. Search once more for patches of leftover finish and remove any remaining finish with a putty knife or scrubbing pad.

W.E. GREER LTD.

Final Touch-Ups

Crew member(s) responsible for the finishing touch should immerse a fresh cotton mop head in clean water in a clean bucket and wringer. Thoroughly saturated the mop head, then wring it thoroughly dry. Using sweeping strokes, erase any squeegee or dry solution marks on the floor. Any remaining marks or lines can be removed with the hand scrubbing pad.

Direct your staff to clean all equipment and remove it from the stripping area if possible. Thoroughly wash mop buckets, wringers and mop handles to remove all residue. Instruct your crew to rinse mop heads to be saved and press them in a wringer before storage. Remove all liquid containment devices (wedges) and border masks (plastic sheeting), being careful not to let solution drain off the masking items onto any part of the floor.

Because you won't have another chance to erase stripping-solution marks after finish has been applied, have your crew make one more thorough inspection of the floor, paying close attention to any solution that may have been left underneath baseboards. Use a wet mop to clean up any solution remaining along the border areas, applying it to all of the affected surface. Once you are satisfied the floor is entirely clear of old finish and is thoroughly dry, have your crew begin the finishing process.

Floor pads do have their limitations. Uneven floors are best cleaned and stripped with a floor brush on a low-speed machine or automatic scrubber. Ordinarily, uneven floors are maintained with a low-speed program, eliminating the need for high-speed equipment.

Brushes have yet to successfully bridge the gap to high-speed applications. Although some floor care equipment manufacturers are beginning to market high-speed brush machines, most floor care professional still use pads when using high-speed equipment.

Have your crew test pads to find the best one for the floor care procedures they perform. Finding the best pad for your equipment and floor polish can determine the success your staff has in maintaining good-looking, clean floors.

Floor Care Program

Floor Finish Application

The proper application of floor finish is 99% science and 1% art. Following correct procedures carefully can all but guarantee success, assuming that good quality chemicals and equipment are used.

To prepare for a floor finishing project, direct your crew to remove all objects from the area to be finished and place safety cones and barriers around it. Where possible, have them lock doors leading to the area to prevent people from entering until the job is completed. Devise a work plan that allows your crew to avoid crossing newly finished areas for as long as possible.

Have your staff use duct tape and plastic sheeting to create “stop lines” to prevent finish from reaching carpeting or other flooring that isn’t going to be finished. Follow tile joint lines to create invisible “splicing” where floors meet.

Place clean floor mats bottom side up between the work area and other flooring, so that technicians may leave the work area without tracking wet finish onto floors or carpeting, or tracking soil or lint into the work area when returning.

Safety Before the Start

Ensure that floor technicians have read the material safety data sheets (MSDS) and product labels on each product used. They should also know how to operate all equipment used in the finishing process.

Proper employee attire includes clean footwear treads, to avoid making impressions or soiling newly finished surfaces. Easily removed, crepe-soiled shoes are recommended to ensure that no soil or grit is tracked onto newly finished floors.

Durable, waterproof gloves are needed for staff members who may handle mop heads or equipment that are covered with wet floor finish. Whenever chemicals are used in a work environment, employers are required to provide employees with appropriate personal protective equipment (PPE) to protect against any hazards involved.

Have your crew place chemicals, tools and equipment near the work area, and instruct them to place equipment on floor mats to prevent damage to floors or surfaces not to be finished. If your crew is using a floor finish that requires a sealer, direct them to use the finish and sealer full strength. Do not dilute either product.

Trash Bag Liner

Before your staff pours the finishing product into a mop bucket, have them place a plastic trash bag in the bucket - so they’re actually pouring the finish into the trash bag - to ensure that nothing contaminates the finish. Provide them with new, large FINISH mop heads (to avoid contamination from other chemicals) and direct your crew to follow the manufacturer’s instructions for proper application of the finish.

A technician should submerge the mop in the finish and agitate lightly for 15 to 20 seconds. Using a side-press wringer, they should place the mop head in the wringer far enough to allow the tip of the mop to touch the bottom of the wringer (which is usually about half of the mop head). Do not twist or double over the mop head.

Direct the technician to gently pull the wringer closed - using only one or two fingers - to squeeze the excess finish from the mop. Remove enough finish from the mop head to ensure that finish doesn’t drip or coat the floor unevenly.

Floor Care Program

The mop head should be lifted clear of the wringer and swung smoothly away from the bucket. With practice, your crew will find that each mop head will fan out to give a smooth, even application. Have your crew apply the finish with a figure-eight pattern, overlapping 2 or 3 inches onto the previous path.

Figure - Eight Application

This pattern creates an even, smooth flow that prevents mop strands from doubling back and leaving a swirl pattern in the finish. Have the technician keep the mop head trailing straight and evenly behind the mop handle.

Direct your crew to begin the finish application no more than 15 feet from the bucket, laying the finish in an inverted "U" pattern. Have them fill the space within the "U" before moving the bucket to a new area. Keep the crew close to the bucket when laying finish to avoid having the finish dry too rapidly or spread unevenly.

If dirt or other contaminants touch the mop head or get into the finish bucket, remove the contaminants immediately. Your crew may need to replace the mop head or the finish.

Instruct your crew to measure the finishing product so that they have minimal amounts of unused finish at the end of the job. Never pour unused finish back into the original container. Unused product, when poured into the original container, will contaminate and ruin the product within a short time.

How Much, How Dry?

Generally, 1 gallon of finish will cover about 1,800 to 2,000 sq. ft. of vinyl-composite tile flooring with one coat of finish. Coverage varies according to the porosity of the floor material. However, if your crew finds that they are covering less floor than they expected, they may be layering the finish too thickly, which may reduce the gloss and prolong drying time. More coverage than expected may mean that they are layering the finish too thinly, which may cause streaking and a dull appearance.

Most finishes will dry within 20 minutes and may then be recoated. Any finish must dry completely before recoating. One approximate test for dryness is to brush the back of your hand lightly across the floor. If you feel the finish catch or pull the hairs on the back of your hand then the finish is still too wet to recoat.

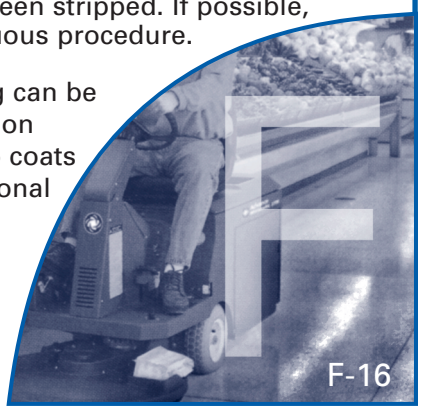
Have your crew test the floor for dryness in several areas before proceeding with the next coat. Drying conditions will vary according to humidity, air flow, temperature and the thickness of the finish coating.

Forced drying of a finish may damage the appearance. If fans or blowers are used, instruct your crew to blow the air indirectly across the floor surface, instead of directly on the floor. Direct air currents on wet finish may cause the finish to dry too quickly, inhibiting leveling and gloss. When refinishing a freshly stripped floor, five coats of finish is recommended, but always consider the manufacturers' label instructions.

Project Cycling

Always apply finish to clean floor. The ideal time to refinish a floor is after it has been stripped. If possible, plan a finishing job when planning a stripping job, to be completed in one continuous procedure.

Planning a time-consuming procedure like continuous floor stripping and finishing can be difficult in large facilities and 24-hour operations, such as hospitals. If your operation doesn't allow you to plan for the entire procedure at once, have your crew lay two coats of finish - allowing 24 hours for drying between coats - and then later apply additional coats as needed. If possible, break down the project into segments, which can be done completely at one time without interruption.



Never allow traffic on a floor that has less than two coats. The finish will be too porous and will readily accept soil and dirt, which will force your crew to start all over again, including re-stripping.

Floor Care Program

When the floor finishing procedure is complete, the floor should be ready for traffic 20 minutes after the last coat dries completely. Some durable floor finishes may seem to have less gloss immediately after application, but can be buffed to a glossy appearance using ultra-high speed buffing equipment. Wait approximately 24 hours before burnishing a newly finished floor. Proper maintenance practices will extend the life of a finish and its glossy appearance.

W.E. GREER LTD.

Floor Pads Shine Under Pressure

They can take the heat- and they're aggressive.

Developed to replace polish brushes used on low-speed equipment, floor pads give increased flexibility to a floor maintenance program.

If one pad doesn't produce the results needed, simply try a different color pad. Light-colored pads are least aggressive and are usually used for polishing. The most aggressive pad is black and is used in stripping procedures.

A pad's aggressiveness is related to the number of resin "rocks" on the pad's surface and the type of synthetic or natural fiber used in the pad's construction. Manufacturers dip in (or brush pads with) a resin solution to hold the fibers together. When the resin dries, it leaves small resin "rocks" on the fibers.

Pig's hair is a natural fiber used in pad manufacturing that is popular with many floor care professionals. Rubberized pads are also available for high-speed burnishing.

Three variables affect the way a buffer performs: downward pad pressure, pad contact area and pad speed. These variables are best described by heat-generating potential. For example, propane buffers generally produce the greatest heat at 3,000 rpm, with full pad contact at high pad pressures.

Too Fast and Hot

Altering the aggressiveness of the pad can offset deficiencies in pad pressure and pad contact area. Overly aggressive pads may produce the desired heat but may leave circles in the floor finish. Powdering of floor finish is also a characteristic of using an excessively aggressive pad.

Many manufacturers design pads for specific types of equipment, such as propane and battery buffers. Ask your distributor or manufacturer for a recommendation when purchasing floor pads, and be sure to tell them what type of buffering equipment and floor finish your crew uses.

When choosing a pad for cleaning operation such as automatic scrubbing, the least aggressive floor pad that does a satisfactory job should be used to help prevent damage to the floor shine. Many cleaning chemicals, especially non-neutral cleaners, can temporarily soften floor polish.

Pre-burnish pads for use with propane equipment have become popular where there is light floor soiling. Using these pads can be more time efficient than automatic scrubbing, and they can be used in rotation with automatic scrubbing in some floor maintenance programs.

There are two ways to construct a floor pad. Some manufacturers use a layered design in which pad fibers lie roughly parallel to the floor. Pads that have fibers running vertically can deteriorate 50% faster. This is a result of pad wear on the looped ends of the fibers, eroding the pad structurally.

Shake and Brush to Clean

Polishing pads should be cleaned often to eliminate build-up that can scratch the floor polish. Clean pads by removing them from the machine and shaking them in a plastic bag to remove dust and embedded debris. Pads can also be brushed with a stiff plastic bristle brush.

Cleaning and stripping pads can be cleaned by soaking them in a light stripper solution for five minutes, then brushing the pad with a stiff brush while rinsing with clear water. Be sure your crew always wears protective clothing when working with stripper solution.

Some manufacturers and distributors provide pad cleaning services which pick up your pads and return them ready-to-use. They may also clean employee uniforms and entrance mats.

Even though a used pad can be cleaned, it doesn't mean that it will always produce the same results as a new pad. Pads begin to lose their resin rocks as the pad is used. Be careful to avoid overusing them.

W.E. GREER LTD.

The Facts and Fiction of High-Speed Burnishing

Let a brief chemistry lesson ease your fears.

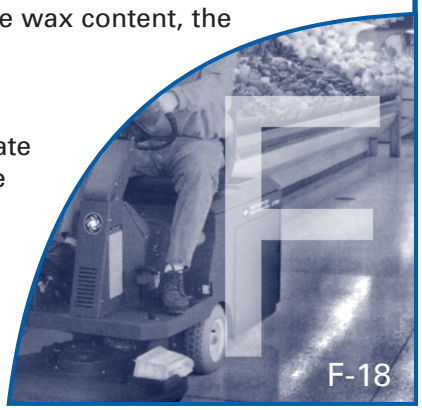
To discuss high-speed burnishing programs, you must first understand the chemistry of floor finishes used in these programs. Acrylic floor finishes and their inherent properties are designed around three major ingredients: polymer, wax and plasticizers.

The polymer is the most important part of the finish. Wear and maintenance properties - which include gloss, hardness, durability, removability, slip-resistance, and resistance to scuffing, black marks, powdering, soil, detergents and water - are a function of the base polymer.

All the remaining chemicals added to floor finish formulations are used to modify inherent polymer properties, but the base properties desired are determined by the polymer selection. The second major component in floor finish is another polymer, called "wax." Like the base polymer, wax is synthetic, but it is different in composition from the original polymer.

The function of wax in a floor finish is to provide desired buffability. The higher the wax content, the more buffable the finish. However, too much wax makes the finish soft and more susceptible to scuffing and dirt pick-up.

Plasticizers can sometimes be solvents which assist in film formation, and evaporate as the film dries. Other plasticizers remain within the film during its life to provide resiliency. Various combinations of these ingredients are responsible for the performance properties of floor finishes that we use today. Keep this in mind as we look at fact and fiction in high-speed burnishing programs.



Floor Care Program

Fiction
Floor finishes used in high-speed programs must be “thermoplastic” in composition.

Fact
All floor finish films are thermoplastic. Thermoplastic is simply a term that defines a material that will flow, deform or become “plastic” when heated. This material can differ in its toughness, hardness and melting or softening point. Thermoplastic materials include everything from steel, glass and plexiglas, to buffer and floor finishes.

Fiction
High-speed burnishing causes a meltdown of the layers of finish.

Fact
High-speed burnishing is nothing more than controlled scratching that results in physically removing or abrasively smoothing the top wear-surfaces of floor finish. This smoothing causes increased floor gloss.

If your crew employs a high-speed burnishing program, you may want five or six coats of finish to be applied to floor for two reasons:

- Successive coats of finish will dampen out the irregularities of floor tile, especially after stripping.
- Because burnishing abrasively removes the film, you run the risk of prematurely damaging or wearing out floor tile without applying an adequate number of coats of finish. Multiple coats of finish result in a smooth surface that reflects light in an ordered, regular pattern to create high gloss.

Fiction
Difficulty in removing finish from a floor, or stripping, is caused by high-speed burnishing.

Fact
All finishes lose some of their removability as they age. The difficulty in removing high-speed-maintained finish films is often due to the amount of time the finish was on the floor, and not from any physical or chemical changes which take place when the finish is burnished.

Because removability only gets harder with time, it is important that finishes used in a high-speed maintenance program start out with excellent removability features.

Resilient Floors - Small Areas

Deep Scrub (Small Areas)

This procedure is used when the floor already has finish on it but simple floor washing will not remove the dirt embedded in the top 1-2 layers of finish.

Use 2 buckets - 1 for Deep Scrub Solution
- 1 for solution pick-up

PROCEDURE:

1. Mix Deep Scrub at 25 to 1 or 5 oz/gallon of room temperature water.
2. Apply solution generously to small areas (4'x4') and immediately scrub lightly with green scrub pad (any dishwashing pad will work).
3. Pick up solution.
4. Rinse floor twice with cold water.
5. Apply 2-3 coats of floor finish.

TIP: Do not let Deep Scrub solution sit on floor for more than 5-6 minutes.

W.E. GREER LTD.

Stripping (Small Areas)

This procedure is used when the finish already on the floor has discolored, scratched, peeled or become so dirty that a deep scrub will not repair it. (NOTE: It is unusual for finish to reach this state, unless it is in a high traffic area (entrance/boot room).)

Use 2 buckets - 1 for stripping solution
- 1 for solution pick-up

PROCEDURE:

1. Mix Easy Way stripper at 3 to 1 in cold water (stripper to water)
2. Apply solution generously to small area (4'x4') and let stand 1-2 minutes. Scrub with aggressive pad or brush (make sure pad/brush will not scratch flooring).
3. Pick up solution.
4. Neutralize floor by adding 1 package of neutralizer to 4 gallons of cold water. Apply generously to floor and remove.
5. Rinse floor twice using clean cold water.
6. When dry, apply floor finish.

TIP: The stripping solution will be thick and slippery, so use whatever means works that will remove solution from floor. DO NOT let stripper dry on floor before removing. Do entire floor.

- Rinse twice to be sure all remaining contaminants are removed.

Floor Finish Application (Small Areas)

PROCEDURE:

1. Floor must be clean and dry.
2. Apply finish using clean cloth or mop that will not leave lint. (Lamb's wool is ideal.)
3. Let dry and apply up to 3 coats in a 24 hour period.

TIP: Apply finish in as thin a layer as possible. Do not allow finish to puddle. Usual drying time is 20-30 minutes. Make sure preceding coat is completely dry before applying next coat. 4-6 coats will provide superior shine and protection.

W.E. GREER LTD.

Wood Floors

Wood Floor Preparation and Recoating

Required Equipment & Products:

- Rotary floor machine 20" (with drive assembly)
- White 3M pad 20"
- Wet/dry vacuum (wet/dry tools)
- 48" dust mop complete
- Wet mop with handle
- Bucket on castors with wringer
- 36" stiff push broom
- Dustpan
- Scraper or putty knives
- Screen discs (60 grit or 100 grit)
- Waterless Cleaner (500 sq. ft. / 4 1)
- Gym floor finish (500 sq. ft. / 4 1)
- Tubular knit cloth
- Seal pan
- Finish applicator with handle
- Applicator refills
- 24" or 36" floor squeegee (complete with handle)

NOTE: If floor has polymer floor finish on it, add suitable stripper.

Preparation of Wood Floor Using Dry Method

1. Dust mop entire floor surface - Remove tape, gum, etc.
2. Strip floor if polymer floor finish exists - Remove moisture immediately with wet/dry vac.
3. Rinse floor thoroughly with clear water - Floor must be thoroughly dry before continuing.
4. Screen disc floor with 60 or 100 grit mesh disc.
5. Vacuum all loose screened material from floor.
6. Tack rag entire floor.
7. Apply gym finish in thin even coats - Use lambs wool applicators. Second coat should be applied before 24 hours. Ensure floor is warm for proper levelling.

Preparation of Wood Floor Using Waterless Cleaner

1. Dust mop entire floor surface - Remove tape, gum, etc.
2. Strip floor if polymer floor finish exists - Remove moisture immediately with wet/dry vac.
3. Rinse floor thoroughly with clear water - Floor must be thoroughly dry before continuing.

Floor Care Program

Wood Floor Recoating Procedure Using Waterless Cleaner and Plasticlear Gym Finish

1. Dust mop floor thoroughly.
2. Remove gum and loose tape with scraper.
3. If wax or heavy soil is present, remove using a suitable stripper with an automatic scrubbing machine or floor machine with a wet pick-up vacuum. Do not allow moisture to remain in contact with floor for extended period of time. Rinse floor using same equipment and allow to dry thoroughly. Water causes permanent damage to wood floors. Avoid the use of water whenever possible.
4. Apply Greer's Waterless Cleaner with a wet mop to a 3-4 foot wide strip of gym floor at the rate of approximately 8 L per 1000 sq.ft.. Apply only to a manageable area.
5. Using a single disc floor machine equipped with a white 3M pad, screen floor using #100 3M Scotch Mesh Disc heeling machine to remove stubborn black marks and soil as and if necessary.
6. Squeegee used Waterless Cleaner onto uncleaned floor and add additional Waterless Cleaner to a new 3-4 foot wide strip and disc new area as noted above.
7. Repeat procedure until floor is completely screened. Pick up slurry with vacuum.
8. Rinse entire floor area using clean Waterless Cleaner and a well wrung-out mop.
9. Using terry towels, tack rag entire floor to remove any loose debris that is left from cleaning procedure.
10. Repeat tack rag procedure until floor is completely free of loose debris and all heavy accumulations of white ash residue.
11. Using an EZ Way applicator or lambs wool applicator and seal pan, apply Plasticlear Gym Finish to entire floor surface. Contact your Greer representative for specific instructions on coverage, etc.
12. Apply second coat of Plasticlear within 12-24 hours of original application. Tack rag prior to application of second coat to remove airborne dust that may have settled on the floor overnight.
13. The application of a third coat for very heavy traffic conditions may be desirable.
14. Allow newly finished floor at least 24 hours dry time prior to subjecting floor to traffic or athletic activities.

TIP: How to Avoid a Bad Finish:

- Use only clean applicators and equipment.
- Do not shake gym finish. Air bubbles may form.
- If air bubbles do appear, go over the wet surface lightly with an almost dry applicator so that bubbles will be broken and flow out evenly.
- Never attempt to rub the gym finish into the floor.
- Always flow finish on in thin, even coats.
- Two thin coats of gym finish will give better results than one heavy coat.
- After applying each coat of finish, thoroughly clean your applicators with Waterless Cleaner or the EZ Way Applicator clean up kit.
- Be sure there is fresh air ventilation for proper drying.

TIP: How to Make a Good Tack Rag:

1. Acquire several white or colorfast bath-sized terry towels.
2. Immerse several towels in Waterless Cleaner and wring out.
3. Fold tack rag towel into layers on floor.
4. Drive tack rag with a stiff push broom.
5. Wipe floor with grain of wood traveling the full length of gym floor and turn tack rag to new clean surface and wipe same area until all loose debris is removed. Move to new line and repeat procedure. Continue in this fashion until entire floor is clean and ready for the application of seal.

Maple Sports Floor

Care of Maple Sports Floor

Introduction:
Wood is naturally porous and can absorb and release moisture. If the humidity in your facility rises, your wood floor will absorb that moisture, causing it to expand. If the humidity falls, your wood floor will release moisture, causing it to shrink. Many installations include expansion voids around the perimeter and around columns or floor inserts, plus expansion joints built into the floor surface. These features permit natural, normal expansion and contraction without damage to the floor. Too much moisture causes abnormal expansion which can lead to cupping or buckling of your floor. In abnormally dry conditions, the wood will contract, leaving separations between flooring strips.

TIP: Never do the following:
- Never shut down the ventilation system in your facility for a prolonged period of time.
- Never use household cleaning products or procedures. They can be harmful to the floor finish and to the wood and may also leave floors sticky or slippery, and potentially harmful to athletes.
- Never clean your floor using scrubbing machinery or power scrubbers which use water under pressure. Water is your floor's worst enemy!
- Never attempt to modify or repair your sports floor without first consulting your contractor.

W.E. GREER LTD.

Wood Floor Maintenance Program

A successful wood floor maintenance program keeps dust and grit off the floor.

Five Steps for Proper Daily Maintenance

1. Sweep the floor daily with a properly treated dust mop. If the floor is used heavily, sweep it up to three times a day.
2. Wipe up spills and any moisture on the floor surface.
3. Remove heel marks using Greer's Waterless Cleaner. Apply with a soft cloth or a dusting mop.
4. Make sure the heating/ventilation/air conditioning system is functioning properly, and that the humidity level is normal. Do not shut down the ventilating system for a prolonged period of time.
5. Inspect floor for tightening or shrinkage. During wet weather, check for water leakage around doors and windows. Remove debris from expansion voids.

Monthly Maintenance:

1. Pick up and dispose of debris.
2. Remove gum.
3. Remove rubber burns and floor marks with a rag saturated with Greer's waterless Cleaner.
4. Tack (or damp mop) the wood floor with Greer's waterless Cleaner.

Annual Maintenance:

1. For lightly worn floors - Use a light screening and apply one coat of Plasticlear.
2. For badly worn floors - Heavy screening or sanding may be needed. Multiple coats of finish may be needed.

Use Floor Mats:

1. Floor mats should be in use before all doors and at food service counters (in areas that receive high street shoe traffic).

Floor Care Program

General Care

Humidity and Ventilation

Humidity and ventilation are critical considerations for your new wood floor. 35-50% relative humidity is normally required for long trouble-free life. If humidity rises to over 50%, prompt air circulation should be initiated by opening interior doors and windows and activating the ventilation system. However, do not draw warm, moist air in from outdoors as excessive humidity will cause wood to expand. Summer months are especially critical. Inspect your wood floors regularly. If necessary, turn on the heating system. If less than 35% humidity level persists, use humidification to prevent excessive dryness and possible wood shrinkage.

Excessive Tightening

When excessive tightening of the floor becomes noticeable, call your flooring contractor or manufacturer immediately.

Joint Separation

When unusually wide cracks begin to appear, call your flooring contractor or manufacturer immediately.

Control Air Conditioning and Humidity

Be sure that your air conditioning system is operating within the 35-50% range of normal relative humidity. Ventilation equipment should be available for year-round use.

Keep Water Off the Floor Surface

Avoid exposure to water from tracking during periods of inclement weather by protecting your floors and exterior doorways. Floor protection should be checked thoroughly to assure no moisture is trapped underneath. Windows and doors should be closed tightly during rainy weather. All leaks must be corrected immediately.

W.E. GREER LTD.

Exercise Care to Prevent Exposure to Moisture

Any evidence of dampness within your building should be called to the attention of your architects and engineers. Interior drains and down spouts should be properly insulated to prevent development of excessive condensation and moisture.

Expansion Joints

Expansion joints around the perimeter of your floor, at columns or inserts, should never be blocked or obstructed. They have been engineered into your floor to permit natural expansion and contraction from normal humidity changes without damage to your floor. (Note: Certain floor systems may be designed to eliminate joints. Your floor contractor can advise if your floor is of this type.)

Anchoring Bleachers

No fixtures, equipment or bleachers should be lagged through wood floors into concrete without first cutting wood away from lag bases and making provisions for expansion in floating type floor systems.

Steel Channel Floor Systems

Steel Channel Floor Systems are designed to contain expansion within the system. No perimeter expansion voids are necessary. Anchoring of bleachers and equipment through the floor without expansion is permitted. This applies to steel channel floor systems only.

Plasticlear Polyurethane Finish

Description:

An oil modified urethane finish, developed through polymer chemistry, which dries to a plastic film of outstanding flexibility and high gloss while retaining superb abrasion resistance.

Recommended:

- For all wood gym floors and basketball floors;
- For sealed cork;
- For concrete that has been sealed with Concure Plus;
- Where a high gloss resistant to rubber burns and scuffs is required.

Advantages:

- One package - no mixing or measuring is necessary;
- Will not dull or fade under heavy use;
- Dirt cannot penetrate the surface;
- High abrasion resistance;
- Maximum resistance to discoloration;
- Dries hard in less than eight hours.

Application:

New Wood Floors:

1. Ensure floor has been thoroughly cleaned of all old wax, grease, oil and soil.
2. Seal the floor with a solution of 1 part Waterless Cleaner blended with 2 parts Plasticlear Finish applied with a lambs wool applicator. Apply two coats of seal.
3. Buff the dry surface with #100 Scotch Mesh Disc.
4. Remove dust by sweeping or vacuum pick-up and follow with a tack rag treated with Waterless Cleaner.
5. Apply a thin even coat of Plasticlear Finish and allow it to dry thoroughly.
6. Buff with #100 Scotch Mesh Disc, remove dust and tack rag with Waterless Cleaner.
7. Apply second coat of Plasticlear Finish.

Coverage:

12-15 sq. m / L (550-650 sq. ft / US gallon)

Drying Time:

Allow 6-8 hours between coats and overnight drying before allowing traffic on the floor.

W.E. GREER LTD.

Gym Floor - Screen Backed Disc

Preparation and Recoating System

1. Dust mop entire floor surface thoroughly and dispose of litter.
2. Remove gum, loose tape, and any severe markings from surface.
3. If floor has a polymer floor finish on it or if it's heavily soiled, remove by using an automatic scrubbing machine or a single disc rotary floor machine with appropriate stripper and pads. Pick up scrubbing solution immediately and thoroughly with a wet/dry vacuum. Never allow moisture to remain on a wood surface for any extended period of time. Always remove moisture from the wood surface with an automatic scrubbing machine or a wet/dry vacuum. Rinse floor thoroughly with clear water and pick up rinse water with an automatic scrubber or a wet-dry vacuum. Allow floor to dry overnight.

Floor Care Program

4. Using a single disc floor machine equipped with an instalok drive assembly and a white 3M pad as a driver pad for a #60 3M Scotch Mesh disc, abrade the floor, opening the existing seal surface and removing scratches and abrasions. Heeling the machine may become necessary for the removal of stubborn scratches and abrasions. Ultimately, floor should be dull and clean of all marks. Continue in this fashion until entire floor surface has been screened. Screen discs normally are effective up to 500 square feet per disc using both sides.
5. Vacuum all loose screened material from floor and then tack rag floor to remove any remaining fine screen dust.
6. Apply Plasticlear Oil Modified Urethane or Greer Moisture Curing Gym Finish in a thin even coat.
7. Allow to dry, no more than 24 hours, and apply a second coat if necessary. Extended drying time between coats may necessitate light screening to ensure proper adhesion.
8. Clean up equipment immediately after use.
9. Ensure floor is warm when applying finish to ensure proper leveling of the finish.
10. Ventilate properly and avoid open flame around gym finish and solvents.

W.E. GREER LTD.

W.E. GREER LTD.

School Housekeeping Procedures

Personal Hygiene
Dust Mopping
Damp Mopping
Floor Scrubbing - Rotary Machine
Floor Scrubbing - Automatic Machine
Floor Stripping - Rotary Machine
Floor Stripping - Automatic Machine
Applying Floor Finish
Spray Buffing Floors
High Speed Burnishing
Classrooms - Daily Maintenance
Wall Washing - Wall Mop Method
Vacuuming
Public Restrooms - Daily Maintenance
Hallways - Daily Maintenance
Teachers Lounges - Daily Maintenance
Stairways - Daily Maintenance
Gym Floors - Daily Maintenance
Chalkboard Maintenace
Whiteboard Care and Cleaning
Checklists
Maintenance Frequencies - Carpets

School Housekeeping Procedures

Personal Hygiene

PURPOSE:
To present a neat and professional housekeeping staff.

REQUIRED SUPPLIES & EQUIPMENT:
- Clean, neat clothing
- Rubber-soled shoes
- Identification badge
- Hair net

PROCEDURE #1:
1. **Preparation** – A neat appearance translates into a professional attitude... Practice proper hygiene. Keep fingernails short and clean. Use cosmetics in moderation. Refrain from use of heavy scents.
2. **Hand Washing** – In order to control cross-infection, hands should be washed after performing duties around washrooms, before and after eating, and before and after using the washroom.
3. **Proper Hand Washing** – Massage the cleaning agent, preferably an antiseptic hand cleaner, around the fingers, knuckles, and hands... Scrub nails with a brush.

W.E. GREER LTD.

Dust Mopping

PURPOSE:
To remove litter, dust and light soil from floors as a daily maintenance procedure, or in preparation for wet mopping.

REQUIRED SUPPLIES & EQUIPMENT:
- Dustpan & brush
- Dust mop
- Putty knife

PROCEDURE #2:
1. **Dust mop area** – Use dust mop of appropriate size. Treat with a water base treatment when working in heavier soil load area. Start at one end of area; hold mop handle at approximately 45 degree angle; push mop straight ahead. Avoid lifting mop from floor or moving it backward. Remove gum with putty knife. Pivot at end of area and mop in opposite direction, overlapping about ten inches.
2. **Pick up trash and dirt** – Use dustpan and brush. Empty in trash container.
3. **Service dust mop** – Take to janitor's closet. Close door and place mop in a plastic liner and shake sharply several times. Replace mop head at the end of each shift and return soiled mop head to laundry.

Classrooms:
1. **Dust mop area** – Use small untreated dust mop. Start at entrance of room; work from sides to center. Move furniture as you mop and replace in correct position. Dust mop carefully around equipment. Remove gum with putty knife.
2. **Pick up trash** – Use dustpan and brush. Empty in trash container.
3. **Service dust mop** – Mop heads should be changed after three or four rooms. Return soiled mop heads to laundry at the end of each shift.

School Housekeeping Procedures

Damp Mopping

PURPOSE:
To provide a clean, aseptic and attractive condition to all resilient tiled or hard surfaces, such as terrazzo.

REQUIRED SUPPLIES & EQUIPMENT:
- Mop bucket with wringer
- Wet mop handle and 20 oz looped-end banded mop
- Hand pad
- Set of "Wet Floor" signs
- Putty knife
- Dust mop
- Dustpan and brush
- Approved germicidal detergent solution appropriate to the area

PROCEDURE #3:
1. **Prepare area** – Set up "Wet Floor" signs. Move obstacles such as furniture.
2. **Dust mop floor** – Follow Procedure #2. Use a clean dust mop.
3. **Apply mopping solution** – Place mop in germicidal detergent solution, wring out until mop is damp. Mop lengthwise along baseboard. Use "figure 8" stroke on balance of area. Turn mop often and rinse frequently. Use the heel of the mop with a hand pad to remove stubborn spots. Wipe off splashes on baseboard immediately.
4. **Change solution and mop frequently** – Use the proper dilution of the correct germicidal detergent. Both mop head and solution should be changed every three or four rooms.
5. **When floor has dried** – Remove signs. Return furniture and other items to proper location.

W.E. GREER LTD.

Floor Scrubbing – Rotary Machine

PURPOSE:
To provide a clean, aseptic and attractive condition to all resilient tiled or hard surfaces, such as terrazzo.

REQUIRED SUPPLIES & EQUIPMENT:
- Floor machine with solution tank and a pad drive assembly or brush
- Mopping outfit and wringer
- 2 wet mop handles and looped-end banded mop
- Set of "Wet Floor" signs
- Hand pads and holder
- Floor pads
- Putty knife
- Dust mop
- Dustpan and brush
- Approved cleaning detergent solution appropriate to the area
- Wet pick-up vacuum

PROCEDURE #4:
1. **Prepare equipment** – Fill solution tank with correct cleaning detergent solution. Fill double mop outfit 2/3 with clean, warm water. Transport to worksite.

2. **Prepare area** – Set up "Wet Floor" signs. Move obstacles such as furniture.
3. **Dust mop floor** – Follow Procedure #2. Use clean dust mop.
4. **Scrub floor** – Operate the floor machine from side to side while dispensing solution. Overlap each pass to cover entire floor. Use care to avoid bumping baseboards and other fixed objects. Use handpad and holder to scrub corners and other areas not accessible to floor machine.
5. **Pick up dirt solution** – Use wet pick-up vacuum or remove the dirty solution with the first mop. Dip the clean second mop into the clear water and rinse, wringing out mop frequently. Cover entire area. Wipe off baseboards.
6. **When floor has dried** – Remove signs. Return furniture and other items to proper locations.

W.E. GREER LTD.

Floor Scrubbing – Automatic Machine

To provide a clean, aseptic and attractive condition to all resilient tiled or hard surfaces, such as terrazzo.

REQUIRED SUPPLIES & EQUIPMENT:

- Automatic floor machine with pad drive assembly or brush
- Mop bucket with wringer
- Wet mop handle with looped-end banded mop
- Set of "Wet Floor" signs
- Squeegee with handle
- Floor pads
- Putty knife
- Dust mop
- Dustpan and brush
- Approved cleaning detergent solution appropriate to the area

PROCEDURE #5

1. **Prepare equipment** – Fill solution tank with correct cleaning detergent solution. Fill mop bucket with clean water. Transport to work site.
2. **Prepare area** – Set up "Wet Floor" signs. Move obstacles such as furniture.
3. **Dust mop floor** – Follow Procedure #2. Use clean dust mop.
4. **Scrub floor** – Use light brush pressure and scrub with the squeegee down – single scrub. Shut off solution a few feet prior to making any turns. Remove any puddles with wet mop or squeegee to a point that can be reached by the automatic machine.
5. **When floor has dried** – Remove signs. Return furniture and other items to proper locations.

Floor Stripping – Rotary Machine

PURPOSE:
To remove soil, floor finish from the floor before applying new floor finish.

REQUIRED SUPPLIES & EQUIPMENT:

- Floor machine with pad drive assembly or brush
- Wet pick-up vacuum
- 2 mop buckets with wringer
- 2 wet mop handles with looped-end banded mop

- Set of "Wet Floor" signs
- Floor pads
- Hand pads and holder
- Putty knife
- Dust mop
- Dustpan and brush
- Doorway mats
- Approved floor stripping concentrate and packaged neutralizer if using a conventional stripper

PROCEDURE #6:

1. **Prepare equipment** – Fill mop buckets with water, add proper amount of floor stripping concentrate to one. Transport to work site.
2. **Prepare area** – Set up "Wet Floor" signs. Select an area of about 200 square feet. Place mats so that soiled shoes can be wiped off instead of tracking dirt into area being cleaned.
3. **Dust mop floor** – Follow Procedure #2. Use clean dust mop.
4. **Wet floor** – Generously spread the floor stripping solution over area with one mop. Allow the solution to set on the floor for the recommended time. Do not allow to dry.
5. **Machine scrub** – Place floor pad under machine or use brush. Scrub lengthwise along baseboards; side to side over balance of area. Use hand pad to scrub along edges of area. Heel machine on badly soiled spots. Avoid splashing walls.
6. **Pick up dirty solution** – Use wet pick-up vacuum. Do not allow dirty solution to dry on floor.
7. **Rinse and dry floor** – Using clean mop and clean water. Cover area liberally with rinse water. Pick up rinse water with vacuum. Wipe baseboards.
8. **If using conventional stripper, neutralize** – Prepare packaged neutralizer according to package instructions in a clean bucket. Cover area liberally with neutralizing solution then pick up with vacuum. Let floor dry.

W.E. GREER LTD.

Floor Stripping – Automatic Machine

PURPOSE:

To remove soil and floor finish from the floor before applying new floor finish.

REQUIRED SUPPLIES & EQUIPMENT:

- Automatic floor machine with pad drive assembly or brush
- Mop bucket with wringer
- Squeegee with handle
- Set of "Wet Floor" signs
- Floor pads
- Putty knife
- Dust mop
- Dustpan and brush
- Floor stripper solution and packaged neutralizer if using a conventional stripper

PROCEDURE #7:

1. **Prepare equipment** – Fill solution tank with correct floor stripper solution. Fill mop bucket with clean water. Transport to work site.
2. **Prepare area** – Set up "Wet Floor" signs. Move obstacles such as furniture.

3. **Dust mop floor** – Follow Procedure #2. Use clean dust mop.
4. **Wet floor** – Using the squeegee in an up position with maximum pressure, spread the floor stripping solution. Allow the solution to set on the floor for recommended time. Do not allow to dry.
5. **Restricted areas** – Follow Procedure #6.
6. **Machine scrub** – Scrub floor with maximum brush pressure, squeegee down. Check rate of speed to ensure complete removal of all old finish. Remove any puddles with the clean wet mop or squeegee to a point that can be reached by the automatic machine.
7. **Rinse** – Fill solution tank with clean water. Replace floor pad or rinse brushes. Using medium pressure, double scrub as described above. Do not wait between passes. Remove puddles. Wipe baseboards.
8. **If using a conventional stripper, neutralize** – Fill solution tank with packaged neutralizer mixed according to package directions. Scrub with squeegee down. Remove puddles and let floor dry.

W.E. GREER LTD.

Applying Floor Finish

PURPOSE:
To protect the various types of floor surfaces, and to maintain clean, safe and attractive floors throughout the school.

REQUIRED SUPPLIES & EQUIPMENT:
- Clean mop bucket and wringer
- Set of "Wet Floor" signs
- Doorway mats
- Supply of floor finish

PROCEDURE #8:
1. **Prepare equipment** – Line bucket with plastic bag (saves clean-up time).
2. **Inspect floor** – Make sure that floor is thoroughly dry and clean.
3. **Prepare area** – Set up "Wet Floor" signs in public areas. Avoid blocking doors when possible. Place door way mats at entrances.
4. **Apply first coat** – Start with clean, slightly dampened mop. Immerse mop in finish. Wring out to eliminate dripping. Apply a THIN coat. Start next to the baseboard, running the mop parallel to the wall. Cover remaining floor areas, using "figure 8" stroke. Use additional finish as needed, being sure to cover all areas. Avoid splashing. Allow first coat to dry.
5. **Apply second coat** – Omit baseboards this time – stay at least 6 inches away. Apply a THIN coat in a "figure 8" pattern. Allow second coat to dry. Let dry as long as possible before opening to traffic.
6. **Additional coats** – If a high speed burnishing maintenance program is used, apply at least 2 additional coats of finish.

Spray Buffing Floors

PURPOSE:
To maintain clean, safe, hygienic and attractive floors.

REQUIRED SUPPLIES & EQUIPMENT:
- Floor machine (175-400 rpm) with pad drive assembly or brush
- Wet mop handle and looped-end banded mop

- Mop bucket with wringer
- Set of "Wet Floor" signs
- Floor pads
- Dust mop
- Dustpan and brush
- Approved cleaning detergent solution appropriate to the area
- Spray buff solution in dispensing container

Procedure #9:

1. **Prepare area** – Set up "Wet Floor" signs. Move obstacles such as furniture.
2. **Dust mop floor** – Follow Procedure #2. Use clean dust mop.
3. **Damp mop** – Follow Procedure #3
4. **Machine buff floor** – Place floor machine in position. Spray floor with solution and spread with machine. Use a side to side motion, be careful to avoid bumping walls and furniture. Allow a slight overlapping on each pass. Buff until haze is gone.
5. **Dust mop again** – Pick up any dust resulting from buffing operation. Use a clean dust mop.
6. **When finished** – Remove signs. Return furniture and other items to proper locations.

W.E. GREER LTD.

High Speed Burnishing

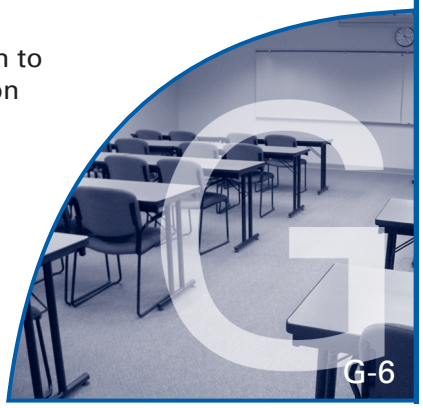
PURPOSE:
To maintain clean, safe and attractive floors.

REQUIRED SUPPLIES & EQUIPMENT:

- High speed buffer (500-2000 rpm) with pad drive assembly
- Wet mop handle and looped-end banded mop
- Mop bucket with wringer
- Set of "Wet Floor"signs
- Floor pads
- Dust mop
- Dustpan and brush
- Approved cleaning detergent solution appropriate to the area
- Spray buff solution in dispensing container

PROCEDURE #10:

1. **Prepare area** – Set up "Wet Floor" signs. Move obstacles such as furniture.
2. **Dust mop floor** – Follow Procedure #2. Use clean dust mop.
3. **Damp mop** – Follow Procedure #3. Be sure no detergent residue is present when floor is dry.
4. **Machine burnish floor** – Place machine in position. Apply spray buff solution to floor. Move in a straight line, forward and back. Allow a slight overlapping on each pass. One complete repetition, forward and back, should be sufficient.
5. **Dust mop again** – Pick up any dust resulting from burnishing operation. Use a clean dust mop.
6. **When finished** – Remove signs. Return furniture and other items to proper locations.



School Housekeeping Procedures

Classrooms - Daily Maintenance

PURPOSE:
To provide a clean and pleasant environment.

REQUIRED SUPPLIES & EQUIPMENT:
- Supply of clean cloths
- Hand pads
- Mop bucket & wringer
- High dusting tool
- Hand pail (3 gallon)
- Approved cleaning solution
- Spray disinfectant
- Spray all-purpose cleaner solution
- Plastic liners (bags)
- Dustpan & brush
- Wet mop handle and looped-end banded wet mop
- Dust mop
- Putty knife
- Blackboard/whiteboard cleaner
- Graffiti & vandal remover

PROCEDURE #11:
1. **Dust furniture and fixtures** – Use dust cloth and high dusting tool. Include all furniture, fixtures, desks and bookshelves.
2. **Clean black/whiteboards and brushes** – Use a cleaning solution or a treated cloth. Use a brush cleaning machine or a vacuum to clean the brushes.
3. **Dust mop floor** – Use a clean dust mop (Follow Procedure #2).
4. **Clean waste basket** – Remove liner and dispose of in trash container on cart. Replace liner.
5. **Damp mop** – Remove all supplies and equipment… Damp mop entire room.
6. **Machine buff** – Spray buff (Follow Procedure #9). High speed burnish (Follow Procedure #10).

W.E. GREER LTD.

Wall Washing - Wall Mop Method

PURPOSE:
To maintain clean, hygienic and attractive surroundings.

REQUIRED SUPPLIES & EQUIPMENT:
- Mop bucket with wall washing wringer
- Wall washing tool with head
- Rubber gloves
- Putty knife
- Set of caution signs
- Hand pads
- Approved all-purpose cleaner

PROCEDURE #12:
1. **Prepare equipment** – Fill mop bucket with correct cleaning detergent. Use cool water. Attach mop head to handle. Transport to work site.
2. **Prepare area** – Set up caution signs. Move obstacles such as furniture away from walls. Remove articles such as pictures from walls to be cleaned.

3. **Pre-spotting** – Heavily soiled areas should be pre-spotted with an all-purpose cleaner. If badly soiled, use cream-cleanser or Graffiti remover.
4. **Wash wall** – Starting at bottom section of wall, apply cleaning solution with wall washing mop. Wet wall, being careful not to squeeze too much solution onto the wall (causes running). Do area approximately 4'x4' using overlapping movements of the wall, mop until area is completed. Repeat sequence, this time apply pressure to clean off soil. Rinse mop and wipe area dry. Finish cleaning wall corner to corner without a break to prevent steaks.
5. **When finished** – Replace pictures and other articles. Replace furniture and other items to their proper position. Remove signs.

Vacuuming

PURPOSE:
To provide clean, hygienic and attractive surroundings.

REQUIRED SUPPLIES & EQUIPMENT:
- Tank type vacuum with hose, wand, rug cleaning tool, crevice tool; or upright type vacuum
- Putty knife
- Caution sign

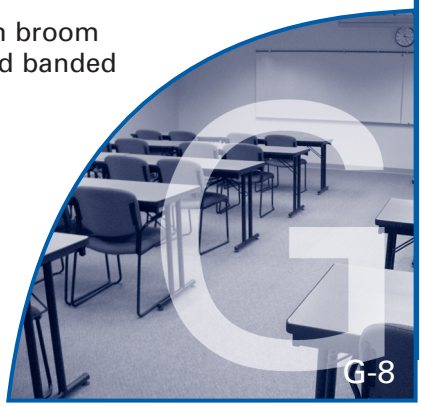
W.E. GREER LTD.

PROCEDURE #13:
1. **Prepare area** – Take equipment to work site. Place caution sign in a prominent location.
2. **Set up equipment** – Plug in machine and place in a central location. Be sure equipment has a 3-prong plug. To move tank-type equipment short distances, pull by hose. To move longer distance, rewind cord and push the vacuum itself. Take care not to bump walls or furniture.
3. **Vacuum carpet** – Where possible, use a push-pull stroke about 3' long. Vacuum so that the nap of the carpet is laid by the pull stroke. Overlap strokes slightly until area is covered. Use accessory tools for hard-to-get spots. Move furniture and equipment as little as possible. Do not over-clean. Usually two strokes per pass is sufficient. Watch cord carefully as it can present a safety hazard.
4. **When finished** – Remove caution sign. Return equipment to storage.

Public Rest Rooms - Daily Maintenance

PURPOSE:
To provide clean, hygienic and attractive surroundings.

REQUIRED SUPPLIES & EQUIPMENT:
- Supply of clean cloths
- Hand pads
- Mop bucket & wringer
- Disposable gloves
- Hand pail
- Approved germicidal detergent solution
- Spray disinfectant
- Spray deodorant
- Plastic liners (bags)
- Paper towels
- Toilet tissue
- "Closed for Cleaning" sign
- Hand mirror
- Long handle dustpan & toy corn broom
- Wet mop handle and looped-end banded mop
- Door stop
- Dust mop
- Putty knife
- Toilet bowl brush/bowl swab
- Toilet bowl cleaner
- Cream cleanser
- Spray germicidal solution
- Spray window cleaner
- Hand soap
- Deck scrub brush



School Housekeeping Procedures

PROCEDURE #14:

1. **Prepare area** – Knock on door. Open slightly and announce your intention to enter. If occupied wait. When empty, open door, "stop" door and post "Closed for Cleaning" sign.
2. **Toilet bowls and urinals** – Put toilet bowl cleaner into toilets and urinals. Follow instructions printed on container. Let stand while balance of the restroom is being cleaned.
3. **High dust** – Remove all dust webs with a cloth tied to a dust mop. Clean wall vents, tops of doors and partitions.
4. **Replenish supplies** – Hand soap, towels, tissue and sanitary napkins. Replace/refill deodorizers. Check working condition of all dispensers.
5. **Pick up waste from floor** – Use dustpan and broom and pick up paper and trash from floor. Use putty knife to remove gum.
6. **Clean light fixtures and mirrors** – Dampen a cloth with glass cleaner. Wipe off light fixtures and mirrors. Move around room until all are cleaned.
7. **Clean waste receptacles** – Remove liners and, after wiping interiors with a germicidal solution, replace liners.
8. **Dust mop floor** – Follow Procedure #2.
9. **Clean wash basins** – Using either a cream cleanser or germicidal solution, depending on soil levels, clean interior surfaces, exterior surfaces, faucets and piping under basins. Wipe dry. Check faucets for dripping and ease of operation, check drain flow.
10. **Spot-clean walls and partitions** – Dampen a cloth with a germicidal solution. Wipe off shelves, dispensers, receptacles, doors and partitions.
11. **Clean inside of toilets and urinals** – Clean bowl vigorously with toilet bowl brush or swab. Check with mirror for stains and encrustations. Scrub as required. Flush, agitate with brush. Flush again.
12. **Clean exterior of toilets and urinals** – Moving down the line, clean from top to bottom with germicidal solution. Include all surfaces, pipes and valves.
13. **Clear floor of all obstructions** – Remove all supplies and equipment. Put waste receptacles out of the way.
14. **Mop floor** – Apply germicidal solution around the toilets and urinals. Beginning at far end of room, damp mop. Follow Procedure #3. When floor around toilets and/or urinals is reached, wash floor thoroughly, wring out mop often. Scrub with deck brush if necessary.
15. **When floor has dried** – Replace waste receptacle. Remove "Closed for Cleaning" signs. Wash hands and arms. Follow Procedure #1. Rinse sink.

W.E. GREER LTD.

Hallways – Daily Maintenance

PURPOSE:
To maintain clean, hygienic and attractive surroundings.

REQUIRED SUPPLIES & EQUIPMENT:

- Automatic floor machine with pad assembly or brush
- Wet mop handle with looped-end, banded mop
- Squeegee with handle
- Floor machine with pad assembly or brush
- Floor pads
- Putty knife
- Dust mop
- Dustpan and brush
- Approved cleaning detergent solution
- Set of "Wet Floor" signs

- Spray polish
- Spray window cleaner
- Clean cloths

PROCEDURE #15:

1. **Service waste receptacles** – Empty, clean and replace liners.
2. **High dust walls** – Remove all dust webs.
3. **Dust mop floor** – Follow Procedure #2.
4. **Clean floor** – Set up "Wet Floor" signs. Follow Procedure #3. Watch out for the safety of students, visitors and employees.
5. **Machine buff** – Spray buff. Follow Procedure #9. High speed burnishing. Follow Procedure #10.
6. **Clean windows and polish metals** – See Section E for window cleaning. Use a cloth dampened with polish to clean and polish metals.
7. **When finished**, remove signs. Return equipment and supplies to proper storage.

W.E. GREER LTD.

Teachers Lounges – Daily Maintenance

PURPOSE:
To maintain clean, hygienic and attractive surroundings.

REQUIRED SUPPLIES & EQUIPMENT:

- Mop bucket with wringer
- Wet mop handle with looped-end, banded mop
- Putty knife
- Dust mop
- Dustpan and brush
- Hand pail
- Approved cleaning detergent solution
- Set of "Wet Floor" signs
- Spray polish
- Spray window cleaner
- Clean cloths
- Vacuum equipment

PROCEDURE #16:

1. **Service waste receptacles** – Empty, clean and replace liners. Remove dated newspapers and damaged magazines.
2. **Dust furniture** – Tables, legs of chairs, lamps, etc.. Damp wipe plastic covered furniture. Vacuum cloth upholstery.
3. **Dust windowsills and light fixtures.**
4. **Dust mop floor** – Follow Procedure #2.
5. **Clean floor** – Either damp mop or vacuum.
6. **Polish** – Metals and furniture. Use appropriate polish and clean cloths.
7. **Spot clean soiled areas** – Check walls and doors. Spot clean only areas no larger than your hand. Notify supervisor if complete wall washing is necessary. Clean windows. Clean telephone.
8. **Straighten furniture** – Arrangements should conform to established pattern.

School Housekeeping Procedures

Stairways – Daily Maintenance

PURPOSE:
To maintain clean, hygienic and attractive stairways.

REQUIRED SUPPLIES & EQUIPMENT:
- Mop bucket with wringer
- Wet mop handle with looped-end, banded mop
- Dust mop
- Dustpan and brush
- Approved cleaning detergent solution
- Set of "Wet Floor" signs
- Clean cloths
- Vacuum equipment

PROCEDURE #17:
1. **Prepare area** – Set up "Wet Floor" signs. Place signs at the top, middle and bottom of the flight of stairs to be cleaned. Clean one flight at a time.
2. **Dust mop** – Work down the stairs. Dust mop each step. Damp dust each banister. Collect dust and debris at each landing. Empty dustpan in waste container. Use putty knife to remove materials stuck to stairs.
3. **Damp mop** – Mop steps with cleaning solution. Start at top of the flight. Wipe walls if splashed by mop.
4. **When steps are dry** – Remove signs. Return all equipment and supplies to storage.

W.E. GREER LTD.

Gym Floors – Daily Maintenance

PURPOSE:
To maintain a clean, hygienic, safe and attractive gym.

REQUIRED SUPPLIES & EQUIPMENT:
- Dust mop
- Dustpan and brush
- Putty knife
- Scrubber
- Mop bucket with wringer
- Mop handle and mop

PROCEDURE #18:
1. **Dust mop** – Follow Procedure #2.
2. **Clean floor** – Set up "Wet Floor" signs. Follow Procedure #3. Watch out for the safety of children. Do not let water stand on gym floor!
3. **When finished** – Remove signs. Return equipment and supplies to proper storage.

School Housekeeping Procedures

Chalkboard Maintenance

PURPOSE:
To maintain a clean, efficient chalkboard surface.

REQUIRED SUPPLIES & EQUIPMENT:
- Soft lint-free dust cloth or chamois
- Pure white medium grade dustless chalk (95% chalk, 5% binder)
- All-felt eraser
- Mild household detergent (only occasionally)

PROCEDURE #19:
"Chalking In" – All new chalkboards write and erase with a little more difficulty than they do after they have been in regular classroom use for a period of time. In order to get the highest efficiency during the first few days of use and at the same time provide for the greatest amount of trouble-free satisfaction through the years, it is advisable to "chalk-in" the chalkboard.

This "chalking-in" process is very simple and requires little time and effort. The chalkboard should be "chalked-in" before it is written on.

Assuming that all paint or plaster spottings, finger marks, room dust, etc., have been removed from the boards, proceed as recommended in the following simple step by step instructions.

1. Go over the entire chalkboard area with a soft lint-free dust cloth to make certain that there is no moisture on the surface.
2. Chalk the entire surface using a piece of pure white medium grade chalk. Use the flat (long) side of the chalk stick and avoid chalk with a glazed surface.
3. Work the chalk into the surface of the board, using an all felt eraser for this purpose.
4. Repeat step 2 and step 3.
5. Clean the surface with a good quality dry chamois or soft cotton cloth. Your chalkboard is now ready to use.

W.E. GREER LTD.

TIPS:
- Use only first quality white medium or soft grade dustless chalk.
- Do not use colored chalks made for use as an art medium on paper, or regular colored chalk or wax crayon. Such chalks and wax crayons are highly pigmented and will not erase readily from any chalkboard. They leave smudges and "ghost marks" which are almost impossible to remove, and eventually build up an oily film on the surface of the board.

General Cleaning - Always clean the chalkboard with a soft felt eraser kept clean and free of accumulated dust. Occasionally, depending on the amount of usage and the accumulation of dust and foreign matter left on the board, the chalkboard surface should be washed with a mild household detergent.
Rinse with clean clear water. Change rinse water frequently for best results.
Dry the board with a clean lint-free cloth.
Boards must be rechalked after each washing.
- After washing, allow boards to dry a minimum of 24 hours before rechalking.
- Do not wash boards more often than necessary, as excessive washing is not good for the boards.

Whiteboard Care and Cleaning

PURPOSE:
To maintain a clean, efficient whiteboard surface.

REQUIRED SUPPLIES & EQUIPMENT:
- Whiteboard Cleaner, glass cleaner, Power Wipe or AIRx15
- Clear rinse water
- Sponge and squeegee
- Dry powdered cleanser
- Whiteboard eraser

W.E. GREER LTD.

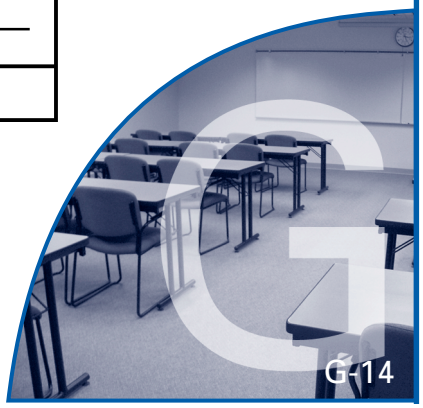
PROCEDURE #20:
The initial cleaning of the whiteboard marker board must be performed to ensure proper erasure.
1. Clean with Glass Cleaner, Power Wipe or AIRx15.
2. Wash board like a window with a sponge and squeegee for best results.

TIPS:
- Clean the whiteboard (as above) periodically.
- To remove crayon, scotch tape, etc., use a mild solvent or a paste made with scouring powder and water.
- Use the board and markers at room temperature for best results.
- Use only LCS marker pens designed for use on whiteboards. Store marker pens horizontally and tightly capped when not in use.

School Housekeeping Procedures

Rest Room Checklist

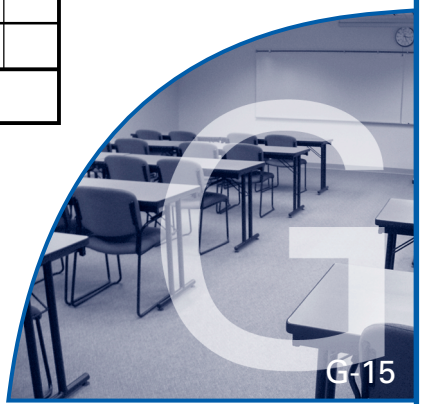
Employee _____ Area _____ Date _____ Time _____ Regular ☐ Relief ☐	Acceptable	Unacceptable
Floors		
Walls		
Ceiling		
Toilet Bowls		
Toilet Seats		
Urinals		
Partitions		
Wash Basins		
Fixtures		
Towel Cabinets		
Mirrors		
Waste Receptacles		
Sanitary Dispensers		
Toilet Tissue		
Paper Towels		
Soap		
Comments: _____		
Supervisor:		



School Housekeeping Procedures

Skills Inventory Checklist

Name _____ Training Started _____ Training Completed _____	Complete	Partial	Untrained
1. Personal Hygiene			
2. Dust Mopping			
3. Damp Mopping			
4. Floor Scrubbing - Rotary Machine			
5. Floor Scrubbing - Automatic Machine			
6. Floor Stripping - Rotary Machine			
7. Floor Stripping - Automatic Machine			
8. Applying Floor Finish			
9. Spray Buffing Floors			
10. High Speed Burnishing			
11. Classroom Cleaning			
12. Wall Washing Wall Mop Method			
13. Vacuuming			
14. Waste Removal			
15. Hallways - Daily Maintenance			
16. Teachers' Lounges - Daily Maintenance			
17. Stairways - Daily Maintenance			
18. Gym Floors - Daily Maintenance			
Supervisor:			



School Housekeeping Procedures

Supervisor's Room Checklist

Employee _____ Area _____ Date _____ Time _____ Regular ☐ Relief ☐	Acceptable	Unacceptable
Floors		
Corners		
Doors		
Windows		
Window Sills		
Shades or Blinds		
Drapes		
Blackboards		
Lights		
Radiator		
Walls		
Desks		
Lockers		
Wastebaskets		
Bookshelves		
Comments: _____		
Supervisor:		

School Housekeeping Procedures

Maintenance Frequencies - Carpets

Suggested guidelines. Frequencies should be modified to reflect traffic and soiling conditions, equipment used and customer's appearance standards.

	Maintenance Procedure	Heavy Traffic Areas	Moderate Traffic Areas	Light Traffic Areas
DAILY	*Use both regularly*			
	Vacuuming	at least daily	2-3 times/week	weekly
	Spot search removal	daily	daily	daily
INTERIM	*Select one or more based on customer's equipment and preferences:*			
	Spin Bonnet Cleaning	at least weekly	twice a month	every 1-3 months
	Prespraying	when extracting or dry foam shampooing, on heavily soiled areas		
	Dry Foam Shampooing	at least monthly	every 2 months	every 3 months
	Fast Extraction	at least monthly	every 2 months	every 3 months
RESTORATIVE	*Select one or more based on traffic, soiling, customer's equipment and preferences:*			
	Prespraying	when extracting or shampooing, on heavily soiled areas		
	Extraction	every 3-6 months	every 6-9 months	yearly
	Rotary Shampoo	every 6 months	every 9 months	yearly
	"Power Cleaning" includes Prespray, Rotary Shampoo, Extract	on heavily soiled and matted carpets when soil load cannot be removed with rotary shampooing or extraction alone		
	Soil Retardant Treatment	after rotary and/or extraction cleaning		
SPECIAL NEEDS	Static Control	after interim or restorative cleaning, or when static becomes a problem		
	Prespraying	when extracting or spin cleaning, or as needed		
	Dry Foam Shampooing	when browning is a problem		
	Fast Extraction	when odors are a problem		

W.E. GREER LTD.

W.E. GREER LTD.

Hospital Housekeeping Hygiene Procedures

Personal Hygiene
Dust Mopping
Damp Mopping
Floor Scrubbing - Rotary Machine
Floor Scrubbing - Automatic Machine
Floor Stripping - Rotary Machine
Floor Stripping - Automatic Machine
Applying Floor Finish
Spray Buffing Floors
High Speed Burnishing
Wall Washing - Machine Method
Wall Washing - Wall Mop Method
Vacuuming
Waste Removal
Patient Bathroom Cleaning
Room Cleaning - Occupied Room
Room Cleaning - Unoccupied Room
Room Cleaning - Patient Discharge
Room Cleaning - Occupied Isolation
Room Cleaning - Discharge Isolation
Public Rest Rooms - Daily Maintenance
Public Areas - Daily Maintenance
Lounges - Daily Maintenance
Stairways - Daily Maintenance
Elevators - Daiy Maintenance
Checklists

"OUR REPUTATION IS SPOTLESS"

Hospital Housekeeping Procedures

Personal Hygiene

PURPOSE:
To present a neat and professional housekeeping staff.

REQUIRED SUPPLIES & EQUIPMENT:
- Clean, neat clothing
- Rubber-soled shoes
- Identification badge
- Hair net

PROCEDURE #1:
1. **Preparation** – A neat appearance translates into a professional attitude... Practice proper hygiene. Keep fingernails short and clean. Use cosmetics in moderation. Refrain from use of heavy scents.

2. **Hand Washing** – In order to control cross-infection, hands should be washed after performing duties around washrooms, before and after eating, and before and after using the washroom.

3. **Proper Hand Washing** – Massage the cleaning agent, preferably an antiseptic hand cleaner, around the fingers, knuckles, and hands. Scrub nails with a brush.

W.E. GREER LTD.

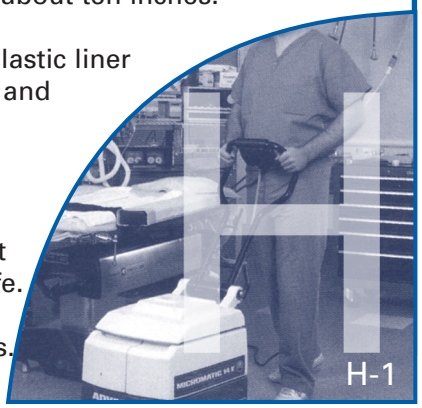
Dust Mopping

PURPOSE:
To remove litter, dust and light soil from floors as a daily maintenance procedure, or in preparation for wet mopping.

REQUIRED SUPPLIES & EQUIPMENT:
- Dustpan & brush
- Dust mop
- Putty knife

PROCEDURE #2:
1. **Dust mop area** – Use dust mop of appropriate size. Treat with a water base treatment when working in heavier soil load area. Start at one end of area; hold mop handle at approximately 45 degree angle; push mop straight ahead. Avoid lifting mop from floor or moving it backward. Remove gum with putty knife. Pivot at end of area and mop in opposite direction, overlapping about ten inches.
2. **Pick up trash and dirt** – Use dustpan and brush. Empty in trash container.
3. **Service dust mop** – Take to janitor's closet. Close door and place mop in a plastic liner and shake sharply several times. Replace mop head at the end of each shift and return soiled mop head to laundry.

Patient Rooms:
1. **Dust mop area** – Use small untreated dust mop. Start at entrance of room; work from sides to center. Move furniture as you mop and replace in correct position. Dust mop carefully around equipment. Remove gum with putty knife.
2. **Pick up trash** – Use dustpan and brush. Empty in trash container.
3. **Service dust mop** – Mop heads should be changed after three or four rooms. Return soiled mop heads to laundry at the end of each shift.



Hospital Housekeeping Procedures

Damp Mopping

PURPOSE:
To provide a clean, aseptic and attractive condition to all resilient tiled or hard surfaces, such as terrazzo.

REQUIRED SUPPLIES & EQUIPMENT:
- Mop bucket with wringer
- Wet mop handle and 20 oz looped-end banded mop
- Hand pad
- Set of "Wet Floor" signs
- Putty knife
- Dust mop
- Dustpan and brush
- Approved germicidal detergent solution appropriate to the area

PROCEDURE #3:
1. **Prepare area** – Set up "Wet Floor" signs. Move obstacles such as furniture.
2. **Dust mop floor** – Follow Procedure #2. Use a clean dust mop.
3. **Apply mopping solution** – Place mop in germicidal detergent solution, wring out until mop is damp. Mop lengthwise along baseboard. Use "figure 8" stroke on balance of area. Turn mop often and rinse frequently. Use the heel of the mop with a hand pad to remove stubborn spots. Wipe off splashes on baseboard immediately.
4. **Change solution and mop frequently** – Use the proper dilution of the correct germicidal detergent. Both mop head and solution should be changed every three or four rooms.
5. **When floor has dried** – Remove signs. Return furniture and other items to proper location.

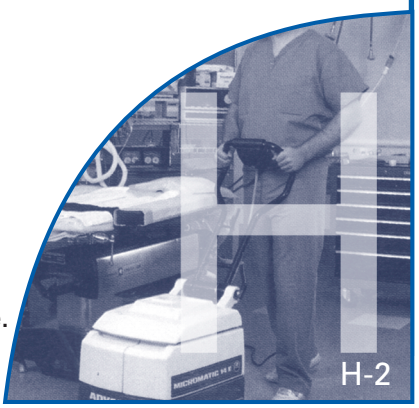
W.E. GREER LTD.

Floor Scrubbing – Rotary Machine

PURPOSE:
To provide a clean, aseptic and attractive condition to all resilient tiled or hard surfaces, such as terrazzo.

REQUIRED SUPPLIES & EQUIPMENT:
- Floor machine with solution tank and a pad drive assembly or brush
- Double mopping outfit and wringer
- 2 wet mop handles and 16 oz looped-end banded mop
- Set of "Wet Floor" signs
- Hand pads and holder
- Floor pads
- Putty knife
- Dust mop
- Dustpan and brush
- Approved germicidal detergent solution appropriate to the area
- Wet pick-up vacuum

PROCEDURE #4:
1. **Prepare equipment** – Fill solution tank with correct germicidal detergent solution. Fill double mop outfit 2/3 with clean, warm water. Transport to work site.
2. **Prepare area** – Set up "Wet Floor" signs. Move obstacles such as furniture.
3. **Dust mop floor** – Follow Procedure #2. Use clean dust mop.



4. **Scrub floor** – Operate the floor machine from side to side while dispensing solution. Overlap each pass to cover entire floor. Use care to avoid bumping baseboards and other fixed objects. Use hand pad and holder to scrub corners and other areas not accessible to floor machine.
5. **Pick up dirt solution** – Use wet pick-up vacuum or remove the dirty solution with the first mop. Dip the clean second mop into the clear water and rinse, wringing out mop frequently. Cover entire area. Wipe off baseboards.
6. **When floor has dried** – Remove signs. Return furniture and other items to proper locations.

W.E. GREER LTD.

Floor Scrubbing – Automatic Machine

PURPOSE:
To provide a clean, aseptic and attractive condition to all resilient tiled or hard surfaces, such as terrazzo.

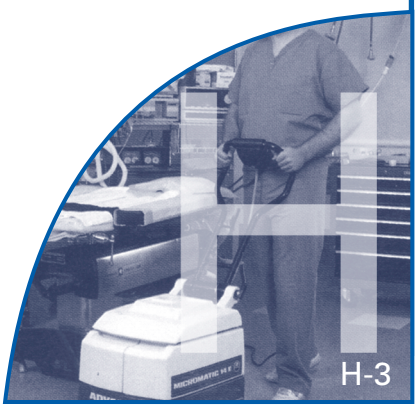
REQUIRED SUPPLIES & EQUIPMENT:
- Automatic floor machine with pad drive assembly or brush
- Mop bucket with wringer
- Wet mop handle with looped-end banded mop
- Set of "Wet Floor" signs
- Squeegee with handle
- Floor pads
- Putty knife
- Dust mop
- Dustpan and brush
- Approved germicidal detergent solution appropriate to the area

PROCEDURE #5:
1. **Prepare equipment** – Fill solution tank with correct germicidal detergent solution. Fill mop bucket with clean water. Transport to work site.
2. **Prepare area** – Set up "Wet Floor" signs. Move obstacles such as furniture.
3. **Dust mop floor** – Follow Procedure #2. Use clean dust mop.
4. **Scrub floor** – Use light brush pressure and scrub with the squeegee down – single scrub. Shut off solution a few feet prior to making any turns. Remove any puddles with wet mop or squeegee to a point that can be reached by the automatic machine.
5. **When floor has dried** – Remove signs. Return furniture and other items to proper locations.

Floor Stripping – Rotary Machine

PURPOSE:
To remove soil, floor finish from the floor before applying new floor finish.

REQUIRED SUPPLIES & EQUIPMENT:
- Floor machine with pad drive assembly or brush
- Wet pick-up vacuum
- 2 mop buckets with wringer
- 2 wet mop handles with 20 oz looped-end banded mop
- Set of "Wet Floor" signs
- Floor pads
- Hand pads and holder



- Putty knife
- Dust mop
- Dustpan and brush
- Doorway mats
- Approved floor stripping concentrate

PROCEDURE #6:

1. **Prepare equipment** – Fill mop buckets with water, add proper amount of floor stripping concentrate to one. Transport to work site.
2. **Prepare area** – Set up "Wet Floor" signs. Select an area of about 200 square feet. Place mats so that soiled shoes can be wiped off instead of tracking dirt into area being cleaned.
3. **Dust mop floor** – Follow Procedure #2. Use clean dust mop.
4. **Wet floor** – Generously spread the floor stripping solution over area with one mop. Allow the solution to set on the floor for the recommended time. Do not allow to dry.
5. **Machine scrub** – Place floor pad under machine or use brush. Scrub lengthwise along base boards; side to side over balance of area. Use hand pad to scrub along edges of area. Heel machine on badly soiled spots. Avoid splashing walls.
6. **Pick up dirty solution** – Use wet pick-up vacuum. Do not allow dirty solution to dry on floor.
7. **Rinse and dry floor** – Using clean mop and clean water. Cover area liberally with rinse water. Pick up rinse water with vacuum. Wipe baseboards.

W.E. GREER LTD.

Floor Stripping – Automatic Machine

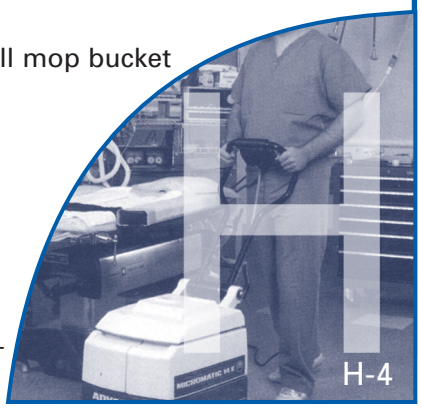
PURPOSE:
To remove soil, floor finish from the floor before applying new floor finish.

REQUIRED SUPPLIES & EQUIPMENT:

- Automatic floor machine with pad drive assembly or brush
- Mop bucket with wringer
- Squeegee with handle
- Set of "Wet Floor" signs
- Floor pads
- Putty knife
- Dust mop
- Dustpan and brush
- Floor stripper solution

PROCEDURE #7:

1. **Prepare equipment** – Fill solution tank with correct floor stripper solution. Fill mop bucket with clean water. Transport to work site.
2. **Prepare area** – Set up "Wet Floor" signs. Move obstacles such as furniture.
3. **Dust mop floor** – Follow Procedure #2. Use clean dust mop.
4. **Wet floor** – Using the squeegee in an up position with maximum pressure, spread the floor stripping solution. Allow the solution to set on the floor for recommended time. Do not allow to dry.
5. **Restricted areas** – Follow Procedure #6.
6. **Second pass** – Scrub floor with maximum brush pressure, squeegee down. Check rate of speed to ensure complete removal of all old finish. Remove any puddles with wet mop or squeegee to a point that can be reached by the automatic machine.



7. **Rinse** – Remove any remaining stripping solution from machine. Refill with clean water. Replace floor pad or rinse brushes. Using medium pressure, double scrub as described above. Do not wait between passes. Remove puddles.

Applying Floor Finish

PURPOSE:
To protect the various types of floor surfaces, and to maintain clean, safe and attractive floors throughout the hospital.

REQUIRED SUPPLIES & EQUIPMENT:
- Clean mop bucket and wringer
- Set of "Wet Floor" signs
- Doorway mats
- Supply of floor finish

PROCEDURE #8:
1. **Prepare equipment** – Line bucket with plastic bag (saves clean-up time).
2. **Inspect floor** – Make sure that floor is thoroughly dry and clean.
3. **Prepare area** – Set up "Wet Floor" signs in public areas. Avoid blocking doors when possible. Place doorway mats at entrances.
4. **Apply first coat** – Start with clean, slightly dampened mop. Immerse mop in finish. Wring out to eliminate dripping. Apply a THIN coat. Start next to the baseboard, running the mop parallel to the wall. Cover remaining floor areas, using "figure 8" stroke. Use additional finish as needed, being sure to cover all areas. Avoid splashing. Allow first coat to dry.
5. **Apply additional coat** – Omit baseboards this time – stay at least 6 inches away. Apply a THIN coat in a "figure 8" pattern. Allow coat to dry. Let dry as long as possible before opening to traffic.
6. **Additional coats** – Apply as required.

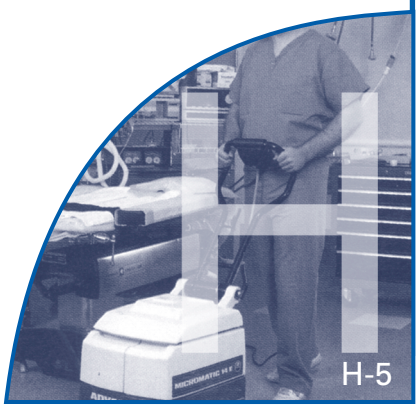
W.E. GREER LTD.

Spray Buffing Floors

PURPOSE:
To maintain clean, safe, hygienic and attractive floors.

REQUIRED SUPPLIES & EQUIPMENT:
- Floor machine (175-400 rpm) with pad drive assembly or brush
- Wet mop handle and 20 oz looped-end banded mop
- Mop bucket with wringer
- Set of "Wet Floor" signs
- Floor pads
- Dust mop
- Dustpan and brush
- Approved germicidal detergent solution appropriate to the area
- Spray buff solution in dispensing container

PROCEDURE #9:
1. **Prepare area** – Set up "Wet Floor" Move obstacles such as furniture.
2. **Dust mop floor** – Follow Procedure #2. Use clean dust mop.



3. **Damp mop** – Follow Procedure #3.
4. **Machine buff floor**– Place floor machine in position. Spray floor with solution and spread with machine. Use a side to side motion, be careful to avoid bumping walls and furniture. Allow a slight overlapping on each pass. Buff until haze is gone.
5. **Dust mop again** – Pick up any dust resulting from buffering operation. Use a clean dust mop.
6. **When finished** – Remove signs. Return furniture and other items to proper locations.

W.E. GREER LTD.

High Speed Burnishing

PURPOSE:
To maintain clean, safe and attractive floors.

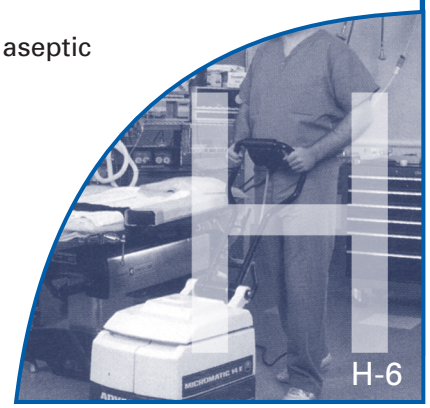
REQUIRED SUPPLIES & EQUIPMENT:
- High speed buffer (500-2000 rpm) with pad drive assembly
- Wet mop handle and 20 oz looped-end banded mop
- Mop bucket with wringer
- Set of "Wet Floor"signs
- Floor pads
- Dust mop
- Dustpan and brush
- Approved germicidal detergent solution appropriate to the area
- Spray buff solution in dispensing container

PROCEDURE #10:
1. **Prepare area** – Set up "Wet Floor" signs. Move obstacles such as furniture.
2. **Dust mop floor** – Follow Procedure #2. Use clean dust mop.
3. **Damp mop** – Follow Procedure #3. Be sure no detergent residue is present when floor is dry.
4. **Machine burnish floor** – Place machine in position. Apply spray buff solution to floor. Move in a straight line, forward and back. Allow a slight overlapping on each pass. One complete repetition, forward and back, should be sufficient.
5. **Dust mop again** – Pick up any dust resulting from burnishing operation. Use a clean dust mop.
6. **When finished** – Remove signs. Return furniture and other items to proper locations.

Wall Washing – Machine Method

PURPOSE:
To maintain clean, hygienic and attractive surroundings. An important part of the aseptic technique in isolation room cleaning.

REQUIRED SUPPLIES & EQUIPMENT:
- Pressure type wall-washing machine with hoses and 3 trowels
- 3 terry cloth pads
- Approved germicidal detergent appropriate to the area
- Cold water
- Scaffold or ladder
- Hand pad
- Set of caution signs



Hospital Housekeeping Procedures

PROCEDURE #11:

1. **Prepare machine** – Remove cap assembly from wash tank. Prepare proper dilution of germicidal solution. Remove cap assembly from rinse tank and pour cold water. Replace both cap assemblies tightly. Pump hand pump until pressure gage shows recommended pressure. Prepare trowels.
2. **Prepare area** – Set up caution signs. Move furniture away from walls and take down pictures.
3. **Wash wall** – Work from bottom upwards. Dampen wash trowel by pressing valve release on trowel. Start at lower right-hand corner and outline a section of wall with wash trowel. Do not attempt an area larger then operation can reach easily. Moisten entire outlined area with wash trowel. Use light pressure in sweeping "figure 8" motion. Repeat moistening procedure within entire outlined area. Do not oversaturate the pad. When pad becomes soiled, remove and fasten with clean side up. Remove stubborn marks and spots with hand pad.
4. **Rinse wall** – Start at lower right-hand corner and rinse entire washed area. Dampen the rinse trowel by pressing valve release on trowel. Use "figure 8" motion, being careful not to run into dirty area. Do not oversaturate the rinse pad. Rinse pad may be turned over and reversed for four clean surfaces.
5. **Dry wall** – Use the third trowel, which is not connected to the machine. Dry around edges of the cleaned area, being careful not to run into dirty area. Dry the entire cleaned area using a "figure 8" motion.
6. **Continue steps 3, 4 & 5** – As required to complete the job. Overlap into clean areas. Change trowel as necessary. Use hand pump to adjust pressure if necessary. Dragging action of trowel indicates more saturation is needed. Finish cleaning wall corner to corner without a break to prevent streaks.
7. **When finished** – Replace pictures and furniture. Remove signs.
8. **Store machine** – Depress valve core to release pressure. Loosen caps on both tanks. Remove pads from trowels. Straighten hose and wrap around top of machine. Drain tanks and hose if machine is not being used the next day.

W.E. GREER LTD.

Wall Washing – Wall Mop Method

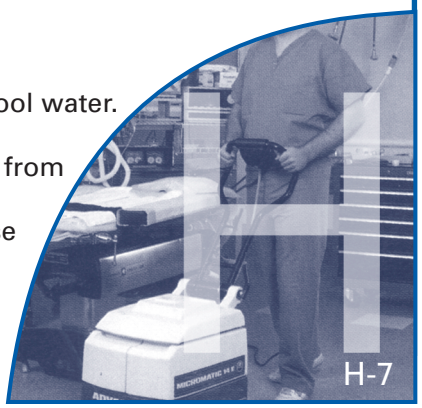
PURPOSE:
To maintain clean, hygienic and attractive surroundings.

REQUIRED SUPPLIES & EQUIPMENT:

- Mop bucket with wall washing wringer
- Wall washing tool with head
- Rubber gloves
- Putty knife
- Set of caution signs
- Hand pads
- Approved all-purpose cleaner

PROCEDURE #12:

1. **Prepare equipment** – Fill mop bucket with correct cleaning detergent. Use cool water. Attach mop head to handle. Transport to work site.
2. **Prepare area** – Set up caution signs. Move obstacles such as furniture away from walls. Remove articles such as pictures from walls to be cleaned.
3. **Pre-spotting** – Heavily soiled areas should be pre-spotted with an all-purpose cleaner. If badly soiled, use cream-cleanser or Graffiti remover.
4. **Wash wall** – Starting at bottom section of wall, apply cleaning solution with wall washing mop. Wet wall, being careful not to squeeze too much solution onto the wall (causes running). Do area approximately 4'x4' using overlapping movements of the wall mop until area is completed.



Repeat sequence, this time apply pressure to clean off soil. Rinse mop and wipe area dry. Finish cleaning wall corner to corner without a break to prevent streaks.

5. **When finished** – Replace pictures and other articles. Replace furniture and other items to their proper position. Remove signs.

Vacuuming

PURPOSE:
To provide clean, hygienic and attractive surroundings.

REQUIRED SUPPLIES & EQUIPMENT:

- Tank type vacuum with hose, wand, rug cleaning tool, crevice tool; or upright type vacuum
- Putty knife
- Caution sign

PROCEDURE #13:

1. **Prepare area** – Take equipment to work site. Place caution sign in a prominent location.
2. **Set up equipment** – Plug in machine and place in a central location. Be sure equipment has a 3-prong plug. To move tank-type equipment short distances, pull by hose. To move longer distance, rewind cord and push the vacuum itself. Take care not to bump walls or furniture.
3. **Vacuum carpet** – Where possible, use a push-pull stroke about 3' long. Vacuum so that the nap of the carpet is laid by the pull stroke. Overlap strokes slightly until area is covered. Use accessory tools for hard-to-get spots. Move furniture and equipment as little as possible. Do not over-clean. Usually two strokes per pass is sufficient. Watch cord carefully as it can present a safety hazard.
4. **When finished** – Remove caution sign. Return equipment to storage.

W.E. GREER LTD.

Waste Removal

PURPOSE:
To provide timely and adequate removal of waste from the building.

REQUIRED SUPPLIES & EQUIPMENT:

- Trash truck
- Plastic liners
- Disposable gloves

PROCEDURE #14:

1. **Accumulation** – Personnel on each unit or floor transport bagged materials to designated accumulation point. "Sharps" should be collected from originating departments in containers not easily punctured. Maintain proper procedure to isolate infectious materials.
2. **Transportation to disposal area** – Collection time and schedule are dependent on various departments' requirements. Begin on top floor and move collected materials through halls and elevators when there is a minimum of traffic. Maintain proper procedures to isolate infectious materials. When materials are unloaded at disposal site, return truck to appropriate area where they can immediately be cleaned with a germicidal solution.

Patient Bathroom Cleaning

PURPOSE:
To provide an aseptic and pleasant environment for the patient.

REQUIRED SUPPLIES & EQUIPMENT
Assemble on cart:

- Supply of clean cloths
- Hand pads
- Hand mirror
- Mop bucket with wringer
- Disposable gloves
- High dusting tool
- Hand pail (3 gallon)
- Approved germicidal detergent appropriate to the area
- Spray disinfectant
- Spray all-purpose cleaner solution
- Plastic liners
- Paper towels
- Toilet tissue
- Dustpan and brush
- Wet mop handle and 12 oz looped-end banded wet mop
- Door stop
- Dust mop
- Putty knife
- Toilet bowl brush/bowl swab
- Toilet bowl cleaner
- Cream cleanser
- Spray germicidal solution
- Spray window cleaner solution
- Rinse water
- Hand soap

W.E. GREER LTD.

PROCEDURE #15:

1. **Prepare area** – Knock on door. Open slightly and announce your intention to enter. If occupied wait. When empty, open and "stop" door.
2. **Toilet bowl** – Put toilet bowl cleaner in toilet. Follow instructions printed on container. Let stand while rest of bathroom is being cleaned.
3. **High dust** – Remove all dust webs with the high dusting tool.
4. **Clean medicine cabinet and/or bathroom shelf** – Remove all articles. Clean mirror. Wipe with germicidal solution. Replace all articles. Remove used soap. Discard in waste receptacle.
5. **Clean bathtub or shower, then sink** – Wipe inside and outside of shower curtain with cloth dampened with germicidal solution. Wipe tile surrounding tub, shower or sink with cloth dampened with germicidal solution. Wet inside surface of tub, etc. Dampen clean cloth. Apply cream cleanser on inside surface. Start with bottom and work up using a circular overlapping pattern. Wipe all surfaces, including shower head. Rinse off cleanser. Dry chrome fittings.
6. **Clean all remaining bathroom surfaces** – Spot clean walls with all-purpose cleaner, paying particular attention to areas near light switches and door knobs. Using a cloth dampened with germicidal solution, wipe walls, lights, toilet seat, outside toilet surfaces. Rinse cloth frequently and change water if dirty.
7. **Clean wastebasket** – Remove liner and dispose of in trash container on cart. Wipe out with a cloth dampened with germicidal solution. Replace liner.
8. **Clean inside of toilet bowl** – Clean bowl vigorously with toilet brush or swab. Check bowl ring with mirror. Scrub as required. Flush toilet rinsing the bowl with the brush. Flush toilet again.
9. **Replenish supplies** – Paper towels, toilet tissue, soap.
10. **Dust mop floor** – Follow Procedure #2. Dust mop bathroom and patient room as one activity.
11. **Damp mop** – Remove all supplies and equipment. Follow Procedure #3. Mop bathroom and patient room as last activity.
12. **Wash hands and arms** – Follow Procedure #1. Rinse sink.

Room Cleaning – Occupied Room

PURPOSE:
To maintain clean, hygienic and attractive surroundings without disrupting patient care.

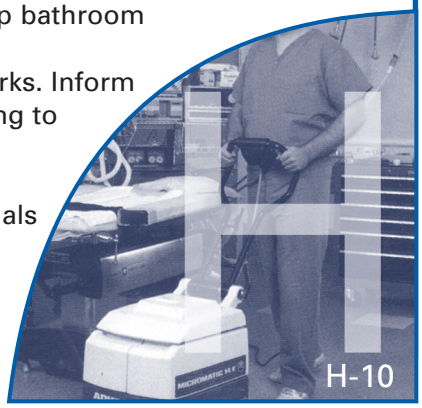
REQUIRED SUPPLIES & EQUIPMENT:

- Supply of clean cloths
- Hand pads
- Hand mirror
- Mop bucket with wringer
- Disposable gloves
- High dusting tool
- Hand pail (3 gallon)
- Approved germicidal detergent appropriate to the area
- Spray disinfectant
- Spray all-purpose cleaner solution
- Plastic liners
- Paper towels
- Toilet tissue
- Dustpan and brush
- Wet mop handle and 12 oz looped-end banded wet mop
- Door stop
- Dust mop
- Putty knife
- Toilet bowl brush/bowl swab
- Toilet bowl cleaner
- Cream cleanser
- Spray germicidal solution
- Spray window cleaner solution
- Rinse water
- Hand soap

W.E. GREER LTD.

PROCEDURE #16:

1. **Prepare equipment** – Assemble all supplies and equipment. Transport to patient's room on housekeeping cart.
2. **Prepare area** – Check to assure non-isolation. Gently knock on patient's door, greet pleasantly by name. Tell patient your name and reason you are there. Bring cart into room.
3. **Clean patient's bathroom** – See Procedure #15.
4. **Damp clean** – Dry-dust, damp wipe with germicidal solution, dry. Furniture and fixtures including windows, window frames and sills, light fixtures, lamps, chairs, dressers and other furniture.
5. **Clean patient's bed** – If instructed to do so by your supervisor. See Procedure #18, step 7.
6. **Spot clean soiled areas** – Checks walls and doors. Remove dust webs with a clean cloth tied around a dust mop. Spot clean area no larger than your hand. Notify supervisor if wall washing is necessary.
7. **Clean wastebasket** – See Procedure #15, step 7.
8. **Dust mop** – Follow Procedure #2. Dust mop bathroom and patient room as one activity.
9. **Damp mop** – Remove all supplies and equipment. Follow Procedure #3. Mop bathroom and patient room as one activity.
10. **When floor has dried** – Inspect curtains and draperies for stains and soil marks. Inform supervisor if these items appear to need changing. Return furniture according to patient room layout.
11. **Wash hands and arms** – Follow Procedure #1. Rinse sink.
12. **Replenish supplies and equipment** – Dispose of dirty water. Replenish materials before proceeding on assignment.



Hospital Housekeeping Procedures

Room Cleaning – Unoccupied Room

PURPOSE:
To maintain a clean, hygienic and attractive room for admittance of a new patient.

REQUIRED EQUIPMENT & SUPPLIES:
- High dusting tool
- Dust mop
- Dustpan and brush
- Dust cloth
- Mop bucket with wringer
- Wet mop handle and 12 oz looped-end banded mop
- Approved germicidal detergent solution appropriate to the area

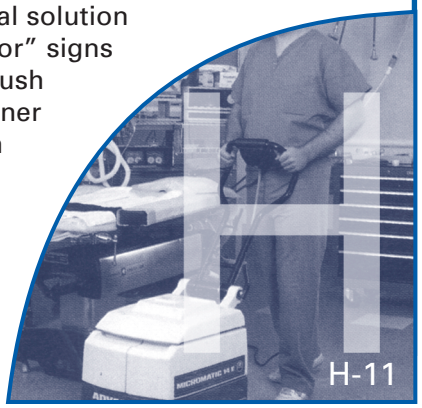
PROCEDURE #17:
1. **Dust furniture and fixtures** – Use dust cloth and high dusting tool. Include all furniture, fixtures, lamps, etc. Do not forget small items such as switch plates, door handles and outlets.
2. **Dust bathroom fixtures** – Use dust cloth and high dusting tool. Include light fixtures, pipes under the sink, mirror, towel cabinet, etc.
3. **Check for and remove dust webs** – Tie a clean cloth around dust mop. Use care so as not to streak walls or ceiling.
4. **Dust mop floor** – Follow Procedure #2. Use clean dust mop.
5. **Check overall condition of room** – Curtains and drapes; windows inside and out; floor tile and wall coverings; lights and plumbing.
6. **Damp mop room and bath** – Recheck unoccupied room daily. Every third day that the room remains unoccupied, damp mop (see Procedure #3).

W.E. GREER LTD.

Room Cleaning – Patient Discharge

PURPOSE:
To thoroughly clean the entire room, all furniture and fixtures before the patient is admitted, so that the room is hygienically clean and attractive.

EQUIPMENT & SUPPLIES:
- Approved germicidal detergent appropriate to the area
- Wet mop handle and 12 oz looped-end banded wet mop
- Floor machine with pad driving assembly or brush
- Vacuum cleaning equipment
- Supply of clean cloths
- Hand pads
- Hand mirror
- Mop bucket with wringer
- Disposable gloves
- High dusting tool
- Hand pail (3 gallon)
- Spray disinfectant
- Plastic liners
- Paper towels
- Cream cleanser
- Spray all-purpose cleaner solution
- Spray window cleaner solution
- Toilet bowl brush/bowl swab
- Spray germicidal solution
- Set of “Wet Floor” signs
- Dustpan and brush
- Toilet bowl cleaner
- Furniture polish
- Toilet tissue
- Rinse water
- Hand soap
- Floor pads
- Door stop
- Dust mop
- Putty knife



Hospital Housekeeping Procedures

PROCEDURE #18:

1. **Prepare area** – Check to assure non-isolation. Check for personal articles left by the patient – return to the Nursing Supervisor with patient's room number. Move any special equipment into hall and advise Nursing Supervisor.
2. **Clean patient's bathroom** – See Procedure #15.
3. **Dust furniture and fixtures** – Move all furniture out from walls. Remove any dust webs from walls and ceiling with a cloth tied to a dust mop. Dust backs of items moved out along with all other items. Do not forget small items such as switch plates, telephones, door handles and outlets. Dust television and wall ceiling brackets.
4. **Vacuum** – Vacuum the draperies and inspect for stains and soil. Report soiled draperies to your supervisor for replacement. Vacuum radiator or air handling unit.
5. **Spot clean soiled areas** – Check walls and doors. See Procedure #16, step 6.
6. **Damp clean furniture** – Damp wipe with germicidal solution, dry furniture and fixtures. Do not forget the backs of moved pieces. Wash dresser drawers, stands, clothes closets, telephones.
7. **Clean bed** – Use a cloth dampened with germicidal detergent solution. Wipe mattress, turn and wipe the other side. Wipe sides, pay special attention to tufts and seams - notify supervisor if damaged or extremely soiled and should be replaced. Wipe all bed surfaces. Rinse cloth often. Include both sides of head and footboard, legs, springs, side rails, cranks and casters.
8. **Polish furniture** – Use clean cloth. Apply polish sparingly. Wipe dry and polish with a soft cloth.
9. **Clean wastebasket** – See Procedure #15, step 7.
10. **Dust mop** – Follow Procedure #2. Dust mop bathroom and patient room as one.
11. **Damp mop** – Remove all supplies and equipment. Follow Procedure #3. Mop bathroom and patient room as one. If floor is heavily soiled, scrub the floor (see Procedure #4).
12. **When floor has dried** – Return furniture to proper locations.
13. **Wash hands and arms** – Follow Procedure #1. Rinse sink.
14. **Replenish supplies and equipment** – Dispose of dirty water, replenish materials before proceeding on next assignment.

W.E. GREER LTD.

Room Cleaning – Occupied Isolation

PURPOSE:
To maintain clean, hygienic and attractive surroundings without disrupting patient care.

REQUIRED SUPPLIES & EQUIPMENT:
NOTE: These supplies and equipment should be reserved for isolation cleaning and should be kept in separate storage.

- Wet mop handle and 12 oz looped-end banded wet mop
- Approved germicidal detergent appropriate to the area
- Supply of clean cloths
- Disposable gloves
- High dusting tool
- Hand pail (3 gallon)
- Spray disinfectant
- Plastic liners
- Toilet tissue
- Dustpan and brush
- Cream cleanser
- Spray germicidal solution
- Spray window cleaner solution
- Spray all-purpose cleaner solution
- Toilet bowl brush/bowl swab
- Mop bucket with wringer
- Toilet bowl cleaner
- Paper towels
- Hand mirror
- Putty knife
- Door stop
- Dust mop
- Hand pads
- Hand soap
- Rinse water

Hospital Housekeeping Procedures

PROCEDURE #19:
NOTE: Isolation units are cleaned after other units unless otherwise instructed by your supervisor.

1. **Prepare to enter room** – Read isolation card on door to determine the protective clothing to be worn. Put on gown, mask, gloves and over-shoe booties as required.
2. **Prepare area** – Use Procedures #15 and #16. Carry all equipment and supplies into room and close the door. Once in the room do not leave with gown on.
3. **Clean bathroom** – Use Procedure #15. When cleaning outside toilet surfaces use a paper towel saturated with a germicidal detergent solution. Wipe down all surfaces. Discard toweling in the waste container. Rinse surfaces with toweling saturated in clear water. Discard in waste container.
4. **Clean patient's room** – Use Procedure #16, steps 1-8. Nursing personnel are responsible for bed and bedside table cleaning.
5. **Floor cleaning** – Flood floor, as in OR cleaning, with a germicidal solution. Let stand for recommended length of time and vacuum up with wet-vacuum. If not practical, wet mop using two-pail method – dip mop in germicidal solution and spread on floor. Mop up dirty solution, wring mop out frequently in solution bucket. Using a second mop rinse floor with clear water. Use solution bucket to wring out mop. Mop up thoroughly.
6. **Gather waste** – Place sealed bags from waste containers in the room into a second clearly tagged or labeled liner and seal.
7. **Wash hands and arms** – See Procedure #1. Wash for 3 minutes.
8. **Leaving isolation** – Open door with a clean paper towel. Discard in wastebasket. Remove all equipment and supplies from room. Dispose of bagged waste in proper receptacle. Remove protective clothing. Remove mask by strings. Remove gown gently, folding it inside out, dispose of in proper receptacle.
9. **Wash hands and arms** – See Procedure #1. Wash for 3 minutes.
10. **Service equipment** – Transport all equipment to appropriate housekeeping storage area. Wash all equipment used in room with a germicidal solution.
11. **Wash hands and arms** – See Procedure #1. Wash for 3 minutes.

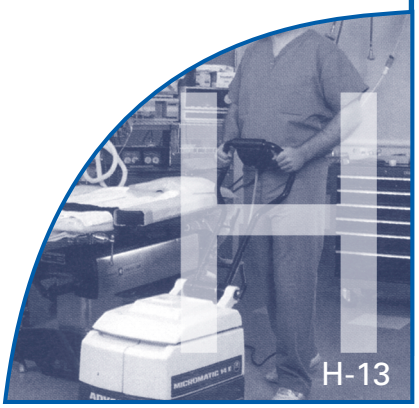
W.E. GREER LTD.

Room Cleaning – Discharge Isolation

PURPOSE:
To thoroughly clean the entire room and all furniture and fixtures before another patient is admitted so the room is hygienically clean and attractive.

REQUIRED SUPPLIES & EQUIPMENT:
NOTE: These supplies and equipment should be reserved for isolation cleaning and should be kept in separate storage.

- Wet mop handle and 12 oz looped-end banded wet mop
- Approved germicidal detergent appropriate to the area
- Supply of clean cloths
- Hand pads
- Hand mirror
- Mop bucket with wringer
- Disposable gloves
- High dusting tool
- Hand pail (3 gallon)
- Spray disinfectant
- Spray all-purpose cleaner solution



- Plastic liners
- Paper towels
- Toilet tissue
- Dustpan and brush
- Wet mop handle and 12 oz looped-end banded wet mop
- Door stop
- Dust mop
- Putty knife
- Toilet bowl brush/bowl swab
- Toilet bowl cleaner
- Cream cleanser
- Spray germicidal solution
- Spray window cleaner solution
- Rinse water
- Hand soap

PROCEDURE #20:

NOTE: All bedding, curtains and drapes should have been bagged and removed from the room before cleaning begins. This may be a nursing staff responsibility.

1. **Prepare to enter room** – Read isolation card on door to determine the protective clothing to be worn. Put on gown, mask, gloves and over-shoe booties as required. Also note any special requirements the type of isolation may require. Flat surfaces may need wet cleaning with a germicidal detergent solution. Walls may need a damp cleaning with a germicidal detergent solution.
2. **Prepare area** – Use Procedures #15 and #18. Carry all equipment and supplies into room and close the door. Once in the room do not leave with gown on. Collect all waste from waste containers immediately and double bag when removing from room.
3. **When cleaning bathroom** – Use Procedure #15. When cleaning outside toilet surfaces use a paper towel saturated with a germicidal detergent solution. Wipe down all surfaces. Discard toweling in the waste container. Rinse surfaces with toweling saturated in clear water. Dispose of toweling.
4. **Proceed with steps in Procedure #18** – Omit step 11. Then proceed with step 5 below.
5. **Floor cleaning** – Flood floor, as in OR cleaning, with a germicidal solution. Let stand for recommended length of time and vacuum up with wet-vacuum. If not practical, wet mop using two-pail method – dip mop in germicidal solution and spread on floor. Mop up dirty solution, wring mop out frequently in solution bucket. Using a second mop rinse floor with clear water. Use solution bucket to wring out mop. Mop up thoroughly. If floor is heavily soiled, scrub the floor (see Procedure #4).
6. **Wash hands and arms** – After all steps have been completed. See Procedure #1. Wash for 3 minutes.
7. **Leaving isolation** – Remove all equipment and supplies from room. Dispose of bagged waste in proper receptacle. Remove protective clothing. Remove mask by strings. Remove gown gently, folding it inside out, dispose of in proper receptacle.
8. **Wash hands and arms** – See Procedure #1. Wash for 3 minutes.
9. **Service equipment** – Transport all equipment to appropriate housekeeping storage area. Wash all equipment used in room with a germicidal solution.
10. **Wash hands and arms** – See Procedure #1. Wash for 3 minutes.

W.E. GREER LTD.

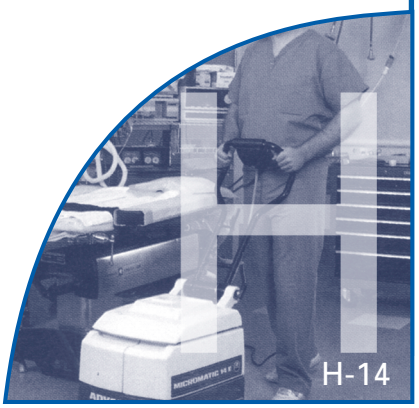
Public Rest Rooms - Daily Maintenance

PURPOSE:

To provide clean, hygienic and attractive surroundings.

REQUIRED SUPPLIES & EQUIPMENT:

- Supply of clean cloths
- Hand pads
- Mop bucket & wringer
- Disposable gloves
- Hand pail
- Approved germicidal detergent solution
- Spray disinfectant



Hospital Housekeeping Procedures

- Spray deodorant
- Plastic liners (bags)
- Paper towels
- Toilet tissue
- "Closed for Cleaning" sign
- Hand mirror
- Long handle dustpan & toy corn broom
- Wet mop handle and looped-end banded mop
- Door stop
- Dust mop
- Putty knife
- Toilet bowl brush/bowl swab
- Toilet bowl cleaner
- Cream cleanser
- Spray germicidal solution
- Spray window cleaner
- Hand soap
- Deck scrub brush

PROCEDURE #21:

1. **Prepare area** – Knock on door. Open slightly and announce your intention to enter. If occupied wait. When empty, open door, "stop" door and post "Closed for Cleaning" sign.
2. **Toilet bowls and urinals** – Put toilet bowl cleaner into toilets and urinals. Follow instructions printed on container. Let stand while balance of the rest room is being cleaned.
3. **High dust** – Remove all dust webs with a cloth tied to a dust mop. Clean wall vents, tops of doors and partitions.
4. **Replenish supplies** – Hand soap, towels, tissue and sanitary napkins. Replace/refill deodorizers. Check working condition of all dispensers.
5. **Pick up waste from floor** – Use dustpan and broom and pick up paper and trash from floor. Use putty knife to remove gum.
6. **Clean light fixtures and mirrors** – Dampen a cloth with glass cleaner. Wipe off light fixtures and mirrors. Move around room until all are cleaned.
7. **Clean waste receptacles** – Remove liners and, after wiping interiors with a germicidal solution, replace liners.
8. **Dust mop floor** – Follow Procedure #2.
9. **Clean wash basins** – Using either a cream cleanser or germicidal solution, depending on soil levels, clean interior surfaces, exterior surfaces, faucets and piping under basins. Wipe dry. Check faucets for dripping and ease of operation, check drain flow.
10. **Spot-clean walls and partitions** – Dampen a cloth with a germicidal solution. Wipe off shelves, dispenser, receptacles, doors and partitions.
11. **Clean inside of toilets and urinals** – Clean bowl vigorously with toilet bowl brush or swab. Check with mirror for stains and encrustations. Scrub as required. Flush, agitate with brush. Flush again.
12. **Clean exterior of toilets and urinals** – Moving down the line, clean from top to bottom with germicidal solution. Include all surfaces, pipes and valves.
13. **Clear floor of all obstructions** – Remove all supplies and equipment. Put waste receptacles out of the way.
14. **Mop floor** – Apply germicidal solution around the toilets and urinals. Beginning at far end of room, damp mop. Follow Procure #3. When floor around toilets and/or urinals is reached, wash floor thoroughly, wring out mop often. Scrub with deck brush if necessary.
15. **When floor has dried** – Replace waste receptacle. Remove "Closed for Cleaning" signs. Wash hands and arms. Follow Procedure 1. Rinse sink.

W.E. GREER LTD.

Public Areas – Daily Maintenance

PURPOSE:
To maintain clean, hygienic and attractive surroundings.

REQUIRED SUPPLIES & EQUIPMENT:
- Automatic floor machine with pad assembly or brush
- Wet mop handle with looped-end, banded mop
- Squeegee with handle

- Floor machine with pad assembly or brush
- Floor pads
- Putty knife
- Dust mop
- Dustpan and brush
- Approved cleaning detergent solution
- Set of "Wet Floor" signs
- Spray polish
- Spray window cleaner
- Clean cloths

PROCEDURE #22:

1. **Service waste receptacles** – Empty, clean and replace liners.
2. **High dust walls** – Remove all dust webs.
3. **Dust mop floor** – See Procedure #2.
4. **Clean floor** – Set up "Wet Floor" signs. Follow Procedure #5. Watch out for the safety of patients, visitors and employees.
5. **Machine buff** – Spray buff. Follow Procedure #9. High speed burnishing. Follow Procedure #10.
6. **Clean windows and polish metals** – See Section E for window cleaning. Use a cloth dampened with polish to clean and polish metals.
7. **When finished** - Remove signs. Return equipment and supplies to proper storage.

W.E. GREER LTD.

Lounges – Daily Maintenance

PURPOSE:
To maintain clean, hygienic and attractive surroundings.

REQUIRED SUPPLIES & EQUIPMENT:

- Mop bucket with wringer
- Wet mop handle with 20 oz looped-end, banded mop
- Putty knife
- Dust mop
- Dustpan and brush
- Hand pail
- Approved cleaning detergent solution
- Set of "Wet Floor" signs
- Spray polish
- Spray window cleaner
- Clean cloths
- Vacuum equipment

PROCEDURE #23:

1. **Service waste receptacles** – Empty, clean and replace liners. Remove dated newspapers and damaged magazines.
2. **Dust furniture** – Tables, legs of chairs, lamps, etc. Damp wipe plastic covered furniture. Vacuum cloth upholstery.
3. **Dust windowsills and light fixtures**.
4. **Dust mop floor** – Use Procedure #2.
5. **Clean floor** – Either damp mop using Procedure #3 or vacuum using Procedure #13.
6. **Polish** – Metals and furniture. Use appropriate polish and clean cloths.
7. **Spot clean soiled areas** – Check walls and doors. Spot clean only areas no larger than your hand. Notify supervisor if complete wall washing is necessary. Clean windows. Clean telephone.
8. **Straighten furniture** – Arrangements should conform to established pattern.

Stairways – Daily Maintenance

PURPOSE:
To maintain clean, hygienic and attractive stairways.

REQUIRED SUPPLIES & EQUIPMENT:
- Mop bucket with wringer
- Mop handle with 16 oz looped-end, banded mop
- Putty knife
- Dust mop
- Dustpan and brush
- Approved cleaning detergent solution
- Spray germicidal solution
- Set of "Wet Floor" signs
- Clean cloths

PROCEDURE #24:
1. **Prepare area** – Set up "Wet Floor" signs. Place signs at the top, middle and bottom of the flight of stairs to be cleaned. Clean one flight at a time.
2. **Dust mop** – Work down the stairs. Dust mop each step. Damp dust each banister. Collect dust and debris at each landing. Empty dustpan in waste container. Use putty knife to remove materials stuck to stairs.
3. **Damp mop** – Mop steps with cleaning solution. Start at top of the flight. Wipe walls if splashed by mop.
4. **When steps are dry** – Remove signs. Return all equipment and supplies to storage.

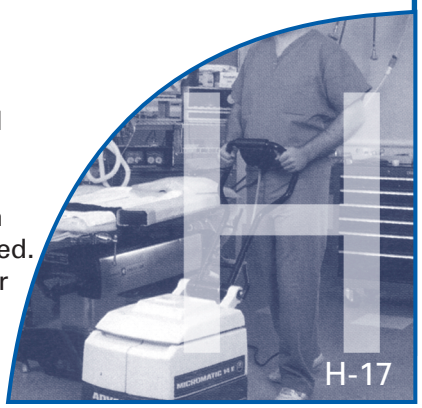
W.E. GREER LTD.

Elevators – Daily Maintenance

PURPOSE:
To maintain a clean, hygienic and attractive elevator facilities.

REQUIRED SUPPLIES & EQUIPMENT:
- Mop bucket with wringer
- Mop handle with 16 oz looped-end banded mop
- Vacuum equipment
- Hand pail
- Putty knife
- Polish
- Graffiti remover
- Approved germicidal detergent solution
- Spray germicidal solution
- Lobby dustpan and toy corn broom
- Supply of clean cloths

PROCEDURE #25:
1. **Prepare area** – Using a cloth dampened with a germicidal solution clean wall area around signal button, outside of elevator doors. Signal for elevator.
2. **Clean elevator car** – When elevator arrives, turn elevator switch to "off" position. Remove any trash. Using a germicidal solution damp wipe interior surfaces. Clean control panels, vents, ceiling and lights. Remove any graffiti. Polish metals as needed.
3. **Clean floor** – Vacuum door grooves. Either damp mop using Procedure #3 or vacuum using Procedure #13.
4. **When cleaning is complete** – Remove all cleaning equipment and materials. Turn elevator switch to "on" position.

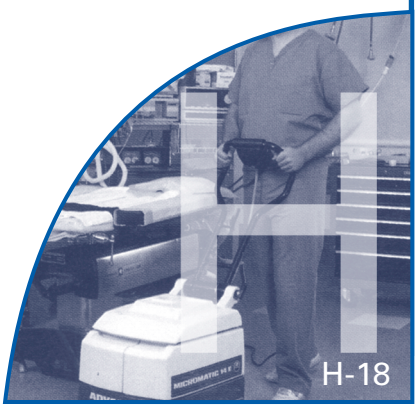


Daily Discharge Form

Name_____ Date_____ Area_____	Bed	Bed Stand	Overbed Table	Lights	Armchair	Straight Chair	Cubicles	Wastebasket	Toilet	Washbowl	Towel Cabinets	Walls	Floor	Ceiling	Windows	Drapes	Clothes Locker	Paper Supplies	Telephone		
Room Number																					
Comments:																					

INSTRUCTIONS: Check off any item in need of repair or servicing and advise your supervisorimmediatly.

W.E. GREER LTD.



Rest Room Checklist

Employee _____ Area _____ Date _____ Time _____ Regular ☐ Relief ☐	Acceptable	Unacceptable
Floors		
Walls		
Ceiling		
Toilet Bowls		
Toilet Seats		
Urinals		
Partitions		
Wash Basins		
Fixtures		
Towel Cabinets		
Mirrors		
Waste Receptacles		
Sanitary Dispensers		
Toilet Tissue		
Paper Towels		
Soap		

Comments: _____

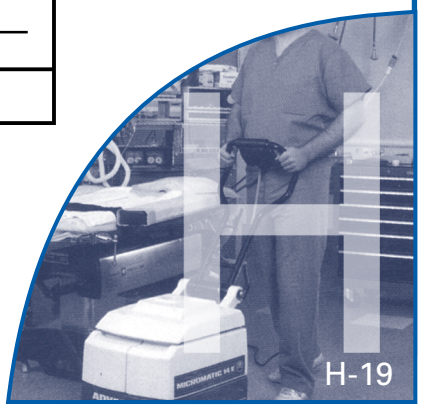
_____

_____

_____

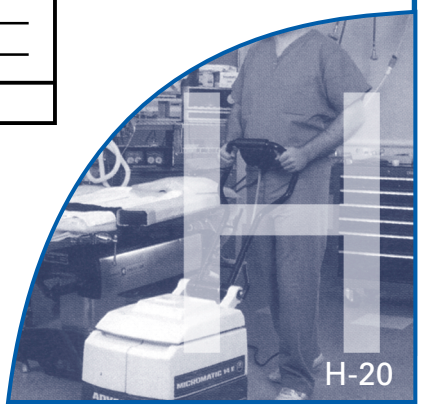
_____

Supervisor:



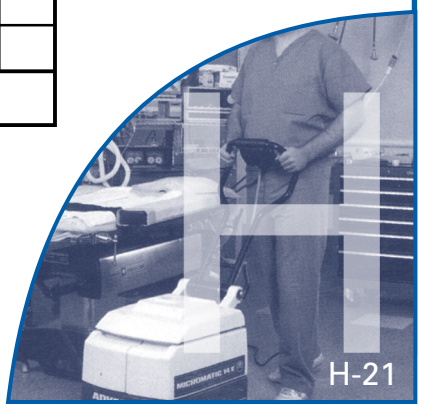
Supervisor's Room Checklist

Employee _____ Area _____ Date _____ Time _____ Regular ☐ Relief ☐	Acceptable	Unacceptable
Floors		
Corners		
Doors		
Windows		
Window Sills		
Shades or Blinds		
Drapes		
Cubicle Curtains		
Lights		
Radiator		
Bed		
Dresser		
Bedside Table		
Overbed Table		
Armchair		
Straight Chair		
Footstool		
Bed Screen		
Mirrors and Pictures		
Wastebaskets		
Toilet		
Plumbing Fixtures		
Washbowl		
Bathroom Furniture		
Clothes Closet		
Paper Supplies		
Soap		
Telephone		
Comments: _____		
Supervisor:		



Skills Inventory Checklist

Name _____ Training Started _____ Training Completed _____	Complete	Partial	Untrained
1. Personal Hygiene			
2. Dust Mopping			
3. Damp Mopping			
4. Floor Scrubbing - Rotary Machine			
5. Floor Scrubbing - Automatic Machine			
6. Floor Stripping - Rotary Machine			
7. Floor Stripping - Automatic Machine			
8. Applying Floor Finish			
9. Spray Buffing Floors			
10. High Speed Burnishing			
11. Wall Washing - Machine Method			
12. Wall Washing - Wall Mop Method			
13. Vacuuming			
14. Waste Removal			
15. Patient Bathroom Cleaning			
16. Room Cleaning - Occupied Room			
17. Room Cleaning - Unoccupied Room			
18. Room Cleaning - Patient Discharge			
19. Room Cleaning - Occupied Isolation			
20. Room Cleaning - Discharge Isolation			
21. Public Rest Rooms - Daily Maintenance			
22. Public Areas - Daily Maintenance			
23. Lounges - Daily Maintenance			
24. Stairways - Daily Maintenance			
25. Elevators - Daily Maintenance			
Supervisor:			



W.E. GREER LTD.

Shower and Locker Room Program

Shower and Locker Room Program
AIRX 15 Concentrated Disinfectant Cleaner
Indo 400 - Biodegradable Citrus Cleaner / Degreaser
Indo 303 - Mild Acid Hard Water Spot Remover

"OUR REPUTATION IS SPOTLESS"

Shower & Locker Room Program

Shower and Locker Room Program

	DAILY	WEEKLY	MONTHLY
TOOLS			
CHEMICAL	**AIRX 15** Dilution: 1:32 or use red tip. 4oz/gal	**INDO 400** Dilution: 1:10 or use no tip in hydro spray bottle.	**INDO 303** Dilution: 1:10 or use no tip in hydro spray bottle.
CLEANING TIPS	Spray entire surface. Scrub heavy soiled area with soft brush. Allow 10 minutes contact time.	Spray entire area. Allow 5 minutes contact time. Then rinse.	Spray entire area. Allow 5 minutes contact time. Then rinse.

W.E. GREER LTD.

AIRX 15 Concentrated Disinfectant Cleaner

AIRX 15 meets rigid AOAC efficacy standards for hospital use. Ideal as well for use in nursing homes, institutions, schools, veterinary hospitals - anywhere that cross-contamination is of concern. AIRX 15 cleans, disinfects, sanitizes and is virucidal when used as directed. It contains a dual quaternary ammonium compound for effectiveness against a broad range of both gram positive and gram negative microorganisms, and it meets the most recent requirements for biocide activity and tolerance to organic soil.

AIRX 15 is particularly unique in its ability to counteract malodors. It kills fungus and putrefactive bacteria that are the cause of foul odors from mildew, decomposition and decay. And AIRX 15 contains Airicide, the exclusive odor counteractant that neutralizes odors from oxidation reduction.

Indo 400 - Biodegradable Citrus Cleaner / Degreaser

Indo 400 is a highly concentrated industrial grade degreaser based on the original "positive emulsion" technology. The superior cleaning performance of this technology has been further enhanced by the addition of a unique natural solvent extracted from citrus fruit.

This biodegradable solvent gives accelerated action in penetrating and dissolving oily, greasy soil. It works like a "butyl" cleaner without the hazards of "butyl" type solvents, petroleum distillates or chlorinated solvents that are sometimes required to give solvent action.

Shower & Locker Room Program

Indo 400 is designed to go to work wherever greasy, oil, organic-based soils exist. It's great for ink too! Use it to clean tile, concrete, marble and terrazzo floors or any other hard surface not affected by water. Cleans and deodorizes typewriters, vending machines, garbage and trash containers, machinery, tools, etc.

- **Positive Emulsion** – Spontaneously emulsifies greasy soil to improve cleaning and prevents dirt re-deposition.
- **Non-Butyl** – Does not contain "butyl" or other glycol ether type solvents, yet penetrates better than butyl for grease and inks.
- **Low VOC** – Increased concern for Volatile Organic Compounds in workplace areas has meant an increased concern for solvent cleaners. Indo 400 contains less than 5% VOC, and a low evaporation rate means improved air quality.
- **Biodegradable** – Waste treatment plants can normally accept and treat the waste from Indo 400. The use of biodegradable citrus derivative means a more environmentally safe product.
- **Pleasant Odor** – Many cleaners use perfumes or fragrances to mask the powerful solvent odors that people find objectionable. Indo 400 uses no such perfumes but rather relies on the natural "orange" aroma of the citrus additive to provide a fresh clean smell after use.
- **Versatile** – Indo 400 will clean up tough jobs that most other water-based products can't handle. Ink stains are hard to remove even with solvents. Indo 400 penetrates and removes ink deposits with amazing ease.

W.E. GREER LTD.

Indo 303 - Mild Acid Hard Water Spot Remover

Acid Detergent Concentrate
Indo 303 is a high quality blended detergent acid formulated for use in meat packers, food processing plants, dairies, breweries or any application where an "acid type" cleaner is required. This "tamed" acid formulation provides an aggressive yet controlled action for removal of scale and rust deposits.

- **Low Odor** – Many strong mineral acids such as muriatic and sulphuric can produce very strong and objectionable odors during use. Indo 303 is very low in odor and produces very little fumes or odor during de-scaling or de-rusting.
- **High Safety** – Indo 303 is much safer to handle than strong acids like sulphuric or muriatic. When used according to directions, it is one of the safest and most effective acid cleaners available.
- **Versatile** – Indo 303 may be used in any application where lime scale, milk-stone, hard water scale or rust deposits have to be removed. Solutions may be heated to 75°C to increase cleaning action. It is also an effective cleaner for protein-type deposits, which normally respond better to an acid cleaner than an alkaline cleaner.

Indo 303 is particularly effective for food area applications and may be used as a soak cleaner, recirculated or used in a scrub brush procedure.

When tile and grout need to be cleaned in and around washroom and shower areas, Indo 303 is the product of choice. It may be applied by lower pressure spray or brushed on, scrubbed and rinsed clean. Most soils such as hard water soap scum, rust and scale will be easily cleaned.

- **Unique Detergent System** – Indo 303 contains a most unique detergent system that enhances the acid cleaning action. Any organic soils that are present are removed and dispersed so as not to interfere with the acid. The emulsification of these soils also means that the surface is rinsed clean with no re-deposition taking place.

Food Preparation Areas

W.E. GREER LTD.

Food Preparation Areas

Sanitation Report - Cleaning and Sanitizing Program

DATE _____ TIME _____ RATING _____

CUTTING ROOM

Acc.	Unacc.		Acc.	Unacc.		
☐	☐	Blocks	☐	☐	Floor	_____
☐	☐	Cutting Table Frames	☐	☐	Sink	_____
☐	☐	Storage Tables & Shelves	☐	☐	Sink Area	_____
☐	☐	Carts & Conveyors	☐	☐	Display Cases	_____
☐	☐	Saw	☐	☐	Cooling Units	_____
☐	☐	Cubers	☐	☐	Trays	_____
☐	☐	Knives & Tools	☐	☐	Ceilings	_____
☐	☐	Walls				

COLD BOX

Acc.	Unacc.		Acc.	Unacc.		
☐	☐	Ceilings	☐	☐	Poultry Trough	_____
☐	☐	Walls	☐	☐	Racks	_____
☐	☐	Floor	☐	☐	Doors	_____
☐	☐	Grinder	☐	☐	Cooling Units	_____
☐	☐	Grinder Area				_____

RECEIVING AREA

Acc.	Unacc.		
☐	☐	Ceilings	_____
☐	☐	Walls	_____
☐	☐	Floor	_____
☐	☐	Scale	_____
☐	☐	Hooks	_____

INVENTORY

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

STORE MANAGER _____

COMPANY _____

INSPECTOR _____

COMPANY _____

LEGEND

Acc. = ☐ Acceptable

Unacc. = ☐ Unacceptable

W.E. GREER LTD.

Food Preparation Areas

DATE _____ TIME _____ RATING _____

DELI

Acc.	Unacc.		Acc.	Unacc.		
☐	☐	Cases	☐	☐	Slicers	_____
☐	☐	Barbecue	☐	☐	Floor	_____
☐	☐	Scales	☐	☐	Sink	_____
☐	☐	Knives & Tools				_____
						_____

BAKERY

Acc.	Unacc.		Acc.	Unacc.		
☐	☐	Hoods	☐	☐	Sink	_____
☐	☐	Oven	☐	☐	Freezer	_____
☐	☐	Trays	☐	☐	Floor	_____
☐	☐	Work Counters	☐	☐	Bread Slicer	_____
☐	☐	Proof Box	☐	☐	Display Shelves & Cases	_____

PRODUCE

Acc.	Unacc.		Acc.	Unacc.		
☐	☐	Dry Sinks & Tables	☐	☐	Display Cases	_____
☐	☐	Carts & Conveyors	☐	☐	Floor	_____
☐	☐	Cooler	☐	☐	Sink	_____
						_____
						_____

MISCELLANEOUS

Acc.	Unacc.		Acc.	Unacc.		
☐	☐	Restroom	☐	☐	Dairy Cooler	_____
☐	☐	Breakroom	☐	☐	Frozen Food Cases	_____
☐	☐	Dairy Cases				_____
						_____
						_____

STORE MANAGER _____

COMPANY _____

INSPECTOR _____

COMPANY _____

LEGEND

Acc. = ☐ Acceptable

Unacc. = ☐ Unacceptable

Food Preparation Areas

Hand Washing

Regular hand washing by store personnel is essential to maintain good sanitation standards.

- All store personnel who work in any food preparation or food handling area must wash their hands with an antiseptic hand cleaner before starting work each day, or after coming in contact with any possible contamination.
- All store personnel must wash their hands with antiseptic hand cleaner after any break throughout the day.
- After washing, hands must be dried using disposable paper towels only. Never dry hands on aprons or on any type of clothing or non-disposable wiper.

W.E. GREER LTD.

Meatroom Cleaning & Sanitizing - Daily Program

Saws, Grinders, Cubes, Scales and Wrapping Machines
Before beginning cleaning routines, turn off all power switches. Disassemble all removable parts and clean using *three-compartment sink cleaning system*:

1. Rough clean with suitable tool, then thoroughly scrub in first compartment using CSG 1000 diluted at 6 oz. per gallon with hot water.
2. Clear water rinse in second compartment using clean warm water.
3. Sanitize rinse in third compartment using CSG 2000 diluted at 1 oz. per 3 gallons with cool water. Immerse for 10 minutes, drain and allow to air day.

Stationary equipment:

1. Rough clean inside and out.
2. Clean with solution of CSG 1000 diluted at 6 oz. per gallon with hot water.
3. Apply cleaner disinfectant with foam gun or pressure washer. Apply agitation as required. Allow 10 minutes contact time.
4. Flush and rinse with clear water.
5. Reassemble equipment when dry.

Knives & Hand Tools
All cutting and sharpening utensils should be cleaned and disinfected twice a day. Use the three-compartment sink cleaning routine noted above.

Trays, Pans, Tubs
Clean at the end of each day using the three-compartment sink cleaning routine as noted above.

Cutting Tables & Blocks

1. Rough clean with suitable scraper.
2. Clean and degrease with CSG 1000 diluted at 6 oz. per gallon with hot water.
3. Apply cleaner disinfectant with foam gun or pressure washer. Apply agitation as required. Allow 10 minutes contact time.
4. Flush and rinse with clear water.
5. Mist CSG 2000 diluted at 1 oz. per 3 gallons of water on all surfaces that have direct food contact.

Food Preparation Areas

Conveyor Belts, Meat Hooks, Cold Box Doors

1. Clean and degrease with CSG 1000 diluted at 6 oz. per gallon with hot water.
2. Apply cleaner disinfectant with foam gun or pressure washer. Apply agitation as required. Allow 10 minutes contact time.
3. Flush and rinse with clear water.

Display Case Exteriors

1. Clean and degrease with CSG 1000 diluted at 6 oz. per gallon with hot water.
2. Apply cleaner disinfectant with foam gun or trigger sprayer. Apply agitation as required. Allow 10 minutes contact time.
3. Flush and rinse with clear water.

Floors

1. Pick up litter from floor and sweep thoroughly.
2. Clean and degrease with CSG 1000 diluted at 6 oz. per gallon with hot water.
3. Apply cleaner disinfectant with foam gun or pressure washer. Apply agitation as required. Allow 10 minutes contact time.
4. Flush and rinse with clear water.

W.E. GREER LTD.

Meatroom Cleaning & Sanitizing - Weekly Program

Display Case Interiors

1. Move all stock into cooler.
2. Move all racks to one end for cleaning later in program.
3. Pick up all loose debris.
4. Insert low-pressure sprayer nozzle directly into drain and flush with CSG 1000 diluted with 6 oz. per gallon with hot water.
5. Clean air vents with low-pressure sprayer.
6. Clean and degrease racks, pans, sides and bottom of case with CSG 1000 diluted at 6 oz. per gallon with hot water.
7. Apply cleaner disinfectant with foam gun, pressure washer or bucket and brush. Apply agitation as required. Allow 10 minutes contact time.
8. Flush and rinse with clear water.

Cooler, Carts, Walls (in Meatroom & Receiving Room)

1. Clean and degrease all surfaces with CSG 1000 diluted at 6 oz. per gallon with hot water.
2. Apply cleaner disinfectant with foam gun, pressure washer or bucket and brush. Apply agitation as required. Allow 10 minutes contact time.
3. Flush and rinse with clear water.

Floor Degreasing

1. Remove all movable objects and sweep up litter.
2. Clean and degrease with CSG 1000 diluted at 16 oz. per gallon with hot water.
3. Apply cleaner disinfectant with foam gun, pressure washer or bucket and brush. Apply agitation as required. Allow 10 minutes contact time.
4. Flush and rinse with clear water.
5. Mist CSG 2000 on entire floor diluted at 1 oz. per 3 gallons.

Food Preparation Areas

3-Compartment Sink Cleaning System

	1st Tank	2nd Tank	3rd Tank	Final Step
Water	Hot	Warm	Cool	Drain and Air Dry
Use	CSG 1000	Clear Water	CSG 2000	
Dilution	6 oz per gallon		1 oz per 3 gallons	
Cleaning Procedures	Wash Thoroughly	Rinse	Sanitize	

W.E. GREER LTD.

Deli – Cleaning & Sanitizing - Daily Program

Exterior – Deli Case, Barbecue & Holding Case

1. Clean and degrease all surfaces with CSG 1000 diluted at 6 oz. per gallon with hot water.
2. Apply cleaner disinfectant with foam gun, pressure washer or bucket and brush. Apply agitation as required. Allow 10 minutes contact time.
3. Flush and rinse with clear water.

Slicers, Scales, Converters, Knives, Pans

Before beginning cleaning routines, turn off all power switches. Disassemble all removable parts and clean using *three-compartment sink cleaning system*:

1. Rough clean with suitable tool, then thoroughly scrub in first compartment using CSG 1000 diluted at 6 oz. per gallon with hot water.
2. Clear water rinse in second compartment using clean warm water.
3. Sanitize rinse in third compartment using CSG 2000 diluted at 1 oz. per 3 gallons with cool water. Immerse for 10 minutes, drain and allow to air day.

Rough clean stationary equipment inside and out:

1. Clean with solution of CSG 1000 diluted at 6 oz. per gallon with hot water.
2. Apply agitation as required. Allow 10 minutes contact time.
3. Flush and rinse with clear water.
4. Mist CSG 2000 diluted at 1 oz. per 3 gallons of water on all surfaces that have direct food contact.

Floors

1. Pick up litter from floor and sweep thoroughly.
2. Wet mop floor with CSG 1000 diluted at 6 oz. per gallon with cool water.
3. If floors are heavily soiled apply CSG 1000 to floor at 16 oz. per gallon and agitate as required. Allow 10 minutes contact time.
4. Flush and rinse with clear water.

Food Preparation Areas

Deli – Cleaning & Sanitizing - Weekly Program

Interior - Deli Case & Barbecue

1. Clean interiors with solution of CSG 1000 diluted at 6 oz. per gallon with hot water. Agitate as required. Allow 10 minutes contact time.
2. Flush and rinse with clear water.
3. Mist CSG 2000 diluted at 1 oz. per 3 gallons of water on all surfaces that have direct food contact.

W.E. GREER LTD.

Bakery – Cleaning & Sanitizing - Daily Program

Trays, Pans & Tools

Clean using three-compartment sink cleaning system:

1. Scrub thoroughly in first compartment using CSG 1000 diluted at 6 oz. per gallon with hot water.
2. Clear water rinse in second compartment using clean warm water.
3. Sanitize rinse in third compartment using CSG 2000 diluted at 1 oz. per 3 gallons with cool water. Immerse for 10 minutes, drain and allow to air dry.

Tables & Countertops

1. Clean with solution of CSG 1000 diluted at 6 oz. per gallon with hot water.
2. Apply agitation as required. Allow 10 minutes contact time.
3. Flush and rinse with clear water.

Exterior of Ovens, Proof Box, Freezers & Sink

Clean and degrease with CSG 1000 diluted at 6 oz. per gallon with hot water.

Floors

1. Pick up litter from floor and sweep thoroughly.
2. Wet mop floor with CSG 1000 diluted at 6 oz. per gallon with cool water.

Mist CSG 2000 diluted at 1 oz. per 3 gallons of water on all surfaces that have direct food contact.

Bakery – Cleaning & Sanitizing - Weekly Program

Display Shelves

1. Clean and degrease with CSG 1000 diluted at 6 oz. per gallon with hot water.
2. Apply agitation as required. Allow 10 minutes contact time.
3. Flush and rinse with clear water.

Exterior of Ovens, Filter Screens, Hoods, Interior of Proof Box

1. Clean and degrease with CSG 1000 diluted at 16 oz. per gallon with hot water.
2. Agitate as required. Allow 10 minutes contact time.
3. Flush and rinse with clear water.

Walls

Spot clean as required using a trigger sprayer and CSG 1000 diluted at 6 oz. per gallon with water.

Food Preparation Areas

Produce – Cleaning & Sanitizing - Daily Program

Tables, Scales, Wrapping Machines, Sinks

1. Clean and disinfect with solution of CSG 1000 diluted at 6 oz. per gallon with hot water.
2. Apply cleaner disinfectant with foam gun or pressure washer. Apply agitation as required. Allow 10 minutes contact time.
3. Flush and rinse with clear water.

Floors

1. Pick up litter and sweep floor thoroughly.
2. Clean and disinfect with solution of CSG 1000 diluted at 6 oz. per gallon with hot water.
3. Apply agitation as required. Allow 10 minutes contact time.
4. Flush and rinse with clear water.

W.E. GREER LTD.

Produce – Cleaning & Sanitizing - Weekly Program

Carts, Conveyors, Interior and Exterior of Display Cases, Exterior of Ice Machine, Cooler Floors, Walls and Cooler Units

1. Clean and disinfect with solution of CSG 1000 diluted at 6 oz. per gallon with hot water.
2. Apply cleaner disinfectant with foam gun or pressure washer. Apply agitation as required. Allow 10 minutes contact time.
3. Flush and rinse with clear water.

Floors

1. Pick up litter and sweep floor thoroughly.
2. Clean and disinfect with solution of CSG 1000 diluted at 6 oz. per gallon with hot water.
3. Apply agitation as required. Allow 10 minutes contact time.
4. Flush and rinse with clear water.

Walls

Spot clean as required using a trigger sprayer and CSG 1000 diluted at 6 oz. per gallon with water.

Mist CSG 2000 diluted at 1 oz. per 3 gallons of water on all surfaces that have direct food contact.

Produce – Cleaning & Sanitizing - Monthly Program

Interior of Ice Machine

1. Clean and disinfect with solution of CSG 1000 diluted at 6 oz. per gallon with hot water.
2. Apply cleaner disinfectant with foam gun or pressure washer. Apply agitation as required. Allow 10 minutes contact time.
3. Flush and rinse with clear water.

CSG 1000 – Cleaner Disinfectant

Description
CSG 1000 is a concentrated liquid cleaner disinfectant designed as part of the CSG Food Service System for cleaning and disinfecting food, meat and poultry processing areas. CSG 1000 can be used as a one-step cleaner-disinfectant-sanitizer, or in combination with CSG 2000 to leave a clean, rinsed and sanitized surface.

CSG 1000 contains a dual quaternary ammonium chloride disinfectant active ingredient to provide broad range kill of numerous bacteria found in food processing areas. Odor causing bacteria are greatly reduced, producing fresh sanitary conditions. In addition, CSG 1000 contains one of the most effective combinations of builders and detergents to produce effective and low cost cleaning. Oily and greasy soils are emulsified and dispersed so as to produce a clean and film-free surface.

Advantages
- **Concentrated** – At use dilutions of 4%, effective cleaning and disinfection takes place. May be prediluted or metered into pressure wash, floor scrubbers or manual washing equipment.
- **Balanced ingredients** – Many products load up on "low cost" builders to give their products "punch". Cleaning studies, however, have shown that a higher ratio of expensive "wetting agents" will produce more effective cleaning results. Maximum cleaning efficiency is obtained from the CSG 1000 formula.
- **No solvents** – Many cleaners use solvents like butyl cellosolve to give increased penetration of greasy deposits. CSG 1000 will match stride with "butyl" type cleaners without the odor and safety problems associated with using butyl cleaners.
- **Chelated** – The addition of "chelating" or water softening agents in the formula allows CSG 1000 to work equally well in soft or hard water. No loss in performance of either cleaning or disinfecting in water hardness up to 400 ppm.
- **Free Rinsing** – Due to the soil suspending characteristics of CSG 1000, surfaces are rinsed clean with no residual film or spots. Even heavy deposits of oily and greasy soils are eliminated to produce "like new" surfaces.

Use Applications
CSG 1000 was designed for use in food processing areas including meat rooms, storage areas, fish processing and poultry processing plants. In addition, CSG 1000 is an excellent general purpose cleaner in any area where oily, greasy soils exist. Surfaces cleaned with CSG 1000 will provide residual sanitizing protection if not water rinsed, however, a water rinse followed by a sanitizing rinse with CSG 2000 is also a recommended procedure.

Application Technique
Follow directions on label for proper cleaning disinfection. It is important to allow adequate contact time for proper bacterial "kill". As with all alkaline detergent cleaners, increased cleaning efficiency is experienced with increased temperature of solution.

Caution
CSG 1000 is a concentrated alkaline cleaner and can cause damage to eyes and skin. Avoid contact with skin, eyes and clothes. Read label and material safety data sheet completely before use.

Food Preparation Areas

CSG 2000 Sanitizer Rinse Agent

Description
CSG 2000 is a final sanitizer for use with CSG 1000 or CSG 3000 as part of the total CSG Food Service System. Using a dual quaternary ammonium sanitizer, CSG 2000 provides effective sanitizing when used as directed. At 200 ppm active "quat", it is an effective sanitizer against E. coli and S. aureus in water of up to 750 ppm hardness.

Advantages
- **Low Odor** - Unlike many disinfectants such as chlorine releasing agents (bleach, etc.), pine oils and phenols, CSG 2000 is very low in odor and is, in fact, a true deodorant.
- **Low Toxicity** - At use dilution, provides a working solution which is very low in nasal irritation and skin irritation.
- **Long Active Life** - Since active component is non-volatile (unlike chlorine), working solutions stay active longer.
- **Good Storage Stability** - Activity of product will not decrease during long term storage.
- **Low Cost Treatment** - Treatment cost per unit surface area is much lower than for most other types of disinfectants.
- **Broad Spectrum Action** - Bactericidal, Fungicidal, Virucidal

Use Applications
CSG 2000 was designed to be used as the final product in the CSG Food Service System. It is a very effective sanitizer against E. coli and S. aureus when used as a final rinse after cleaning with CSG 1000 Cleaner Disinfectant or CSG 3000 Foam Cleaner.

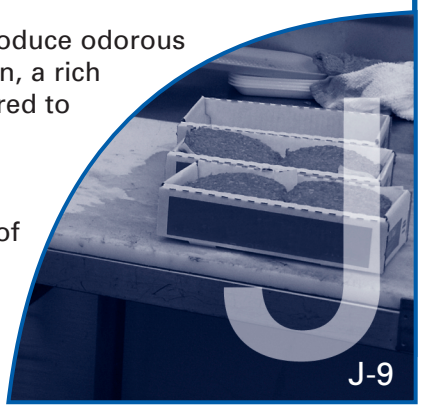
Application Technique
To prepare a 200 ppm "Quat" Sanitizing solution, add 10 mL of CSG 2000 to 5 L of water. Apply solution to previously cleaned and potable water rinsed surfaces and allow contact time of at least 60 seconds. Allow to air dry. Prepare a fresh solution for each use.

W.E. GREER LTD.

CSG 3000 - Foam Cleaner

Description
CSG 3000 is a blended liquid product designed as part of the CSG Food Service System for cleaning of inclined surfaces in food, meat, poultry and fish processing areas. It contains a high level of grease-cutting builders as well as high foaming surfactants. This combination allows production of thick stable foam which clings to vertical surfaces and penetrates deeply into oily, greasy residues.

CSG 3000 contains no "butyl" type solvents or other solvent materials that will produce odorous or toxic solvent vapors. When applied by pressure washer system with air injection, a rich stable foam is produced with either cold or hot water although hot water is preferred to help liquefy solid grease deposits and enhance detergent action.



Advantages
- **Concentrated Liquid** - Low viscosity, high solids means maximum economy of use in metering devices or proportioning systems.
- **Chelated** - Works well with hard or soft water source. No residual water hardness film.
- **Stable Foam** - Longer contact time with soil particles means cleaner and better rinsed surfaces.

- **Non-solvent** - Many cleaners depend on butyl cellosolve or other solvents to obtain cleaning degreasing action. Butyl cellosolve is quite odorous especially when used at high temperatures. It also carries a low TLV (Threshold Limit Value) for skin contact and is becoming an increasing safety and handling concern. CSG 3000 contains no solvents.
- **Blended Surfactants** - A unique blend of anionic surfactants provides a rapid penetration and removal of tough oily and greasy soils.
- **Free Rinsing** - Selected builders are added to improve both detergency and rinsing. Surfaces come clean and streak free.

Use Applications
CSG 3000 was designed for use in food processing areas including meat rooms, storage areas, and fish and poultry processing plants. Best results are obtained when CSG 3000 is applied with a "foam gun" pressure spray unit. At a recommended use dilution of 5-10%, CSG 3000 will produce rich stable foam with excellent cleaning action.

Application
May be pre-diluted if necessary to meet the metering requirements of existing equipment. Concentration of product at nozzle should be 5-10% although a lower concentration may be used for light cleaning duties. A temperature of 120-160°F (50-70°C) produces the best cleaning results since greasy solids are liquefied above this temperature and soil penetration is more complete.

W.E. GREER LTD.

CSG 4000 - Grease Trap/Drain Cleaner/Degreaser/Deodorizer

Description
CSG 4000 is a powerful 100% organic solvent blended specifically for rapid and safe cleaning of grease traps and drain pipes. It contains deep penetrating citrus solvent plus emulsifiers for rapid dissolving and breakup of grease and oils. Water rinsability is achieved by coupling agents that disperse soil particles and allow complete flushing of surfaces.

CSG 4000 contains no petroleum solvents or harmful chlorinated solvents like orthodichloro benzene which have been used in grease traps. This means a more "environmentally safe" product which can be safely flushed to most waste treatment systems (check with local authorities first). No need for hot water. CSG 4000 works quickly and completely in cold water.

CSG 4000 has hundreds of other uses too. It is an excellent cleaner for heavy machinery, engines, road tar or anywhere oil and grease is a problem.

Advantages
- **100% Organic Formula** - Every ounce goes to work immediately and completely.
- **Added Detergents** - Water rinsing is easy. No plugging or sticking.
- **No Petroleum or Chlorinated Solvents** - Environmentally safer to use.
- **Pleasant Citrus Odor** - Cleans and leaves refreshing after aroma.
- **Liquid Concentrate** - May be water diluted or metered for use.

Use Applications
CSG 4000 was designed for use in grease trap and drain cleaning but has many other uses. It will penetrate and clean greases, oils, tars, etc. like no water-based cleaner can. Best results are obtained when using full strength but for many clean ups, a dilution with up to 5 parts water produces excellent results.

Food Preparation Areas

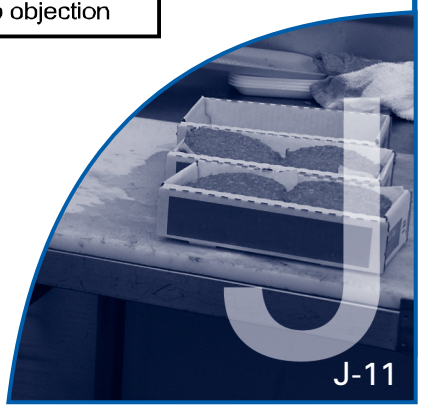
Application
As a grease trap or drain cleaner, may be added as required down the drain or by automatic pump feed. Daily use of small quantities normally will prevent clogging whereas large slugs may be required to remove buildup.

For cleaning road machinery, automotive engine parts, road tar, garage floors, etc., dilute with up to 3 parts of water. Apply liberally by spraying, pouring or wiping on surface. Allow 5-10 minutes contact time agitating with brush or cloth if necessary. Flush clean with water. NOTE: Always test painted or enameled surfaces first to determine product safety.

W.E. GREER LTD.

CSG Product Specifications

	CSG 1000	CSG 2000	CSG 3000	CSG 4000
Form	Liquid	Liquid	Liquid	Liquid
Color	Yellow	Coloress	Amber	Colorless/Straw
Odor		Low		Citrus
Active Content		10%		
Active Ingredient		Myristalkonium chloride, quat. 14		
% Non-Volatile	15		26	5.1
pH as Supplied	13.1	7-7.5	13.5	
pH Use	11.9		12-13	
Solvents	None		None	Organic citrus
Flash Point			None	50°
Foam Level	Medium foam, fast break		High	
Water Solubility	Complete	Complete	Complete	Emulsifiable
Cleaning Effeciency				
Freeze-Thaw	No effect / 3 cyles	No effect / 3 cyles		No effect / 3 cycles
Shelf Life	1 year minimum	1 year minimum		1 year minimum
Food Plant Status	No objection			No objection



W.E. GREER LTD.

Preventative Maintenance of Equipment

Automatic Floor Scrubber
Buckets and Wringers
Chemicals
Custodial Carts
Dust Mops
Floor Machines
Wet Mops
Wet and Dry Vacuums

"OUR REPUTATION IS SPOTLESS"

Preventative Maintenance of Equipment

Purpose
To insure the efficient operation of the custodial department, it is crucial that cleaning supplies be well maintained. To achieve proper handling of equipment and supplies, the following procedures should be rigorously adhered to.

Dust Mops

Care and Storage:
- Clean by shaking inside a plastic bag, or vacuum the trapped soil from mop with the vacuum hose and dusting tool.
- Do all clean up in the storage areas only.
- Return mops to the laundry on a regular schedule.
- Hang up the dust mops in the storage area when not in use.

Buckets and Wringers

Cleaning and Storage:
- After each use, rinse and wipe out the buckets.
- Clean inside and outside of the buckets with a germicidal detergent solution; dry.
- Clean the wringer with a germicidal detergent solution; dry.
- Store buckets upside down.
- Oil casters on bucket and working parts of wringer regularly.
- Replace bumpers on buckets when necessary.

W.E. GREER LTD.

Wet Mops

Care and Storage:
- Freshly laundered mops should be issued at the start of each shift.
- Mops should be washed and wrung out in a clean germicidal solution after completing a cleaning task.
- Mops not in use should be hung away from contact with the wall until needed.
- At the end of each shift, all wet mops should be rinsed, wrung out, bagged and returned to the laundry

Custodial Carts

Care and Storage:
- All waste containers must be emptied at the end of each shift.
- Damp wipe the carts with a germicidal solution before storing.
- Replace depleted supplies.
- Oil casters as needed.

Preventative Maintenance of Equipment

Chemicals

Proper Use:

- All chemicals must be approved for use.
- Germicidal detergent solutions should be used in concentrations and by type as prescribed by the label directions.
- Read instructions for usage and carefully follow dilution instructions.
- Keep all safety information concerning proper chemical usage.
- Keep chemicals in original containers.
- Do not repackage chemicals.
- Do not mix chemicals as dangerous reactions may result.

W.E. GREER LTD.

Wet and Dry Vacuums

Proper Use:

- All vacuums must be operated with bacteria filters properly installed.
- Start vacuuming next to the machine; work away from machine.
- Use proper tools.
- Prevent machine from running over cord.
- Inspect cord regularly for damage.

Cleaning and Storage:

- Empty vacuum immediately upon completing task.
- Clean or replace the bacteria filter.
- Rinse the vacuum tank with a germicidal solution.
- Wipe the exterior of the machine.
- Remove debris from hoses, wands and tools and wipe them clean.
- Wipe the cord and wind it loosely around the machine.
- Place the motor and cover sideways on the tank to allow for thorough drying.
- Check the power cord. Do not use with damaged power cord.

Preventative Maintenance of Equipment

Floor Machines

Proper Use:

- Mount the brush or pad driver by hand.
- Do not "hop" or run the floor machine over a brush or a pad driver and attach by starting the machine motor.
- Start the machine only when the brush is securely locked on to the pad driver.
- Prevent machine from running over electric cord.
- Inspect cord frequently for damage.
- Remove plug from outlet carefully.
- Do not jerk the plugs from the outlets.
- Do not use an adapter or "cheater" plug.

Cleaning and Storage:

- Wipe cord after each use with a cloth dampened with a germicidal solution.
- Wind cord loosely around hooks of the machine.
- Remove the brush or the pad driver.
- Wash and dry the brush with the bristles up.
- Wash floor pads after each use.
- Replace floor pads when they become limp or worn.
- Wipe machines with a cloth dampened with a germicidal solution.
- Polish the metal on the machine.
- Oil wheels as needed.

Burnishers

Cleaning and Storage:

Daily

- Clean and remove any debris from skirt.
- Check dust collection bags on each side and replace when full.
- Check conditions of floor pad and replace if necessary.
- Wipe outside of machine with a clean damp cloth.
- If battery powered, charge machine, but only if it has been used for one hour or more.

Weekly

- If battery powered, check battery fluid levels. Add distilled water when level is below lead cells. Fill to cover the lead cells, ONLY after the machine has been charged.

Monthly

- Lubricate machine chain.

Preventative Maintenance of Equipment

Automatic Floor Scrubber

Proper Use:

- Operate machine at a moderate speed.
- Use correct amount and type of detergent.
- Empty and clean recovery tank before refilling solution tank.

Cleaning and Storage:

Daily

- At the end of each daily use, empty and clean both tanks.
- Clean the brushes or pads. Clean the hopper on a cylindrical machine.
- Clean the float screen, solution filter and vacuum filter.
- Clean the battery connector with a mild solution of ammonia and water.
- Damp wipe the exterior with a germicidal solution
- Take squeegee of machine and clean in floor sink. Wipe with a clean cloth.
- Check and rinse all hoses.
- Check the casters, gearboxes, belts and chains.
- Charge the batteries in a well ventilated area but only if machine has be used for more than two hours.
- Store the automatic scrubber in a clean, dry room with the brushes and squeegee in the "up" position.

Weekly

- Check battery liquid levels and add distilled water when level is below lead cells. *Fill to cover the lead cells **only** and only **after** the machine has been charged.*
- Grease squeegee adjustment and thumb nuts.

Monthly

- Check squeegee blades (blue in color) and replace if ripped or damaged.
- Check side skirt rubber and replace if ripped or damaged.

W.E. GREER LTD.

Carpet Extractor

Cleaning and Storage:

Daily

- Clean and remove any debris from the pick-up tool.
- Clean debris off brush.
- Clean dome where hoses go into the machine.
- Remove dirty water from recovery tank and rinse
- Wipe electrical cord.
- Wipe outside of machine with a clean, damp cloth.

Preventative Maintenance of Equipment

Weekly

- Clean motor filter on bottom.
- Clean ball float assembly.
- Check the power cord. Do not use with damaged power cord.

Monthly

- Check solution valve / spray nozzle and lubricate if necessary.

Yearly

- Check the vacuum motor brushes.

WHMIS

- Introduction
- Occupational Safety and Health
- Workers Compensation Board
- Three Components of WHMIS
- Supplier Labels
- Information Chain
- Hazard Identification
- Material Safety Data Sheet
- Cleaning Actions
- Toxicological Properties
- Product Inventory
- Employer Responsibilities
- Worker Responsibilities
- Pop Quiz

L WHMIS

Introduction

The Workplace Hazardous Material Information System (WHMIS) is a nationwide system to provide information on hazardous materials used in the workplace. WHMIS recognizes the interests of workers, employers, suppliers and regulators, balancing the worker's right to know with industry's right to protect confidential business information.

Exposure to hazardous material can cause or contribute to a variety of health effects such as irritation, burns, sensitization, heart ailments, kidney and lung damage and cancer. Some materials may also be safety hazards that can contribute to fires, explosions and other accidents if improperly stored or handled.

Findings of a recent federal social-economic impact analysis estimated the social costs of exposure to hazardous materials in the workplace to be about $600 million a year. Approximately 1 in 4 Canadian workers is exposed to chemical hazards on the job.

Due to the seriousness of these safety and health problems and the lack of information available to employers and employees, the federal-provincial-territorial governments agreed to implement WHMIS with the goal of reducing the incidence of illness and injury caused by hazardous materials in the workplace.

W.H.M.I.S. stands for:

Workplace - Every workplace in Canada is obligated to be W.H.M.I.S. compliant, although the program is managed on a provincial basis.

Hazardous Materials - These are materials which present some type of danger or hazard to those interacting with them.

Information System - All the components of W.H.M.I.S. are designed to work together to produce a system for getting information from people who produce materials, through to those people who use them.

Your right in law

W.H.M.I.S. gives you the right in law to know about the hazards of all substances that you are coming into contact with.

W.E. GREER LTD.

Occupational Safety and Health

Like all rights and privileges, this comes with responsibilities. Like any other occupational and health requirements, you are mandated to comply with the W.H.M.I.S. regulations in your workplace.

- W.H.M.I.S. compliance applies to all workplaces in which exiting O.S.H. regulations apply.
- W.H.M.I.S. uses symbols to identify hazards. These symbols are different than the consumer hazardous product symbols that appear on products purchased for home use.

L WHMIS

Workers Compensation Board

W.H.M.I.S. is policed by the Workers Compensation Board.

There are provincial variations in some of the compliance requirements. It is possible to obtain booklets from the workers compensation board which outlines these slight variations.

The workers compensation board is able to do inspections without warning. They can make recommendations, levy penalties often running into thousands of dollars, and even shut down a facility if they believe that it is unsafe.

The four questions they ask if they do a W.H.M.I.S. inspection are:

1. What do you know about the hazards of __ chemical?
2. How would you protect yourself from the hazard?
3. How would you handle an accident or spill of __ chemical?
4. Where do you find further information?

W.E. GREER LTD.

Three Components of W.H.M.I.S:

1. **Labels:** (manufacturer and workplace) on hazardous materials and their containers which alert employers and workers to the dangers of products and basic safety precautions.
2. **Material Safety Data Sheets:** (M.S.D.S.) technical bulletins which provide detailed hazard and precautionary information on the product;
3. **Training:** (worker education) programs which provide instructions on hazards and training in work procedures.

Supplier Labels - Required Information

1. Product Identifier
2. Supplier Identification
3. Reference To M.S.D.S.
4. Hazard Symbols
5. Risk Phrases
6. Precautions
7. First Aid

Employers are required to develop Workplace Labels when:

- Controlled products are produced at the workplace
- Supplier labels are removed, defaced or become illegible
- Controlled products are transferred to another container

Workplace Labels must contain:

- Product Identifier (must be identical to that of the M.S.D.S.)
- Information on the safe handling of the product (ie. Hazard Statement and Precautionary Measures)
- Statement that an M.S.D.S. is available

L WHMIS

Optional Information on a Workplace Label:

- W.H.M.I.S. label border (diagonal hash marks)
- Hazard Symbols • Product Code or Number
- Additional hazard symbols (e.g. HMIS, NFPA)
- Workplace Label can be bilingual - the second language being any language used commonly at the workplace.

Information Chain (Labels - M.S.D.S. - Training - Implementation)

The manufacturer must:

- Produce the data sheet based on all available data about the product and its ingredients.
- Affix a W.H.M.I.S. panel to his product and the outside case where needed.

The customer must:

- Collect and keep updated copies of M.S.D.S. for each product in facility.
- Use information on labels and M.S.D.S. to acquire correct protective equipment and clothing, and to provide procedures and training in the workplace.
- Place workplace labels on all product decanted from original containers and not used up in a single shift.

The worker must:

- Comply with W.H.M.I.S.
- Follow through on correct procedures.

W.E. GREER LTD.

Hazard Identification

W.H.M.I.S. breaks hazards down into six categories and each one carries a different symbol.

Class A: Compressed Gas

- Gas cylinders
- Fire extinguishers
- Aerosol cans

Precautions:

- Do not use around heat
- Do not store around heat
- Do not dispose of around heat
- Do not smoke
- Do not drop containers

Class B: Flammable and Combustible Materials

- Liquids
- Solids
- Gases
- Vapors

Precautions:

- Keep away from heat
- Keep away from open flame
- Keep away from static charges

Class C: Oxidizing Material
Three components are always present at a fire:

- There is always a fuel. This could be combustible material like paper or building materials. It could sometimes be a solvent bound chemical.
- An ignition source is needed to initiate the fire. This could be an open flame, cigarette, static charge from a motor, or sometimes it only needs heat. This is especially so where there are large amounts of oxygen present.
- Oxidizers are chemicals which can supply large amounts of oxygen or other chemicals which act like oxygen in a fire. Some oxidizers are so powerful that you can set fire to paper just by pouring the chemical on the paper. An example of this is chromic acid.

Class D: Toxic Substances
The word toxic refers to a substance which can cause adverse effects to the body in some manner. This could be as small as a skin rash or itchy eyes, or as serious as possible fatal effects. One symbol is not sufficient to cover all the information needed and so there are three different symbols.

1. **Material causing immediate and serious toxic effect** - The first symbol D1 tells you that the product has the potential to cause fatal results from unprotected contact.
2. **Material causing other toxic effects** - D2 symbol tells you that while the potential toxicity is not immediate or serious, there are either some lesser toxic effects, or that there are some chronic or long term effects possible from unprotected contact over a prolonged period (ie. eye irritant, skin irritant, respiratory irritant, long term effect from repeated contact)
3. **Biohazardous infectious materials**- Biohazardous materials contain pathogens (disease causing organisms).

W.E. GREER LTD.

Class E: Corrosives

- Corrosive liquids
- Corrosive vapors
- Skin
- Eyes
- Respiratory tract

TIP: Eyewash Stations

- Keep them clean
- Change fluid in bottles
- Keep written record
- Post signs
- Train on use
- 15 min flush-ability minimum

Class F: Dangerously Reactive Material
What should you always do before touching a reactive material?

- Read the M.S.D.S. so that you understand the nature of the reactivity which could occur.

WHMIS

Controlled Product Categories and Corresponding Hazard Symbols

Class A Compressed Gases

Class B Flammable and Combustible

Class C Oxidizing Material

Class D Poisonous and Infectious Material

1. Material Causing Immediate and Serious Toxic Effects

2. Material Causing Other Toxic Effects

3. Biohazardous Infectious Materials

Class E Corrosive Material

Class F Dangerously Reactive Material

WHMIS

Material Safety Data Sheet

A material safety data sheet is a technical document which provides detailed and comprehensive information on a controlled product related to:

- Health effects of overexposure to the product
- Hazard evaluation related to the product's handling, storage or use
- Measures to protect workers at risk of overexposure, and
- Emergency procedures

The data sheet may be written, printed or otherwise expressed, and must meet the availability, design and content requirements of WHMIS legislation. The legislation provides for flexibility of design and wording but requires that a minimum number of categories of information be completed and that all hazardous ingredients meeting certain criteria be listed subject to exemptions granted under the Hazardous Materials Information Review Act.

The Purpose of the Data Sheet

The data sheet is the second element of the WHMIS information delivery system and is intended to supplement the alert information provided on labels. The third element of the system is the education of workers in hazard information on controlled products, including instruction in the content and significance of information on the M.S.D.S..

The data sheet is an essential starting point in the development of a worksite program for the safe use of controlled products:

1. As a technical information reference;
2. As a document which can be distributed for the use of persons with responsibilities related to its content; for example, health and safety coordinators and committees, first aid personnel, fire response teams, and in work areas where the product is used;
3. As a starting point for the implementation of control measures to protect workers;
4. As a key element of worker education, and
5. As a means of updating a program when revisions to data sheets come available.

M.S.D.S. Categories

1. Product information
   - Product identifier
   - Product use
   - Manufacturers name/address
   - Suppliers name/address
   - Emergency telephone
   - Numbers

2. Hazardous ingredients
   - Ingredients
   - Percentage (%)
   - C.A.S. #
   - LD50 (species and route)
   - LC50 (species and route)

3. Physical data
   - Physical state
   - Odour and appearance
   - Odour threshold
   - Vapour pressure
   - Vapour density
   - Evaporation rate

- Boiling point
- Freezing point
- pH
- Specific gravity
- “Coeff” water/oil distribution

4. Fire & explosion hazard
   - Flammable?
   - Means of extinction
   - Flashpoint
   - Auto-ignition
   - Hazardous combustion products
   - Sensitivity to impact
   - Sensitivity to static discharge

5. Reactivity data
   - Chemical stability
   - Incompatibility with other substances
   - Reactivity? Under what conditions?
   - Hazardous decomposition products

6. Toxicological properties
   - Acute exposure
   - Chronic exposure
   - Exposure limits {ppm}
   - Irritancy
   - Sensitization
   - Carcinogenicity
   - Teratogenicity
   - Mutagenicity
   - Reproductive toxicity
   - Synergistic products

7. Preventive measures
   - Personal protective equipment
   - Type of glove
   - Specific respirator
   - Type of eye protection
   - Specific footwear
   - Specific clothing
   - Other items
   - Engineering controls, ventilation, etc
   - Leaks & spills
   - Waste disposal
   - Storage requirements
   - Shipping Info (T.D.G.)

8. First aid measures
   - Specifics of treatment

9. Preparation information
   - Name
   - Phone number
   - Date

WHMIS

Cleaning Actions

- Penetrating action
- Breaking surface tension
- Surfaces
- Emulsifying / lifting
- Suspending / free rinsing

Toxicological Properties

- Respiratory Tract
  1. Fine mucus membrane easily damaged.
  2. Oxygen gets into blood via lungs.
  3. Gases can get into blood.
- Chemicals can be absorbed into unprotected skin.
- Many chemicals can de-fat skin.
- Blood carries chemicals to all the body organs.
- Human kidneys process approximately 1,100L of blood daily.
- Gloves should be standard practice for cleaning staff.

W.E. GREER LTD.

Product Inventory

- Collect M.S.D.S.
- Product eliminations/changes
- Update inventory
- M.S.D.S. dates
- Inform fire department of hazardous materials
- Create procedures
- Make written procedure record
- Purchase protective items
- Train staff
- Update training at least annually

Employer Responsibilities

1. Provide all hazard information received from suppliers.
2. Provide all hazard information of which the employer is or ought reasonably to be aware.
3. Develop and implement a program of instruction on:
   A. Labels and M.S.D.S.
      - Content Required
      - Purpose Of Information
      - Significance Of Information

   B. “Means Of Identification”
      - Colour, Number, Letter, Etc., Codes
      - Other Means, Used With Transfer Systems, Reaction Systems And Hazardous Waste.

C. Training In Work Procedures Related To Controlled Products
- Safe Storage, Handling, Use, and Disposal.
- Fugitive Emissions
- Emergencies

Worker Responsibilities

1. Protect The Health and Safety Of Him/Herself and Co-Workers
2. Cooperate With Employer

Example
- Receive and learn information (on controlled products) which the employer provides.
- Use information and training to perform work safely (ie. follow procedures).
- Inform employer if information is inadequate.
- Work with employer in development, implementation and review of program as required.

W.E. GREER LTD.

Pop Quiz

What types of flammable materials are classified by the flammable symbols?
1. Compressed gasses
2. Flammables
3. Oxidizers

What precaution should we take with all the flammable materials?
1. Do not use around heat or ignition source
2. Do not store around heat or ignition sources
3. Do not dispose of around heat or ignition sources

What type of substance requires universal precaution during clean-up?
1. All body fluids
2. Needles
3. Feminine supply disposal

What type of injury results from contact with corrosive material?
- Corrosive materials burn
- When they contact
- Moisture

What is the function of a surfactant?
- To break the surface tension of the water and allow cleaner to penetrate dirt film.

Airx 109 Plus Germicidal Detergent and Deodorant

MATERIAL SAFETY DATA SHEET

Effective Date: 06/30/98

SECTION I - PRODUCT IDENTIFICATION AND PREPARATION INFORMATION

Product Name: Airx 109 Plus

WHMIS Class: Registered Product - DIN 01975617

T.D.G. Classification: Not regulated under TDG

HEALTH	2
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	B

Manufacturer Name and Address:
W.E. Greer Limited
14704 - 119 Avenue
Edmonton, Alberta
T5L 2P1

MSDS Prepared by:
Dell Tech Laboratories Ltd.
UWO Research Park
100 Collip Circle
London, Ontario N6G 4X8
(519) 858-5021

Emergency Telephone: CANUTEC (613) 996-6666

SECTION II - HAZARDOUS INGREDIENTS

Ingredients	CAS#	Wt%	ACGIH-TLV	LC_{50}	LD_{50}
Alkyl dimethyl benzyl ammonium chloride (8001-54-5, 7173-51-5, 64-17-5)	Mixture	15-40	Not available	Not available	590 mg/kg oral, rat
Nonionic surfactant	2605-78-9	7-13	Not available	Not available	Not available
Tetrasodium ethylene diaminetetraacetate	64-02-8	1-5	Not available	Not available	3030 mg/kg oral, rat

SECTION III - PHYSICAL DATA

Boiling Point (deg C): 100
Vapour Pressure (mm Hg): Not available
Vapour Density (Air = 1): Not available
Solubility in Water: Complete
Physical State: Liquid
Appearance and Odour: Red with airicide odour

Specific Gravity (H_2O = 1): 0.995
Percent Volatile (Wt %): 81.9
Evaporation Rate (H_2O = 1): Similar
pH (as supplied): 6.8
Viscosity: Slightly viscous
Odour Threshold: Not available

SECTION IV - FIRE AND EXPLOSION DATA

Flammability: Not flammable by WHMIS criteria.
Flash Point (deg C, TCC): None **LEL:** Not applicable **UEL:** Not applicable
Hazardous Combustion Products: May include and are not limited to oxides of carbon.
Means of Extinction: Dry chemical, carbon dioxide and alcohol foam.
Special Fire Hazards: Firefighters should wear self-contained breathing apparatus.

SECTION V - REACTIVITY DATA

Conditions for Chemical Instability: Stable.
Incompatible Materials: Strong oxidizing agents and acids. Hazardous vapours may be produced when mixed with chlorinated detergents.
Hazardous Decomposition Products: May include and are not limited to oxides of carbon when heated to decomposition.

Material Data Sheet page 2

Airx 109 Plus Germicidal Detergent and Deodorant

SECTION VI - TOXICOLOGICAL PROPERTIES

Route of Entry: Eye, Skin contact, Inhalation, Ingestion

EFFECTS OF ACUTE EXPOSURE:
Eye: Contact can cause irritation.
Skin: Contact can cause irritation.
Inhalation (of Mist): Can cause nose, throat and respiratory tract irritation, coughing and headache.
Ingestion: May cause nausea, vomiting, diarrhea and other medical problems.

EFFECTS OF CHRONIC EXPOSURE:
Skin: Prolonged or repeated exposure can cause drying, defatting and dermatitis.

Irritancy: Hazardous by WHMIS criteria.
Respiratory Tract Sensitization: No data available
Carcinogenicity: Non-hazardous by WHMIS criteria.
Teratogenicity, Mutagenicity, Reproductive Effects: No data available.
Synergistic Materials: Not available.

SECTION VII- PREVENTATIVE MEASURES

Gloves: PVC, latex rubber or natural rubber. Confirm with reputable supplier first.
Eye Protection: Chemical splash goggles.
Respiratory Protection: Not normally required if good ventilation is maintained.
Other Protective Equipment: As required by employer code.
Engineering Controls: General ventilation normally adequate.
Leak and Spill Procedure: Before attempting clean-up, refer to hazard data given above. Small spills may be absorbed with non reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice.
Waste Disposal: Review federal, provincial and local government requirements prior to disposal.
Storage Requirements: Store in closed container away from incompatible materials. Keep out of the reach of children.

SECTION VIII - FIRST AID

Eye: Immediately flush with water for 15 minutes. Remove contact lenses, if applicable, and continue to flush with water for 15 minutes. Obtain medical attention if irritation persists.
Skin: Flush with water. Obtain medical attention if irritation persists.
Inhalation: If inhaled, move victim to fresh air. If symptoms persist, obtain medical attention.
Ingestion: Do not induce vomiting. Rinse mouth with water, then drink one glass of water. Obtain medical attention immediately. Never give anything by mouth if victim is unconscious, is rapidly losing consciousness or is convulsing.

Disclaimer

Information for this material safety data sheet was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the mandatory requirements of WHMIS. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this form. If user requires independent information on ingredients in this or any other material, we recommend contact with the Canadian Centre for Occupational Health and Safety (CCOHS) in Hamilton, Ontario (1-800-263-8466) or CSST in Montreal, Quebec (514-873-3990).

Glossary

A-Z

Glossary

A

Abrasion – Wearing away or cleaning by friction.

Abrasive – A substance used to scour, scrub, smooth or polish. Abrasive particles are found in such products as cleansers, pumice stones, scouring pads and hand cleaners.

Abrasive Pads – There are 3 basic types: metal pads are a mesh from fine #11 to #3 grade; stainless steel pads are similar to metal but generally coarser and the stainless steel will not rust. Carbon silicate pads are coated over nylon, polyester or other materials.

Absorbent – A material that attracts substances from a surface to the absorbent material. Widely used in carpet cleaning and concrete cleaning.

Absorption – The passage of a material through the skin.

Accessories – Various tools that may be used in conjunction with cleaning machines and equipment (ie. a dusting tool with a wet and dry vacuum).

Acid – A water-soluble substance with pH less than 7 that reacts with and neutralizes an alkali.

Acidity – A measure of the strength of an acid. See pH and alkalinity.

Acrylic – Type of polymer popular for floor finishes. Also, a man-made synthetic fiber used in spun yarn to resemble wool in carpet.

Acrylic Styrene – Popular type of polymer blend for floor finishes.

Active Ingredients – The ingredients in a product that are specifically designed to achieve the product performance objectives.

Acute Effect – An adverse effect that develops rapidly from a short-term high-level exposure to a material.

Adhesion – A necessary component of a floor finish, which causes it to stick to the floor rather than peel, flake or powder.

Aerobe – A microorganism that requires air (oxygen for growth).

Aerosol – An extremely fine mist or fog consisting of solid or liquid particles suspended in air. Also, term used for products that mechanically produce such a mist.

Alcohol – A class of organic compounds containing one or more hydroxyl groups (OH). Alcohol is used in detergent formulations to control viscosity, to act as a solvent for other ingredients and to provide resistance to low and freezing temperatures encountered in shipping, storage and use.

Algae – Microscopic single cell plants that grow in water, contain chlorophyll and require sunlight.

Algaecide – Product that destroys algae.

Algistat – Product used to inhibit algae growth.

Alkali – A chemical substance with pH greater than 7 that reacts with and neutralizes an acid. Also called alkaline or base.

Glossary

Alkaline Residue – Unsightly film left on floor surface after stripping. A white powdery film which can best be observed by running your hand across the floor surface.

Alkalinity – Useful in removing acidic, fatty and oily soils. Soap and soap-based products are alkaline and perform well only in an alkaline medium. Detergent products can be formulated at any level of alkalinity determined by the cleaning task to be performed.

Allergic Reaction – An abnormal physiological reaction to chemical or other stimulus.

All Purpose Cleaner – A powder or liquid detergent suitable for both general house-cleaning duties and laundry. These products may not be as effective for specific cleaning jobs as products specially formulated for the task.

American Oriental – Woven American carpets of Axminister or Wilton weave in oriental colors and patterns.

Amine – A class of organic compounds containing nitrogen. Amines are often used as floor finish strippers, buffering agents in liquid laundry detergents and as fabric softeners.

Ammonia – an alkaline gas composed of nitrogen and hydrogen (NH3). 5% to 10% solutions of ammonia are sold as household ammonia. Ammonia is used to aid in removing grease and dirt from surfaces and to boost the cleaning power in grease cutters, wax strippers and general-purpose soil removers.

Anaerobic Bacteria – Bacteria that thrives in the absence of air or oxygen.

Anhydrous – The active soap content of liquid soap.

Anionic – Negatively charged part of a molecule. Anionic surfactants are widely used in high-sudsing detergents.

ANSI – American National Standards Institute; a privately funded, voluntary membership organization that identifies industrial and public needs for national consensus standards and coordinates development of such standards.

Antidote – An agent that neutralizes or counteracts the harmful effects of poison.

Antifoaming Agents – Agents necessary in floor coatings to reduce and eliminate bubbles and foam when the finishes are applied. Bubbles and foam interfere with continuous film formation and can cause cratering when the bubbles break during the drying process.

Anti-microbial – Agent that inhibits or destroys bacteria, fungi, protozoa or viruses that are pathogenic.

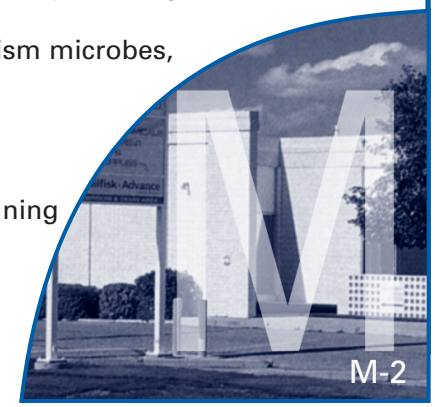
Antistatic Agent – A substance that reduces static electricity by preventing friction. Friction causes fabric (especially man-made fabrics such as nylon and polyester) to produce static electricity discharge.

Antiseptic – A chemical agent that prevents or inhibits the growth of microorganism microbes, particularly on the skin.

Antistat – Substance that reduces static electricity.

A.O.A.C. Method – Association of Official Agricultural Chemists' method of determining phenol coefficient and kill-effectiveness of disinfectant and sanitizing products.

Aqueous – A solution which contains water.



Glossary

Aromatic Solvents – Solvents made of compounds that contain an unsaturated ring of carbon atoms, typified by benzene's structure. Xylene and toluene are aromatic solvents.

Asbestos – A non-flammable mineral fiber that was once used extensively in some floor tiles, especially vinyl asbestos tile (VAT) and asphalt tile. Its use is now limited because asbestos is known to be a carcinogen.

Asepsis – Refers to the absence of pathogenic microorganisms.

Asphalt Tile – A floor tile manufactured with a mixture of synthetic fibers, lime rock, mineral fillers and coloring. Asphalt is used to bind the materials together.

Asphyxiant – A vapor or gas that can cause unconsciousness or death by suffocation. A potential hazard, particularly when working with certain chemicals in unventilated or confined areas.

ASTM – American Society for Testing and Materials.

Autoclave – A steam and disinfectant method for sterilization in hospitals.

Auto-ignition Temperature – The lowest temperature at which a flammable gas will spontaneously ignite without a spark or flame.

Automatic Scrubber – Labor-saving powered floor cleaning machine that dispenses cleaning solution to the floor, scrubs it and vacuums it up into a recovery tank.

Axminister – A carpet weave in which pile tufts are individually inserted from colored yarns arranged on spools, making possible an enormous variety of colors and patterns.

W.E. GREER LTD.

B

Bacilli – Cylindrical or rod-shaped bacteria.

Backing – The various materials that comprise the back of a carpet that secures the face of carpet pile. They include primary backing, which is frequently a woven or non-woven polypropylene, woven jute, or on scatter rugs, cotton duck. Secondary backing that is fabric (usually jute, woven or non-woven polypropylene) laminated to the back of carpet to reinforce and increase dimensional stability. Construction yarns comprising chain warp, stuffer warp, and shot fill which are interwoven with the face yarn during carpet formation, are the backings of woven carpets.

Bacteria – Single cell microorganisms not containing chlorophyll. Germs.

Bactericide – A chemical agent that destroys bacteria.

Bacteriostat – A chemical agent that prevents bacteria from multiplying and growing (doesn't kill).

Base (see Alkali) – A water-soluble substance with pH greater than 7.

Base Unit – The main power source for a "steam" type carpet cleaner.

Beater Bar – A rigid bar on a vacuum cleaner brush that agitates and loosens soil from the carpet.

Glossary

Biodegradable – Capability of organic matter to be decomposed by biological processes.

Bird's Eye – Circular blemishes on a polymer or wax surface caused by bubbles solidifying during application. Usually caused by agitation of the floor finish during the application or by applying heavy coats of finish. Also known as "fish eyes".

Bleach – A product that cleans, whitens, removes stains and brightens fabrics. It also removes stains on some hard surfaces.

Bleaching Agents – Act as soil and stain removers. They attack soil chemically, breaking it down to smaller units. Colored soils and stains are oxidized to a colorless, more easily removable form.

Bleeding – Removal of color from carpet or other floor tile material by a liquid. Some carpets may bleed with hot water. Floor tile (particularly asphalt) can bleed from an excessive concentration of stripper solution.

Blooming – A white deposit on the surface of a new concrete or magnesite floor. Is either soluble salt or magnesium chloride.

Boiling Point – The lowest temperature at which a liquid becomes a vapor.

Brighteners – Optical or fluorescent enhancers found in carpet cleaning product and fabric cleaners.

Brightwork – The chrome plumbing fixtures around sinks, fountains and the tops of toilets and urinals.

Broadloom – Term of measurement that designates the width of a carpet.

Broad Spectrum – Killing a wide variety of Gram - (negative) and Gram + (positive) organisms.

Browning (Brown Out) – A reaction that occurs in carpets when high pH solutions cause the carpet's natural coloring in the backing (usually jute) to travel up the fiber strands and discolor the carpet. Easily cured with de-browning product applications.

Buckles – Deviations in a carpet where it does not lay flat; wrinkles.

Buffer – Any substance in a fluid which tends to resist a change in pH when acid or alkali is added. Also a slang term for a floor buffing and scrubbing machine.

Buffing – Polishing with a floor machine, floor pad or brush.

Builder – A material that enhances and maintains the cleaning efficiency of a surfactant. Used to improve cleaning performance.

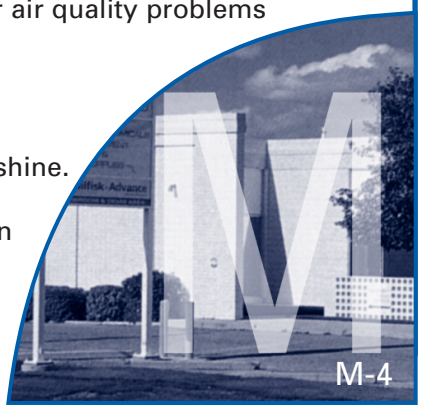
Building-Related Illness (BRI) – Refers to a specific illness brought about by indoor air quality problems (ie. Legionnaires disease).

Built Detergent – A cleaning product containing both surfactant and builder.

Burnish – To buff a floor finish before it dries or at high speeds to develop a hard shine.

Butyl Cellusolve – A trademark name for a water-soluble solvent frequently used in degreasing products. Actual name of slang term "butyl".

Bypass Motor – A wet-dry vacuum motor that employs two sources of air in the machine's operation (ie. working or vacuum air and cooling air).



Glossary

C

Calcium Carbonate – An insoluble compound that occurs naturally as chalk and limestone that results from the reaction of sodium carbonate and the hard water ion.

Carcinogen – A substance or agent capable of causing or producing cancer in mammals, including humans.

Carnuba – Natural polishing wax derived from the leaves of the carnuba palm tree in Brazil. Average yield per year from one tree is approximately four to five ounces of wax.

Carpet Cushion – A term used to describe any kind of material placed under a carpet to provide softness when it is walked upon. Also called lining, padding and underlay.

Carpet Freshener – A product designed to counteract malodor in carpets.

Carpet Squares (Tiles) – Loose-laid or self-adhesive backed squares of carpet.

Carrier – A person in apparent good health who carries a pathogenic microorganism (germ).

CAS – Abstracts and indexes information published in "Chemical Abstracts" by the American Chemical Society. "CAS Numbers" are used to identify specific chemicals or mixtures.

Castile – Originally soap made from olive oil in Castile, Spain. Now refers to any mild soap made from vegetable oils.

Catalyst – A substance that influences a chemical action.

Cationic Surfactant – A surfactant from a positively charged ionic group. The most common cationic surfactants are known as quaternary ammonium compounds such as alkyl dimethyl benzyl ammonium chloride. These are widely used as disinfectant and sanitizing products.

Caustic – Strong base (alkaline) substance that irritates the skin. Corrosive. When the term is used alone it usually refers to caustic soda (sodium hydroxide), which is used in manufacturing hard soap. It also refers to caustic potash (potassium hydroxide), which is used in manufacturing soft soap.

Ceramic Tile – Clay tile with an impervious, usually glossy, layer on the surface.

C.F.C. (chlorofluorocarbon) – CFC's have been shown to be one of the major contributors to the depletion of the ozone layer, a stratospheric barrier to high intensity ultraviolet light from the sun which would destroy life as we know it, if it were to reach the surface of the earth.

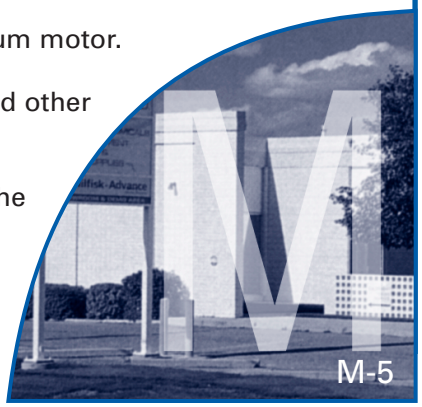
C.G.S.B. – The Canadian Government Standards Board.

C.F.M. – Cubic Feet per Minute – Describes the amount of air generated by a vacuum motor.

Chelating Agent – An organic sequestering agent used to inactivate hard water and other metallic ions in water.

Chlorinated Solvent – An organic solvent that contains chlorine atoms as part of the molecular structure. They include carbontetrachloride (vapor degreasers) chlorothene, trichlorethylene and perchlorethylene. They are being phased out of the cleaning industry.

Chlorine – Powerful oxidizing agent sometimes used as a germicide.



Glossary

Chlorine Bleach – A group of strong oxidizing agents commonly sold in an approximately 5% solution of sodium hypocholorite. As a laundry additive, liquid chlorine removes stains, aids in soil removal, whitens, disinfects, and deodorizes. Dry forms of chlorine bleach are frequently used in cleansers and automatic dish-washer detergents. Bleach should not be used with silk, woolens, dyes sensitive to hypochlorite, and on certain stains such as rust (which it can set). Chlorine bleach deactivates enzymes in laundry cleaners.

Chronic Effect – An adverse effect on a human or animal body, with symptoms that develop slowly over a long period of time or that recur frequently.

Chronic Toxicity – Adverse affects caused by continuous or repeated exposure to a harmful organism over a period of time equal to 1/2 of the organism's lifetime.

Cidal or "Cide" – Generally refers to agents with the ability to kill microorganisms.

Cleaned-In-Place (CIP) – The cleaning and sanitizing of food and dairy processing equipment in its assembled condition by circulation of detergent, rinse, and sanitizing solutions under appropriate conditions of time, temperature and physical action.

Cleaning – Locating, identifying, containing, removing and disposing of unwanted substances (pollutants) from the environment. It is our most powerful means of managing our immediate surroundings and protecting our health.

Cleaning Head – A tool used in carpet extraction cleaning, which sprays solution and vacuums it up.

Cleanser – A powdered or liquid cleaning product generally containing abrasives, a surfactant and frequently a bleach.

Coalescing Agents – Ingredients added to floor coatings to assist in the film formation. Once the water evaporates from the coating, the coalescing agents remain and evaporate slowly allowing the polymers, resins, waxes and acrylics to form a continuous and durable film.

Cocci – Spherically shaped bacteria.

Colloids – Dispersions of particles in a liquid that are in such a finely divided state that gravitational forces will not separate the particles, even though they are too large to form a true solution. The dispersion is maintained by the repulsive forces of the similar electrical charges on the particles and can be broken by introducing an electrical current or by adding electrolytes to the mixture.

Colony – A visible growth of microorganisms on a culture medium.

Communicable Disease – One whose causative agent is directly or indirectly transmitted from person to person.

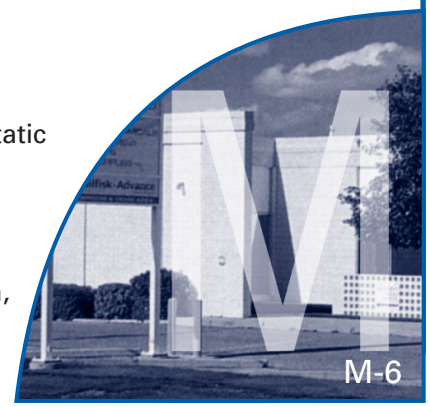
Compostable – Able to be composted in the aerobic conditions found in a composting operation. Compost is the product of decay of organic materials.

Concentrate – The undiluted form of a dilutable cleaning product.

Conductive Floors – Special resilient tile that is designed to drain off or prevent static electricity. Frequently used in computer rooms.

Contamination – Entry of undesirable organisms into some material or object.

Continuous Filament – Continuous strand of synthetic fiber extruded in yarn form, without the need for spinning which all natural fibers require.



Glossary

Cork Tile - Essentially a wood product manufactured from the granulated bark from the cork oak tree, plus resin binders and wax. Today it is factory waxed or pre-finished with a combination of wax and/or resin applied to the cork under heat and as a "cured" finish.

Corrosion – Process of gradual eating away by chemical action.

Corrosion Inhibitor – Substance which protects against oxidation of metal surfaces.

Corrosives – Substances which cause skin and eye damage at the site of contact.

Coverage – The amount of product that is required to coat or treat a specific area. Usually expressed in square feet per gallon (sq. ft./gallon)

Crazing – A small irregular cracking or breakup in a floor finish film or coating after it has dried on a surface. Powdering, dulling and walk off of the finish can result.

Cross-Contamination – The process of transferring bacteria from one person or an object to another person. Similar term to cross-infection.

Curing – A chemical aging process that allows floor finishes to bond to a floor surface.

Cut Pile – The face of a carpet that has had the ends cut at the loops.

W.E. GREER LTD.

D

Damp Mopping – Mopping with a mop wrung out tightly in a clean solution containing mild detergent, disinfectant or sanitizing agent.

Defoamer – Substance used to reduce or eliminate foam.

Degrade – The loss of strength in bleach solutions caused by time and action of sunlight.

Degreaser – A product specifically formulated to remove grease, oil and greasy soils.

Deionized Water – Water from which charged or ionizable organic salts are removed.

Deodorant – A product for destroying, masking or eliminating offensive odors.

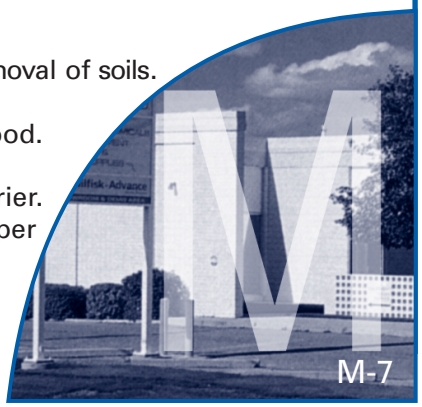
Detergency – Cleaning efficiency.

Detergent – Synthetic cleaning agent (other than soap) that is useful in physical removal of soils.

Digester – An enzyme used to break down stains caused by food products and blood.

Dilution - The reduction of a concentration of one product by the addition of a carrier. This carrier commonly refers to either water or a solvent used to dilute a product per manufacturer's instructions before use.

Dimensional Stability – The tendency of fabric to retain size and shape. A carpet receives additional dimensional stability from the secondary backing.



Glossary

Dioxins – A family of chlorinated organic substances.

Discoloration – The tendency of a floor finish to turn yellow or darken with age or successive coats. Many times this is caused by embedded dirt.

Disinfectant – An agent that destroys harmful bacteria and/or viruses on inanimate surfaces (except spores). Most common types include Quaternary Ammonium Compounds, Phenolic Compounds, Pine Oil (at least 70%). Products making disinfectant claims must be registered with the Environmental Protection Agency (EPA), and state it on the label with a registered EPA number.

Disinfection – Direct removal of a microorganism that physically eliminates it from potential sites of growth. Washing with soap and water is perhaps the single most important measure for controlling and removing microorganisms.

Dispersibility – A product that goes into solution quickly and uniformly without excessive agitation and is completely soluble in all portions in normal, soft, and hard water.

Disposable – Generally applied to products that are intended to be used once or for relatively short life before being thrown away.

Double Bucket Procedure – A mopping technique that utilizes two buckets. The first bucket contains a disinfectant and the other, clear rinse water. The mop goes from the disinfectant to the floor, from the floor to the clear water rinse, to the wringer and back in to the disinfectant. The procedure reduces disinfectant contamination.

Drain Cleaner – A chemically strong product formulated to clean plugs of solid grease and other varied materials embedded in drains.

Dry Absorbent Cleaning – A carpet cleaning method that uses an absorbent powder that contains a solvent. The powder is worked into the carpet pile in order to absorb the grease and dirt, allowed to set for a period and then vacuumed.

Dry Foam – A detergent solution with a small amount of water that is mechanically worked into a carpet. A vacuum removes the loose soil.

Dry Rot – A condition caused by an attack of microorganisms on fibers, textiles, carpets and other materials. An attack on natural carpet backing may cause loss of strength that leads to tearing and breaking up.

Dusting Product (Furniture) – An aerosol or pump spray that dispense ingredients in a fine spray onto surface of dusting cloth. Some cloths come already impregnated with active ingredients. These products attract, pick up and retain light dust and soil.

W.E. GREER LTD.

E

Ecology – The science of the relationship between organisms and the environment.

Economic Poison – Pesticide.

Efflorescence – A white deposit sometimes found on concrete or brick surfaces. It is caused by moisture bringing water-soluble salts to the surface. The salts are deposited on the surface as the water evaporates.

Glossary

Electrolytes – Substances capable of conducting an electric current, either in their pure liquid state or when in solution. Acids, bases and salts are all electrolytes.

Emollient – An ingredient for making skin soft or soothed.

Emulsification – The action of breaking up fats, oils and other soils into small particles that are then suspended in a solution.

Emulsion – A dispersion of small oil particles in a solution.

Environmental Impact – The possible adverse effect of the release of a material into the environment as listed in MSDS information.

Enzyme – Protein molecules produced within an organism that are used as catalysts for biochemical reactions. Often used to enhance cleaning products.

Epidemic – A condition in which a large number of persons in a community contract the same disease within a short time.

Epidemiology – The science that deals with the study of disease in a general population. Determination of the incidence and distribution of a particular disease may provide information about the causes of the disease.

Epoxy – A very hard synthetic resin often used in floor finishes, paints and sealers.

ESD Protective Materials – Material capable of limiting the generation of static electricity, rapidly dissipating electrostatic charges over its surface or volume; or providing shielding from EDS spark discharge or electrostatic fields.

Etch – A chemically caused change on the outside of a smooth floor surface which causes the floor to be pitted or rough, and thereby improve adhesion of floor finish.

Explosion Hazard – Hazard of some materials when they are exposed to heat or flame.

Exposure Limit – The limit set to minimize an employee's exposure to a hazardous material. Associated terms include Permissible Exposure Limit (PEL), Short Term Exposure Limit (STEL) and Threshold Limit Value (TLV).

W.E. GREER LTD.

F

Factory Finish – A temporary finish applied to a floor covering by the manufacturer. This finish provides protection during manufacture, transportation, storage and installation. The factory finish must be removed prior to application of a floor sealer or finish.

Fading – Loss of color caused by actinic radiation such as sunlight, atmospheric gases and cleaning or bleaching chemicals.

Fastness – Retention of color by carpets and other materials.

Fatty Acid – An organic (most commonly tallow and coconut oil) substance that reacts with a base to form soap.

Glossary

Fibers – Natural or man-made objects that have lengths hundreds to thousands of times greater than their widths (high aspects ratio).

Filament – A single continuous strand of fiber.

Filming – The development of a thin covering or coating.

Fish Acute Toxicity Test (LC50, 96 hours) – Test used to define toxicity and hazard potential to fish. Results reported as LC50 (ie. the concentration which will kill 50% of the fish).

Fish Eyes – See "Bird's Eyes".

Flagged Fibers – Brush or broom fibers that are split at the end to increase cleaning efficiency.

Flammability – The capacity of a material to ignite easily and burn rapidly. This term is also used to classify certain liquids on the basis of their flash point.

Flash Point – The lowest temperature at which the vapor from a product will ignite.

Floor Machine (Buffer) – A powered machine used to scrub and buff floors that is equipped with a pad driver and synthetic pads or a brush.

Floor Finish – The top layer of protective floor coatings.

Foam – A mass of bubbles formed on liquids by agitation.

Fomite – Any object or substance, other than food, that harbors or carries infectious organisms.

Formaldehyde – Preservative; sterilizing and disinfecting agent (gas or liquid).

Fungi (Fungus) – Vegetable organisms that lack chlorophyll and are filamentous. Fungus includes mold, mildew, yeast and mushrooms.

Fungicide – A chemical agent that destroys fungi.

Fungistat – A chemical that inhibits the growth of fungi.

Furniture Cleaner/Polish – A liquid, paste or aerosol spray designed to remove dust and stains from wood surfaces, confer shine and protection against water spots, and is formulated to reduce wax buildup with continued use.

Fuzzing – A loose, hairy effect on a fabric surface caused by wild fibers or slack yarn twists. May be corrected by professional cleaning.

W.E. GREER LTD.

G

Gage (Gauge) – The distance expressed in fractions of an inch between two needle points in carpet knitting or tufting.

Gel – A colloid in a semi-solid state, having a "jelly-like" consistency.

Glossary

Germicide – Any substance that kills germs. A disinfectant.

Gloss – The property of a surface involving specular reflection responsible for lustrous or mirror-like appearance. Measured with a glossmeter usually at a 60 degree angle.

Gluteraldehyde – A chemical relative of formaldehyde, used in cold sterilization.

Grains Hardness – A measure of water hardness. The actual amount of dissolved calcium and magnesium salts measured in parts per million in a gallon of water.

Gram Positive and Gram Negative – Classification of bacteria by their reaction to staining. A dye is applied to bacteria and those that remain permanently stained are Gram positive. If the stain is easily removed they are Gram negative. Staph and strep are examples of Gram positive bacteria. Pseudomonas and salmonella are examples of Gram negative bacteria.

Grout – Matrix between ceramic tile on walls and floors.

W.E. GREER LTD.

H

Halogens – The elements chlorine, bromine, iodine, fluorine, which have strong disinfecting properties.

Hand Cleanser – A cleaner designed to clean hands with an emphasis on removing oils, grease and other occupational soils.

Hard Water – Water containing soluble salts of calcium and magnesium and sometimes iron.

Hazardous Material – Any substance having properties capable of producing adverse effects on the health or safety of people.

Heeling – Technique of applying pressure to the side of a floor machine to remove black shoe marks and persistent soil.

Hepatitis B Virus – Hepatitis is a general term describing an infection or inflammation of the liver. HBV is transmitted through blood and blood products, shared needles, venereal and maternal transmission and saliva.

Hexachlorophene – One of the synthetic phenol compounds currently used in prescription antiseptic soaps.

High Speed Floor Machine – Any floor buffing or burnishing machine that operates at RPMs over 200.

High Speed Floor Finish – Floor finish specifically designed to be used with and respond to a floor machine.

HIV (Human Immunodeficiency Virus) – The agent of acquired immune deficiency syndrome (AIDS).

Holiday – A missed spot in cleaning. Refers to streaks or areas that were not overlapped.

Hospital-type Disinfectant – Kills most germs due to a special combination of disinfectant ingredients. More terminology than fact.

Humidity – A measure of moisture in the atmosphere.

Glossary

Hydrochloric Acid (HCL) – Also known as muriatic acid. Used in toilet bowl cleaners in varying dilutions. Hydrogen chloride.

Hydrofluoric Acid (HCL) – A highly caustic inorganic acid often found in commercial rust removers and stain removers. Use with extreme caution.

Hypochlorite – A powerful disinfectant containing chlorine.

W.E. GREER LTD.

ID50 – The dose (number of microorganisms) that will infect 50% of the experimental animals in a test series.

Impervious – Incapable of being penetrated by a given material.

Incompatible – Substances that cause adverse reactions from contact with each other.

Incubation – Maintaining cultures of microorganisms at a temperature favorable to their growth.

Inert – Substance not active in a formula.

Infection – A condition in which microorganisms have entered the body and produced an adverse reaction.

Ingestion – Taking a substance into the body by mouth.

Inhalation – Taking a substance into the body by breathing.

Inhibit – Bacteriostatic action slows down or restricts the growth of bacteria rather than killing the bacteria.

Inhibitor – A chemical or substance used to slow down or restrain an undesirable reaction such as corrosion.

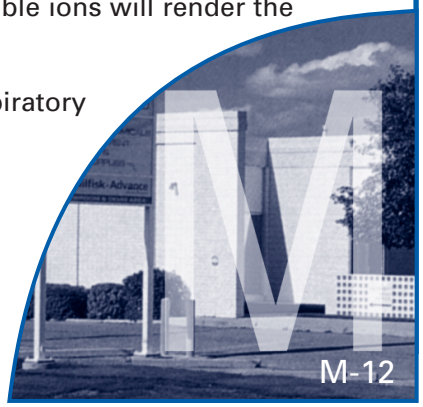
Inorganic – A substance not made of the combination of carbon and hydrogen.

Iodine – A disinfectant agent.

Iodophor – Combinations of iodine and detergent used in antisepsis or disinfection.

Ionic Compatibility – Electrical charges in chemical formulations similar to North and South poles on a magnet. The charges indicate to the formulating chemist the compatibility of various ionic or non-ionic chemical products. Blending or cross-use of chemical products that do not possess compatible ions will render the products useless for their intended purpose.

Irritant – Something that causes an inflammation reaction in the eyes, skin or respiratory system.



Glossary

J

James Machine – Gives very precise, reproducible readings of the static coefficient between typical shoe leather and coated floor panels. The Canadian Government Standards Board (CGSB) established the figure of 0.5 on the James Machines as the minimum reading for floor finishes. Ratings above this level pass, readings below fail.

Jute – A natural cellulosic fiber made from certain plants of the linden family that grow in warm climates such as India and Bangladesh. Jute yarns are used in woven carpet construction as backing for the yarns and twines. Woven jute is used in tufted carpet as primary and secondary backing. The latter are similar to burlap fabrics.

K

Knitting – A fabric formation process comprising interlacing yarns in a series of connected loops with needles. Pile and backing are produced simultaneously with multiple sets of needles that interlace pile backing and stitching. A small fraction of total carpet production is produced by knitting.

W.E. GREER LTD.

L

L.D. Point – Abbreviation for "Lethal Dose".

LD50 – The dose (number of organisms) that will kill 50 percent of the animals in a test series.

Latex – A water emulsion of synthetic rubber, natural rubber or other polymer used in carpet manufacturing to laminate the secondary backing to tufted carpeting, backcoating carpet and rugs.

Lather – A foam consisting of very small bubbles formed when soap or detergent is agitated with or in water.

Lethal Concentration (LC) – The concentration required to cause death in a given species of animal or plant. Measured in a milligram per kilogram of body weight (mg/kg).

Lethal Dose (LD) – The dosage required to cause death in a given species of animal or plant. Measured in milligram per kilogram of body weight (mg/kg).

Leveling Agent – Substance added to coating which allows it to flow evenly in application and to help prevent "puddling".

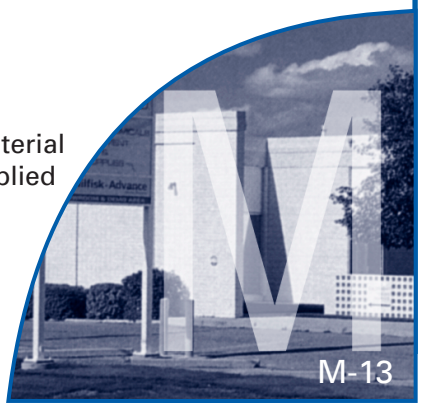
Level Loop – A carpet style having all tufts in a loop of identical height.

Lime – An insoluble mineral deposit found in water.

Linoleum – A flooring material composed of binders, oxidized oil and resinous material that is mixed with ground cork or wood flour and pigment. The composition is applied to a backing of felt, fabric or burlap.

Local Exhaust – A system for capturing and exhausting contaminants from the air at the point where the contaminants are produced (welding, sanding, etc.).

Loom – A machine that produces woven fabrics.



Glossary

Loop Pile – Carpet style having a pile surface consisting of uncut loops of woven or tufted yarn. Also called "round wire" in woven carpet terminology.

Ludox – Sand-like material added to wax to increase slip resistance.

W.E. GREER LTD.

M

Medicated Soap – A soap containing antibacterial ingredient to help reduce or inhibit the growth of bacteria on the skin, which might otherwise cause infection.

Metal Interlock – Detergent- and water-resistant type of floor finish with a metal salt in the solution. Removable with ammonia strippers.

Micron – 1/25,000 of an inch.

Microorganisms – Plants or animals visible only the aid of a microscope.

Mildew – A growth, usually white, produced by fungus.

Milk Stone – Calcium deposits on dairy or ice cream equipment.

Milled Soap – Soap processed by an operation in which soap chips or pellets are squeezed and kneaded by passing them through a series of heavy, closely set rollers.

Mold – A woolly growth, produced by fungus.

Molecule – The smallest unit into which a substance can be divided that retains all of the chemical identity of that substance (ie. one molecule of water).

Montan Wax – Mineral wax extracted from lignite or peat (brown coal). It is a hard polishing wax.

Mop Drag – A resistance between the mop and a floor finish during application.

M.S.D.S. – Material Safety Data Sheet – A document produced by the manufacturer of a chemical product that explains the hazards associated with the product.

Muriatic – Commercial name given to hydrochloric acid.

Mutagenic – Causes tissue changes in subsequent generations.

N

Neutral – A chemical state that is neither acid nor alkali (base); 7 on the pH scale.

Neutral Cleaner – Non-alkaline, non-acid cleaner. The pH of mild neutral cleaners may be as high as 10 and not contain harsh alkalis.

Neutralizer – Chemical to change the pH of a surface so that residues will not interfere with floor coating adhesion.

Glossary

Non-Chlorine Bleach – A laundry product containing peroxygen compounds, which release active oxygen in wash water. This type of product produces gentler bleaching action than chlorine bleach.

Non-Ionic Surfactant – A surface-active agent that contains neither positively nor negatively charged (ionic) functional groups. These surfactants have been found to be especially effective in removing oily soil.

Non-Selective – A term applied to disinfectants that kill a wide variety of organisms including bacteria and fungi.

Non-Volatile Solids – Refers to the actual amount, expressed in percentage, of a floor finish product that remains on the floor after the drying process.

Non-Woven – Any fabric manufactured by a method other than weaving.

Nylon – Synthetic thermoplastic of the polyamide family. It is the dominant fiber in tufted carpet pile yarns.

W.E. GREER LTD.

O

Odor Threshold – The lowest concentration of a substance's vapor, in air, that can be smelled.

Olefin – Any long chain synthetic polymer composed of at least 85% by weight of ethylene, propylene or other olefin units. It is used in the manufacture of carpets and matting.

Oncogenic – Produces or induces tumor formations in living animals.

Opacifier – Substance that does not permit the transmission of light; a cloudy agent. It is used to reduce soap's translucence or to make a bar of soap white or a desired color.

Optical Brightener – Substance that makes color appear brighter in the presence of sunlight and ultraviolet light.

Orange Peel – A roughness in the surface of a finish that resembles the skin of an orange.

Oriental Rugs – Hand-woven rugs made in the Middle East and the Orient.

Organic – A substance composed of carbon and hydrogen.

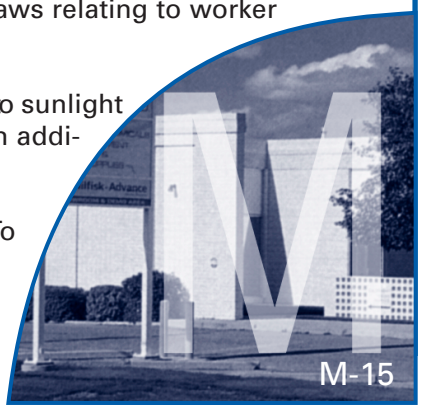
Organism – Any individual animal, plant or bacterium.

OSHA – Occupational Safety and Health Agency, which establishes and enforces laws relating to worker safety.

Outdoor Carpet – Carpet specifically designed to resist fading and deterioration due to sunlight and water. Most are solvent-dyed polypropylene containing ultraviolet stabilization additives. Coatings and backings that are water and rot resistant are usually synthetic.

Oven Cleaner – Usually a liquid in an aerosol container or pump-actuated bottle. To clean a cold oven a strong chemical is necessary. Usually the product is thick or foamy to promote clinging to vertical surfaces.

Overexposure – Exposure to a hazardous material beyond the allowable exposure limits.



Glossary

Oxidation – To combine with oxygen. Slow oxidation is typified by the rusting of a metal.

Oxidized – Bleached.

Ozone – A toxic substance that is fairly unstable. The ozone layer shields the surface of the earth from harmful solar radiation.

W.E. GREER LTD.

P

Particulates – Have an important impact on indoor air quality. They range from inorganics to organic matter such as mite feces, dust and fibers.

Paste Wax – Wax in a thick form. Always needs buffing.

Pathogen – Any disease-producing organism.

Pathogenic – Disease-producing.

Pesticide – Agent that prevents, repels, destroys or mitigates; pests types include insecticides, disinfectants and sanitizers, rodenticides and herbicides.

pH – A simple chemical scale which expresses the degree of acidity or alkalinity of a solution. The pH scale runs from 0 to 14. The neutral point is 7. Numbers below 7 indicate acidity with 0 being 10 times more acidic than 1, 1 being 10 times more acidic than 2, etc. 0-3 is strongly acidic, 4-6 moderately acidic. Above 7 is the alkaline side. 8-10 is moderately alkaline, 11-14 is strongly alkaline. Alkalinity is 10 times greater at each full number rise along the scale.

Phenol Coefficient – A comparison of germicidal effectiveness of disinfectant products with phenol. Usually considered an obsolete comparison.

Phenol – Chemical used for disinfecting (phenolic disinfectant). Also known as carbolic acid.

Phosphate – A widely used water softener, builder and sequestering agent used in detergents.

Phosphoric Acid – The most common acid based on phosphorus sometimes called orthophosphoric acid. Used as a mild bowl acid and in formations of light duty detergents.

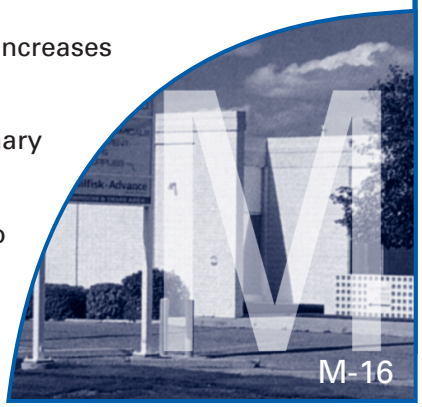
Pile Crush – Loss of pile thickness in a carpet due to traffic and heavy furniture. The tufts collapse into the air space between them.

Pile Density – Refers to closeness of fibers in a carpet to each other. High density increases weight and quality.

Pile Height – The length of the extended tufts of a carpet, measured from the primary backing top surface to their tips.

Pile Lifter – A machine that loosens soil, vacuums it and stands the pile up prior to deep cleaning.

Pile Setting – A carpet cleaner's term for the process of erecting damp, disheveled pile following shampooing or extracting, through the use of a pile brush or pile lifting machine.



Glossary

Pine Oil –Oil processed from the gum of pine trees. Used in hard surface cleaning and disinfecting and distinguished by a characteristic aroma. As a disinfectant it is inactive against staphylococci.

Pine Oil Cleaner – A liquid hard surface cleaner containing detergents and pine oil. Used to dissolve oil, fatty acids, paints and tars while disinfecting/sanitizing and deodorizing with a pine odor.

Pitting – Small craters on the surface of concrete and terrazzo floors that will grow in size, with traffic and chemical exposure, unless coated with a protective floor finish.

Plasticizer – An ingredient added to wax, varnish and polymer floor finish to make it flexible rather than brittle.

Plasticizer Migration – Plasticizers which are present in some types of vinyl and vinyl asbestos flooring and can attack a floor finish film.

Ply – The number of single strands of fiber that have been twisted together to form a yarn (ie. 3 ply, 4 ply).

Polyester – A fiber-forming thermoplastic synthetic polymer used in some carpet that is essentially staple and spun yarn.

Polypropylene – Synthetic thermoplastic polymer that is used for carpet fiber which is solution dyed and usually contains ultraviolet stabilizers for outdoor use.

Polymer – A large molecule of multiple units formed into a single building block linked together. The formation of multiple units of these molecules is called polymerization. Common types of polymers include styrene, acrylic, polyethylene, urethane, bakelite, vinyl and epoxy.

Polymer Emulsions – Polymer materials that are chemically emulsified into a water base. When these formulations are applied to surfaces they form a smooth, continuous finish.

Porcelain Enamel – A coating of ceramic type material that is fired or fused to a steel base and used in sinks, bathtubs, etc. This differs from the vitreous china used in toilets and urinals.

Post-Consumer – Applied to recycled material; material that has been recovered after consumers have used it.

Powder – A carpet cleaning preparation consisting of absorbent granules impregnated with dry cleaning fluids, detergents and other cleaners. The powder is sprinkled on the carpet, worked into the pile with a brush and left to absorb soil for a short time, and finally removed with the absorbed soil by vacuuming.

Powdering – An unfortunate condition of polymer-type floor finish being removed from a floor in the form of fine, white dust. Usually caused by abrasion occurring from buffing, heavy traffic and inclement weather.

PPB – Parts per billion. One part per billion equals 1 pound in 500,000 tons.

PPM – Parts per million. One part per million equals 1 pound in 500 tons.

Precautionary Statement – Warnings on product labels to alert users to potential harmful hazards associated with using the product.

Precipitate – Material settled out of solution.

Preservative – A chemical agent that inhibits aging such as decay, discoloration, oxidation and microbial growth.

Presoak – A soaking operation, to remove stains, that precedes the regular laundering process.

Glossary

Pre-Spot – Removal of stains before more extensive carpet cleaning.

Primary Backing – The carrier fabric for the pile yarn of a carpet into which the yarn tufts have been inserted.

Propellant – An agent used to expel contents from an aerosol under pressure.

Pseudomonas Aeruginosa – A pathogenic bacteria used to assess hospital-strength activity of a disinfectant.

PSI – Pounds per square inch. Measure used in determining solution pressure in steam carpet cleaning and pressure washers.

Pumice – Porous volcanic rock frequently used as an abrasive.

W.E. GREER LTD.

Q

Quaternary Ammonium Compounds – A class of chemicals used as disinfectant, antistat and softening agent (Quats).

R

Reactivity – Tendency of a chemical reaction with the release of energy to occur.

Recoat – Procedure incorporated in floor maintenance programs to increase the level of protection by applying an additional coat of floor finish.

Re-Emulsification – A chemical process that occurs when a film of floor finish has not completely dried and is re-liquefied by a subsequent application of finish. It doesn't appear until the floor has dried and then appears streaked or dull.

Refinishing – To apply a new coat of wax or floor finish to a floor.

Residue – Cleaning chemicals or soil left in a carpet after the cleaning process.

Resilient Tile – Tile that will withstand shock without permanent damage; includes rubber, cork, asphalt, linoleum, vinyl, vinyl asbestos. This tile will give under impact and certain loads and then return to its original form after the load is removed.

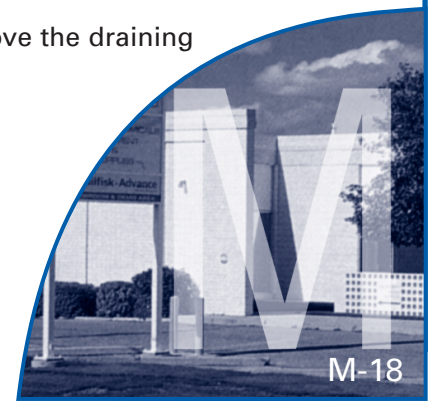
Resins – The basic solid content of gym and concrete floor finishes that are solvent-borne.

Rinse Agent – A wetting agent used in the last rinse during dishwashing to improve the draining of the water from dishes and utensils.

Rinse Aids – Surfactants that aid in the rinsing property of water by lowering its surface tension.

Rotary Brush Carpet Cleaning – A carpet cleaning technique in which a detergent solution is worked into the carpet pile by a brush attached to a rotary buffing machine. Loosened soil is usually removed by vacuuming.

Rust Remover – A specialty cleaner used to remove rust stains form carpet yarn.



Glossary

S

Salmonella Choleraesuis – Form of bacteria transmitted by food and causes food poisoning.

Sanitizer – Agent that reduces the number of bacteria to a safe level, but does not completely eliminate them, as judged by public health requirements. Usually in food service areas.

Saponofication – The process of converting a fat into soap by treating it with an alkali. Also the process used by some cleaners to remove grease and oil.

Scale – Calcium or mineral deposits in steam boilers and in steam and water pipes.

Scouring Pad – A hand-sized pad that supplies the cleaning action of an abrasive.

Scrub – The use of a brush or synthetic floor cleaning pad and detergent solution to clean a floor without removing the floor finish.

Scuffing – Non-discoloring marks in a floor where the film has been dulled by traffic. In a waxed floor they can generally be removed by buffing with a floor machine. The spray buffing technique is generally used to remove scuff marks from polymer finishes.

Sealer – A coating designed to penetrate and provide the initial protection to a floor surface by filling in the tiny holes. Also, a product that prevents color bleeding.

Secondary Backing – The fabric reinforcement that is laminated to the back or bottom of a tufted carpet to provide strength and stability.

Sepsis – Poisoning due to absorption of pathogenic bacteria into the bloodstream.

Septicemia – Condition in which bacteria in the blood have multiplied. (Referred to as “blood poisoning”.)

Sequestering Agents – Chemicals that tie up water hardness and prevent the precipitation of hard water salts. This action causes clarity in liquid soap.

Shelf Life – The time between manufacturing and the time that a product becomes spoiled, unusable or ineffective because of age.

Sizing – A product that provides a coating such as starch.

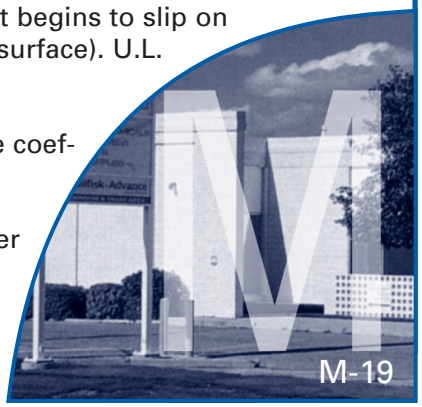
Slimicide – Prevents of inhibits the growth of biological slimes which contain combinations of algae, bacteria or fungi.

Slip Coefficient – A measurement of the angle of the point at which a person’s foot begins to slip on the James machine (an instrument use to test the static coefficient of friction of a surface). U.L. considers 0.5 or above is the safe limit.

Slip Resistance – The “drag” encountered when walking on a floor. The higher the coefficient of friction, the greater will be the slip resistance.

Slurry – A temporary suspension of insoluble solid or immiscible liquids in a carrier base. Usually refers to the suspension of dirt or the thick, dark, soapy mixture created when stripping a floor.

Soap – A natural cleaning agent produced by the reaction of a fat or oil and an alkali.



Glossary

Soda Ash – Sodium carbonate.

Sodium Bicarbonate – Baking soda.

Sodium Hypochlorite - Bleaching and disinfecting agent.

Soil Resistance - A condition of the floor that occurs due to the application of protective coatings. A finished floor will remain cleaner than an unfinished floor exposed to the same traffic and soil. Finishes are applied to be resistant to dirt, oil, grease, soap, alkalis, acids, bleaches, solvents, and boiling water.

Soil Retardant - A chemical finish applied to carpet and fabric surfaces, which inhibits attachment to the soil fiber.

Solid Content - The amount of ingredients in a floor finish that do not evaporate or volatilize at 105°C.

Solids – The residue or percentage weight of material that is left after the volatile materials have been evaporated.

Solubility - The tendency of a material to dissolve in another material.

Solution - A uniformly dispersed mixture of two or more fluids.

Solvency – The technique whereby the cleaner literally dissolves the particles and takes into its own system, equally distributed throughout the solvent.

Solvent Finish - Finish in which the solid content is borne in solvent, rather than water.

Solvents - Substances used to solubilize other materials.

Spalling - The process of concrete or terrazzo breaking apart into dust and pieces.

Specific Gravity – The weight of a material compared to the weight of an equal volume of water is an expression of the density (or heaviness) of a material. Insoluble materials with specific gravity of 1.0 or greater will sink.

Spore - A special hard shell-like cell structure of a rod shaped bacteria which has an inactive form, and is the most resistant of all living things to heat, chemicals and drying. Can only be destroyed by sterilization.

Spotter - A carpet stain remover.

Spray Buff - An intermediate floor care procedure which cleans, removes black marks and shines the wear areas of a floor. Utilizes a sprayed solution, a floor machine and a synthetic floor pad.

Stain - A visible discoloration.

Stain Repellent - A product applied to carpets that helps the yarn resist stains.

Staphylococcus (Staph) - Highly resistant Gram + (positive) organism used in the evaluation of disinfectants. Is pathogenic.

"Stat" - Inhibitor.

Sterilization - The process of killing all forms of microbial life, including vegetative bacteria, fungi, viruses and spores.

Streaking - Signs of improper application of floor finish uneven floor finish.

Glossary

Streptococcus - Common disease organism that microscopically appears is Gram + (positive) chains.

Stripper – Specially formulated detergent that breaks the bond of floor wax and finish, when used as directed, without damaging flooring material.

Substrate – The surface to which the coating is applied.

Surface Activity – The term describes the most fundamental property of detergent, for once the chemical has wetted out and penetrated the soil, surface active qualities form a chemical bond between the surface of each dirt particle and the water surrounding it; with this action completed, the soil can then be easily wiped or rinsed away.

Surface Tension – Surface-active agent that increases the emulsifying, foaming, dispersing, spreading and wetting properties of a product.

Surfactant - Surface active agent which increases the emulsifying, foaming, dispersing, spreading and wetting properties of a product.

Suspension – The process of a cleaning agent holding insoluble dirt particles in the cleaning solution and keeping them from re-depositing on a clean floor.

Synergistic – Chemicals that when combined have a greater effect than the sum of the two independently.

Synthetic Detergent – A washing or cleaning product that utilizes synthetic surfactants rather than traditional soaps.

Synthetic Fibers – Man-made fibers, as opposed to natural fibers such as wool, that are used in most carpets today.

W.E. GREER LTD.

T

Tackiness – A sticky or adhesive condition that is a property of applied floor finishes, when not completely dried.

Tack Rag – A cloth, dampened in solution, which is used to remove surface particles (lint, dust, floor pad abrasive) prior to refinishing a surface.

Telescope Handle – An adjustable length pole that extends by pulling tubes out, one inside the other.

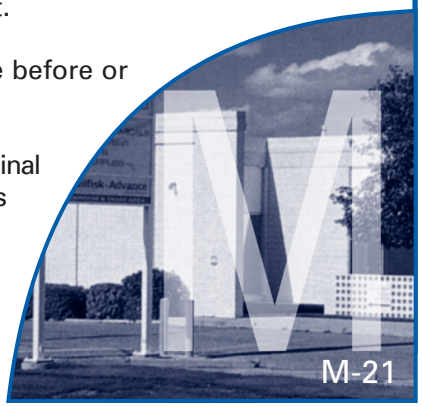
Terrazzo – A non-resilient floor material composed of marble and Portland cement.

Thinner – A liquid used to reduce the viscosity of a coating and that will evaporate before or during the cure of a film.

Thermoplastic – A polymer that softens when exposed to heat and returns to its original condition when cooled to room temperature. Resins and waxes used in floor polishes are thermoplastic.

Toxic – Substance causing adverse effects in the body like a poison.

Toxin – Poisonous substance produced by bacterial cells.



Glossary

Tuberculin – An extract of the tubercle bacillus, capable of eliciting an inflammatory reaction in the animal body that has been sensitized by the presence of living or dead tubercle bacilli. Used in a skin test for tuberculosis.

Tucker Pole – Special multi-story outside window-washing tool.

Traffic Lane – High traffic areas that show worn or soiled "lanes".

Traffic Lane Cleaner – A heavy detergent compound used to clean high traffic carpet areas.

Tri-Sodium Phosphate (TSP) – A water softener sometimes used as a cleaning agent.

Turkish Towel – Towel similar to terry cloth.

TWA – Time Weighted Average exposure is the airborne concentration of a material to which a person is daily exposed, average over the total exposure time. Exposure for more than 8 hours per day or more than 40 hours per week, even at or below the TLV or PEL, may represent a health hazard.

W.E. GREER LTD.

U

U.L. – Underwriters Laboratories – an organization that tests manufactured products for safety.

U.S.D.A. – United States Department of Agriculture, which approves disinfectants and sanitizers.

Urethane – A synthetic resin, ethyl carbamate, used in protective coatings for wood, concrete and metal.

Use-Dilution – The final concentration at which a product is used.

Use-Dilution Test – Test used to determine antimicrobial activity of a hard surface disinfectant in its final use concentration.

V

Vegetative Bacteria – Those able to multiply; the term is used to exclude spores.

Vinyl Asbestos Tile (VAT) – Floor tile composed of vinyl resin, plasticizers, asbestos fibers, mineral fillers and color pigment formed into a given thickness and cut into tile sizes.

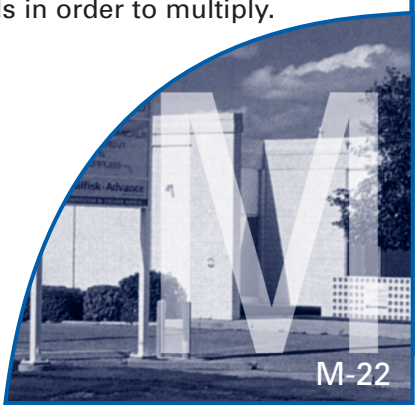
Virus – A group of filterable infective agents that require the presence of living cells in order to multiply.

Virucide – A chemical agent that kills viruses.

Virulence – The disease-producing ability of an organism.

Viruses – Microorganisms smaller than bacteria which cannot grow outside living cells.

Viscosity – The thickness of a liquid that determines pourability. The resistance to flow is measured in relationship to water in centipoise (cp). Water has a viscosity of 1 cp.



Glossary

Vitreous China – Ceramic, non-porous material used in toilets and urinals.

Volatile – The part of a product that evaporates during drying.

Volatile Organic Compounds (VOC's) – Are the solvent portions of products that flash off into the air. They are used in cleaning agents, as a leveling agent, as a gloss enhancer, as fast or slow drying agents, as carrying agents and in products that are designed to promote better solubility. VOC's are directly responsible for outdoor air quality when they combine with nitrogen oxide (the bi-product of the fuel that automobiles burn). The two products combine to produce ground level ozone or smog. VOC standards are measured in grams of VOC's per litre of finished product.

W.E. GREER LTD.

W

Warewashing – Washing of dishes, utensils, glassware, pots, pans, etc. in the institutional market.

Water Conditioner – A material that improves the quality of water for a given application or use.

Waterlift – An efficiency rating for vacuums used to pick up water. Tells how many inches the water would be raised or "lifted" in a measuring column.

Water Hardness – A measure of the amount of metallic salts found in water. Hard water can inhibit the action of some surfactants and reduce the effectiveness of the cleaning process.

Water Resistance – The ability of a floor finish to be unaffected by water spilled on it.

Water Softener – Substance that removes or counteracts the hardness of water.

Water Spotting – Change in appearance of a surface finish resulting from spot wetting by water.

Wax – A natural protective coating for hard surfaces.

Wear – A distortion of the surface of a floor coating due to traffic and abrasion.

Wet Mopping – Applying a liberal amount of cleaning solution. Used in disinfecting, thorough cleaning, scrubbing and stripping. Requires removing excess solution.

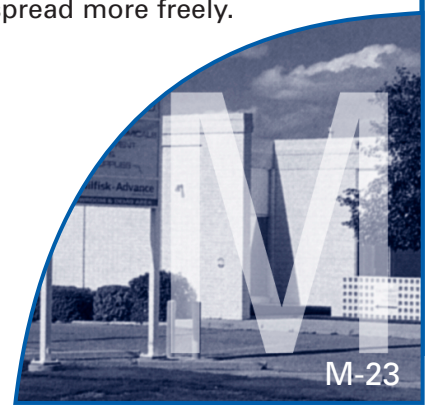
Wetting – The ability of a solution to disperse or spread over an oily or otherwise water-repellent surface.

Wetting Agent – A chemical that reduces surface tension of water, allowing it to spread more freely.

Y

Yeast – A form of fungus.

Yellowing – Discoloration of a floor finish due to aging. A common complaint regarding carnuba wax.



N

W.E. GREER LTD.

Reference Data

Dilution Chart
Metric Conversation Table
Hard Floor Equipment Production Rates
Carpet Equipment Production Rates

"OUR REPUTATION IS SPOTLESS"

Reference Data

Dilution Chart

The following dilution ratios will be helpful when mixing cleaning products. The smaller number in the ratio is the number of parts of concentrate, while the larger number is the number of parts of water.

To make ____ of solution, add the following amount of concentrate:

Dilution Ratio	Concentrate to make 1 quart	Concentrate to make 1 gallon	Concentrate to make 5 gallons	Concentrate to make 24 oz. trigger spray bottle
1-to-4	6-1/2 oz	25-1/2 oz	128 oz (1 gal)	4-3/4 oz
1-to-10	3 oz	11 1/2 oz	59 oz	2-1/4 oz
1-to-12	2-1/2 oz	10 oz	50 oz	1-3/4 oz
1-to-15	2 oz	8 oz	40 oz	1-1/2 oz
1-to-20	1-1/2 oz	6 oz	31 oz	1 oz
1-to-32	1 oz	4 oz	20 oz	3/4 oz
1-to-40	4/5 oz	3 oz	16 oz	3/5 oz
1-to-50	3/5 oz	2-1/2 oz	13 oz	1/2 oz
1-to-64	1/2 oz	2 oz	10 oz	1/3 oz
1-to-128	1/4 oz	1 oz	5 oz	1/5 oz
1-to-256	1/8 oz	1/2 oz	3 oz	1/10 oz

NOTE: *When mixing cleaners, you may find it helpful to fill your container with the proper amount of water, then add the concentrate and thoroughly mix the solution. If you add water to the concentrate, you may create a large amount of foam. By adding the concentrate to the water, the amount of foaming from the concentrate is minimized.*

Conversion Chart

1 gallon = 128 ounces	1 ounce = 1/8 cup
1 quart = 32 ounces	2 cups = 1 pint
1 pint = 16 ounces	2 pints = 1 quart
1 cup = 8 ounces	4 quarts = 1 gallon

W.E. GREER LTD.

"OUR REPUTATION IS SPOTLESS"

Reference Data

Metric Conversation Table

To Convert From	To	Multiply By
Bushels (British)	litres	36.3677048
Bushels (U.S.)	litres	35.238329
Centimetres	inches (U.S.)	0.393700
Centimetres	yards (British)	0.01093614
Centimetres	yards (U.S.)	0.01093611
Cubic cm.	cubic inches	0.061023
Cu. inches (British)	cubic cm.	16.3870253
Cu. inches (U.S.)	cubic cm.	16.387162
Cu. inches (U.S.)	litres	0.0163868
Cubic yds. (British)	cubic metres	0.76455285
Cubic yds (U.S.)	cubic metres	0.76455945
Feet (U.S.)	metres	0.3048006096
Gallons (British)	litres	4.5459631
Gallons (U.S.)	litres	3.78533
Grams	ounces (avoir.)	0.0352739
Grams	ounces (troy)	0.0321507
Inches (British)	centimetres	2.539998
Inches (U.S.)	centimetres	2.540005
Kilograms	tons (long)	9.84207 x 10
Kilograms	tons (metric)	0.001
Kilograms	tons (short)	0.0011023112
Kilometres	miles (nautical)	0.539593
Kilometres	miles (U.S.)	0.6213699495
Litres	cubic inches	61.025
Litres	gallongs (British)	0.219976
Litres	gallons (U.S.)	0.26417762
Litres	quarts (British)	0.87990
Litres	quarts (U.S.,dry)	0.908096
Litres	quarts (U.S., liq)	1.056681869
Metres	feet (U.S.)	3.280833333
Metres	inches (British)	39.370113
Metres	inches (U.S.)	39.3700
Metres	yards (U.S.)	1.093611
Ounces (avoir.)	grams	28.349527
Ounces (avoir.)	pounds (avoir.)	1/16
Ounces (avoir.)	pounds (troy)	0.075954861
Ounces (British)	cubic cm.	28.4130
Ounces (U.S.)	cubic cm.	29.5737
Ounces (U.S.)	litres	0.0295729
Pints (Brit., liq.)	cubic cm.	568.26

To Convert From	To	Multiply By
Pints (U.S., dry)	cubic cm.	550.61
Pints (U.S,, liquid)	cubic cm.	473.179
Pounds (avoir.)	kilograms	0.4535924277
Pounds (troy)	kilograms	0.3732418
Quarts (British, liq.)	cubic cm.	1136.521
Quarts (U.S., dry)	cubic cm.	1101.23
Quarts (U.S., dry)	cubic cm.	946.358
Quarts (U.S., liq.)	litres	0.946333
Sq. cm.	sq. inches	0.15500
Sq. feet (British)	sq. metres	0.09290289
Sq. feet (U.S.)	sq. metres	0.09290341
Sq. inches (British)	sq. cm.	6.4515898
Sq. inches (U.S.)	sq. cm.	6.4515258
Sq. metres	sq. inches	1550.0
Sq. metres	sq. yards (British)	1.195992
Sq. metres	sq. yards (U.S.)	1.195985
Sq. yards (British)	sq. metres	0.836126
Sq. yards (U.S.)	sq. metres	0.83613
Tons (long)	tons (metric)	1.0160470
Tons (metric)	tons (long)	0.984207
Tons (metric)	tons (short)	1.10231
Tons (short)	kilograms	907.1846
Yards (British)	metres	0.9143992
Yards (U.S.)	feet	3
Yards (U.S.)	metres	0.91440183

Reference Data

Hard Floor Equipment Production Rates

The figures below are based on actual production of the equipment in use - not the maximum running speed of the machine, or unnatural working speeds of the operators.

Convertamatic - Scrub - Wet Vacuum

Size	Sq. ft. per hour	Mins. Per 1000 sq. ft.
17 inch	7,000 feet	8.4 min.
20 inch	8,300 feet	7.2 min.
21 inch	8,700 feet	6.9 min.
24 inch	9,600 feet	6.6 min.
26 inch	10,300 feet	5.8 min.
28 inch	10,900 feet	5.5 min.
32 inch	12,750 feet	4.7 min.
38 inch	17,000 feet	3.5 min.

Single Disk - Scrub (177 - 190 RPM's)

Size	Sq. ft. per hour	Mins. Per 1000 sq. ft.
14 inch	2,000 feet	30.0 min.
16 inch	2,400 feet	25.0 min.
17 inch	2,600 feet	23.0 min.
18 inch	2,800 feet	21.0 min.
20 inch	3,500 feet	17.0 min.

Wet Vacuuming

Size	Sq. ft. per hour	Mins. Per 1000 sq. ft.
14" Squeegee Tool	3,000 feet	20.0 min.
Air Scoop 8 gal.	8,500 feet	7.0 min.
Air Scoop 12 gal.	10,000 feet	6.0 min.

Mopping (From ISSA Figures)

Size	Sq. ft. per hour	Mins. Per 1000 sq. ft.
Damp - 24 oz. Mop	5,000 feet	12.0 min.

Single Disk Standard - Spray Clean/Buff

Size	Sq. ft. per hour	Mins. Per 1000 sq. ft.
177 RPM/17"	1,900 feet	30.2 min.
177 RPM/20"	2,100 feet	20.8 min.

Reference Data

Single Disc Hi Speed - Spray Clean

Size	Sq. ft. per hour	Mins. Per 1000 sq. ft.
300 RPM/17"	2,600 feet	23.0 min.
300 RPM/20"	3,000 feet	20.0 min.

Burnish

Size	Sq. ft. per hour	Mins. Per 1000 sq. ft.
1100 RPM/20"	11,000 feet	5.4 min.
1500 RPM/17"	8,000 feet	7.5 min.
1500 RPM/20"	11,000 feet	5.4 min.
2000 RPM/20"	15,000 feet	4.0 min.
2000 RPM/33"	26,000 feet	2.3 min.
2500 RPM/20"	17,000 feet	3.5 min.

Dust Mop (From ISSA Figures)

Size	Sq. ft. per hour	Mins. Per 1000 sq. ft.
36 inch Mop	12,500 feet	4.8 min.
48 inch Mop	25,000 feet	2.4 min.

Sweeping

Size	Sq. ft. per hour	Mins. Per 1000 sq. ft.
18" Push Broom	5,500 feet	10.8 min.
Minitriever	15,000 feet	4.0 min.

W.E. GREER LTD.

Carpet Equipment Production Rates

Carpet Vacuum

Size	Sq. ft. per hour	Mins. Per 1000 sq. ft.
12 inch	4,000 feet	15 min.
14 inch	5,500 feet	11 min.
16 inch	6,500 feet	9 min.
20 inch	8,500 feet	7 min.
22 inch	15,000 feet	4 min.
28 inch	20,000 feet	3 min.
134B	22,000 feet	2.7 min.

Reference Data

Extraction

Size	Sq. ft. per hour	Mins. Per 1000 sq. ft.
Brush Tool	600 feet	100 min.
Weighted Tool	600 feet	100 min.
Tool	400 feet	150 min.
26" Aqua Matic	5000 feet	12 min.
20" Aqua Matic	3800 feet	15.8 min.
Tempest	1200 feet	50 min.
AquaClean	1000 feet	60 min.

Dry Foam Shampoo

Size	Sq. ft. per hour	Mins. Per 1000 sq. ft.
12 inch	750 feet	80 min.
18 inch	1200 feet	50 min.
28 inch	1900 feet	32 min.

Single - Disc Bonnet

Size	Sq. ft. per hour	Mins. Per 1000 sq. ft.
17 inch	1600 feet	36 min.
20 inch	2000 feet	30 min.

Single - Disk Shampoo

Size	Sq. ft. per hour	Mins. Per 1000 sq. ft.
17 inch	1200 feet	50 min.
20 inch	1430 feet	42 min.

W.E. GREER LTD.