Cleaning for a Healthy U

University of Alberta
Facilities & Operations
Buildings & Grounds Services
Sustainable Cleaning & Related Services

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TABLE OF CONTENTS

INTRODUCTION

In the early 1990s, the University of Alberta began to substitute conventional cleaning chemicals with less-harsh alternatives. At the time, we were motivated by health concerns for cleaning staff building occupants. These initiatives demonstrated that we could achieve a safer working environment for the Division employees while maintaining a quality service. Our early success provided the impetus for a continuous improvement process that has resulted in the *Cleaning for a Healthy U* program.

Cleaning for a Healthy U embodies the University's commitment to sustainable cleaning. It involves much more than purchasing environmentally friendly cleaning chemicals and equipment. It is a holistic approach to providing healthy, high-performance cleaning and related services. Our objective is to lessen the impact we have on our immediate environment – the 13.9 million square feet of buildings at the U of A – as well as the global environment. This comprehensive program serves to focus our attention on all aspects of services provided by the Buildings and Grounds Services Division. The twelve guidelines cover cleaning practices, chemicals, equipment, storage, matting systems, carpet & floor care, staff training & occupant awareness, low environmental impact pest control and recycling.

Cleaning for a Healthy U will focus on enhancing productivity – ensuring that sustainable cleaning practices can be both high-performance and cost-effective. To do this requires that we have an engaged workforce that has the knowledge, supplies, equipment and support necessary to achieve productivity gains. Areas such as hallway and carpet cleaning, floor refinishing, and the servicing of entrance matting can provide huge productivity gains. In short we want to be *working smarter not harder.*

Cleaning for a Healthy U confirms our commitment to our role in the provision of a high quality healthy indoor environment, through our cleaning & related practices. The program provides a framework for the Division to operate within; it will guide us in the delivery of our services to the students, staff and visitors to the University.

Cleaning for a Healthy U will where possible eliminate exposure of the cleaning services staff and the occupants of the buildings to potentially hazardous chemical, biological and particle contaminants, which may adversely impact indoor air quality, health, building finishes and systems. These practices are also intended to minimize the impact on the global environment. This will be accomplished by reducing the amount of volatile organic compounds (VOCs) going into the air; and trapping and removing airborne particulates from the air. Reductions in these air pollutants will be accomplished through the use of green cleaning chemicals and equipment, micro fibre cloths, entrance matting systems and sustainable cleaning practices

The program will apply to the provision of Division services whether by in-house or contractor staff.

OBJECTIVES

1. To assist in the provision of a high quality healthy indoor environment.

2. To ensure that the objectives of the Program are understood by the service providers and the Campus community alike, and recognized as contributing to the overall health of the Campus.

3. To provide a standard for the provision of environmentally responsible and effective cleaning management practices.

4. To minimize the exposure of the cleaning services personnel and building occupants to potentially hazardous chemicals, and air borne particulates.

5. To minimize any adverse impact caused by the provision of our services to building air quality, building finishes and systems and the environment.

6. To balance the previous objectives with the cost and quality of the managed cleaning systems providing sustainable cleaning services.

To accomplish these objectives, the Buildings & Grounds Services Division will continuously seek out, review, evaluate (including financial impacts) new and innovative cleaning chemicals, equipment and industry best practices. Adopting these will enhance our service levels and /or our environment and allow us to maintain or enhance our standards for cleaning and disinfection and reduce risks and negative impacts. Further we will continue to ensure that Division staff are engaged in the process and receive the necessary training and support.

DEFINITIONS

Sustainability
Programs and procedures that provide the best outcomes for human and natural environments both now and into the indefinite future. Simply put, we want our current practices to enhance our environment and limit the negative impact we have on the environment not only for today, but into the future.

Sustainable Cleaning
The provision of our services in a fashion that will provide the best outcomes for the human and natural environments both now and into the foreseeable future. Simply put we want our current cleaning practices to enhance our environment not only today but into the future and to limit the negative impact of our practices.

Cleaning Service Providers
The parties responsible for the provision of the Cleaning Services, to University buildings, includes both in-house operations and contractors.

Cleaning Services Personnel
The staff responsible for the provision of the Cleaning Services, to the University buildings, includes both in-house and contractor's staff.

Cleaning Chemicals
Chemicals approved for use in the provision of cleaning services at the University. They shall be, where appropriate, certified Green by the appropriate agency(s).

When it is not possible to use a cleaning chemical with Green certification, the product shall have a defined, restricted use and an explanation as to how and where the product is used will be provided.

Touch Zones
Areas that individuals frequently come in hand contact with. Examples of touch zones are, but not limited to; door knobs / handles, light switches, water taps, flush valves, dispenser handles, push plates, panic bars, handrails, shower heads, public phones.

ECOLOGO (formerly known in Canada as Environmental Choice Canada)
An organization that provides third party certifications for a variety of green products, services and packaging.

Green Guard
An organization that sets standards for Green cleaning equipment and certifies same.

Green Certified
Products or equipment that have been certified as green by the specified third party agency (ECOLOGO, Green Seal or GreenGuard).

Green Seal
An organization that provides third party certifications for a variety of green products and services.

Volatile Organic Compounds (VOC's)
Chemical compounds that are emitted as gases from certain solids or liquids. Concentrations of many VOC's are consistently higher indoors (as much as 10 times higher than outdoors) VOC's are emitted by a wide range of products.

WHMIS
The Workplace Hazardous Materials Information System (WHMIS) is Canada's national hazard communication standard. The key elements of the system are cautionary labeling of containers of WHMIS "controlled products", the provision of material safety data sheets (MSDS) and worker education and training programs.

MSDS
Material Safety Data Sheets -The MSDS is a technical bulletin which provides detailed hazard, precautionary and emergency information on the controlled product. It's the second element of the WHMIS information system and is meant to supplement the alert information found on the label. The MSDS must be made available to workers for review and use.

APPA – (formerly the Association of Physical Plant Administrators) An international association dedicated to maintaining, protecting and promoting the quality of educational facilities, APPA represents more than 1,500 learning institutions serving over 4,700 individuals. Cleaning standards established by APPA and modified by the University of Alberta set the frequency for the various cleaning tasks and define the results expected to meet the established standards.

Vacuums – c/w Hepa-like Filters - Vacuums equipped with Hepa-like filters shall be used for normal servicing of areas. These filters shall be capable of removing particulates as small as 0.3 microns from surfaces.

Zero Waste - is a goal that is ethical, economical, efficient and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use.

Zero Waste means designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them.

Implementing Zero Waste will eliminate all discharges to land, water or air that are a threat to planetary, human, animal or plant health.

Zero Waste International Alliance, 2009

ORGANIZATIONS and REFERENCES

Third Party Certification Organizations: ECOLOGO, Green Seal (USA), Green Guard (North America), LEED (International), Carpet & Rug Institute (CRI) Green Label,

Industry Organizations: Canadian Sanitation Supply Association (CSSA) International Sanitation Supply Association (ISSA) , Association Physical Plant Administrators (APPA), International Facility Management Association (IFMA), Canadian Association University Business Officers (CAUBO), Buildings Owners & Managers Association (BOMA).

Industry Best Practices and additional information may be obtained through trade publications, attendance at industry shows, benchmarking with peer organizations and contact with suppliers/manufacturers. The Division will actively seek, review, evaluate and adopt industry best practices as appropriate.

Others: Managers & Supervisors within the Division.

The following section provides general information on the various components of

The *Cleaning for a Healthy U Program*

*CTRL & click the **italicized note** to go directly to the detailed Guideline.*

The Twelve Program Components

1. Cleaning Services

The provision of cleaning& related services at the University of Alberta is defined generally as those tasks which remove foreign materials from cleanable vertical and horizontal surfaces using approved chemicals and systems, by manual or mechanical means, and where appropriate it will include disinfection of "touch zones" and other specialized cleaning procedures. It includes the removal of waste and recyclable materials to designated locations and the provision of pest control practices. Procedures for the provision of these services are found in *The Staff Orientation & Training Guide* - Appendix A

Guideline 1 - Cleaning Service Systems

2. Cleaning Chemicals

The Division wherever possible, will only use third party ***green certified*** cleaning chemicals (ECOLOGO, Green Seal or GreenGuard). Cleaning chemicals will only be purchased in concentrates in regulated dispensing systems.

Only cleaning chemicals approved by the Division will be used in University buildings.

Guideline 2 - Cleaning Chemicals

3. Cleaning Chemical Storage

The safe handling and proper storage of cleaning chemicals will reduce the risk of exposure to potentially hazardous materials. The guideline will be considered when new buildings are in the design phase or when renovations are taking place that affect current chemical storage locations. The Division, wherever possible will purchase cleaning chemicals in a concentrated format, in tamper proof containers with regulated dispensing dilution rates. Because these chemicals are packaged in concentrated formats they may present a higher hazard upon exposure thus making the proper containment, storage, dispensing and training critical to avoid employee or occupant exposures. A log will be maintained in each building identifying storage location of cleaning chemicals.

Guideline 3 - Cleaning Chemical Storage

4. Carpet Care and Maintenance

Our carpet care maintenance program consists of the following components:

1) entrance mat systems to trap & retain soil at building entrances
2) removal of dry soil
3) removal of spots/stains
4) restorative or hot water extraction
5) restorative work will be accomplished by a dedicated floor crew.

A log will be kept which details the relevant care, maintenance & restoration practices and the dates of these activities. The duration between extraction cycles shall be documented. The Division will put in place mechanisms to identify individuals with chemical sensitivities, the locations of these occupants will be noted in the building log. The Division will notify occupants of buildings prior to carrying out extraction processes so that those with sensitivities may make arrangements to be away from the affected space, or the Division will attempt to schedule the work so that residual odors associated with the process have time to dissipate.

Guideline 4 – Carpet Care & Maintenance

5. Hard Surface Floor Care & Maintenance

Our floor care maintenance program consists of the following.

1) entrance mat systems to trap and retain soil at the entryway
2) dry soil recovery by vacuum, broom, dust mop, micro-fiber flat mop system or mechanical sweeper
3) wet cleaning systems such as traditional mop and bucket, micro-fiber flat mop systems or automatic scrubbing machines
4) scheduled buffing/burnishing program determined by area and traffic load
5) scheduled restorative maintenance, (scrub/ recoat or strip/ refinish).
6) restorative work will be accomplished by a dedicated floor crew.

A log will be kept which details the relevant care, maintenance & restoration practices and the dates of these activities. The duration between strip/refinish processes shall be documented. The Division will put in place mechanisms to identify individuals with chemical sensitivities, the locations of these occupants will be noted in the building log. The Division will notify occupants of buildings prior to carrying out floor restorative processes so that those with sensitivities may make arrangements to be away from the affected space, or the Division will attempt to schedule the work so that residual odors associated the process have time to dissipate.

Guideline 5 - Hard surface floor care

6. Cleaning Equipment and Products

Consists of both manual and mechanical equipment such as but not limited to mopping, dusting, washing systems, waste & recycle containers, vacuums, mechanized floor maintenance equipment, carpet extractors etc.
All campus cleaning equipment will be selected for effectiveness of cleaning operation, productivity enhancement benefit, cost effectiveness, ergonomics, reliability, serviceability and lowest impact on

the environment. Mechanical equipment shall be green certified, by Green Guard and/or the Carpet & Rug Institute (CRI). A log will be kept of all mechanical equipment, noting operating hours, repairs and maintenance.

Guideline 6 – Cleaning Equipment and Products

7. Disposable Products, Equipment and Supplies

Consists of but not limited to items such as paper products, hand soap, waste container liners and Personal Protective Equipment such as gloves, masks, etc.
All disposable cleaning products will be controlled by regular usage audits and will be selected with focus on end use costs and reduction of product used. Where possible products with specified recycle content will be chosen.

Guideline 7 – Disposable Products, Equipment and Supplies

8. Entryway Matting Systems

Studies show that 80% of all soils tracked into buildings is a result of foot traffic and further that a 1000 people coming into building will carry in 10 kg of dirt into a building in an average month. The cost to remove dirt once it is in building is estimated to be $1300/kg.

Entryway matting systems greatly reduce the amount of foreign matter tracked into a building, reduce the risk of slips/falls inside the building, and protect the building flooring systems from excessive wear and tear, thereby reducing interior maintenance requirements and prolonging the life of the flooring.

Scraper mats and or entrance matting systems shall be used at all moderate and high traffic entrance points of a building to prevent snow, dirt, dust, pollen and other materials from being tracked into the building. All low traffic entryways shall be protected with entrance mats as appropriate.

Entrance matting will be serviced as required to ensure the matting is working to optimal levels.

Guideline 8 - Entryway Matting Systems

9. Zero Waste Program

A paper recycling program was first introduced at the university over thirty years ago and the university has been collecting beverage containers since the early 1990s. Since 2005, the university has increased the amount of waste diverted from landfill from 22% to 55%. In 2007, the university expanded its recycling program by building an on-campus Recycling Transfer Station to facilitate the collection of additional recyclables, including glass and light metals, plastics, and organics. In 2014, the university diverted nearly 1,800 tonnes of recyclables and organics from landfill.

10.

To reduce the amount of waste created and sent to landfills at this institution the University of Alberta is committed to taking a **Zero Waste** approach and has moved from a six stream collection program (landfill waste, beverage containers, glass/light metals, plastics , paper/cardboard and organics) to a four stream collection program (mixed paper, recyclables, organics and landfill waste).

GOALS & DRIVERS
By 2015, expand waste reduction initiatives across all campuses and increase the amount of waste diverted from landfill at the University of Alberta's North Campus to 50%. (2012-2016 Sustainability Plan). Achieved (55% diversion in 2015).

Starting in 2018, the university has committed to send 1,500 metric tonnes (1,500,000 kg) of organics annually to the City of Edmonton's new **Anaerobic Digestion Facility** to produce energy and compost. By preventing this waste from being landfilled, approximately 1,800 tonnes of GHG emissions will be mitigated annually.

By 2020, the university's goals are to divert 90% of the university's waste from landfill and continue to reduce the annual amount of waste per capita. (2016-2020 Sustainability Plan)

Recycling website.

Guideline 9 – Zero Waste Program Rolling Cart/Container Service Levels

11. Low Environmental Impact Integrated Pest Control

The following points were considered in the establishment of our pest control program. The application of pest control products and control devices will be provided through contracted services. The company providing the services will be responsible to maintain information on their web site to advise the University community related to their services. The site is intended to host a specific area dealing with services provided to the University.

- Low environmental impact integrated pest management shall consist of a written pest management plan which details the techniques, strategies and schedules to control unwanted pests.
- The plan will include a log of all pest management activities, including but not limited to; establishing barriers, setting of traps, use of baits and chemical applications, the log shall be retained by the Division and the information will be provided by the service provider.
- Individual product Material Safety Data Sheets and Technical Bulletins will be maintained on all pest control products and will be maintained by the service provider

Guideline 10 - Low Environmental Impact - Integrated Pest Management

12. Education & Training Programs

Consists of general and specialized training for all Division staff in all aspects of the provision of Division services including, health & safety, general custodial tasks, specialized training in areas of carpet & floor care, etc.
These programs are designed to ensure that staff involved with the provision of cleaning services are aware of the potential risks associated with their work environment and are educated and trained on an ongoing basis to identify and mitigate those risks.
Staff will receive a copy of the Cleaning for a Healthy U program and will be kept advised of changes through regular Division and area training sessions.
Contractors providing similar services on Campus are required to ensure that their staff are trained in a consistent fashion. The Division will monitor the contractor's health & safety and training program to ensure they are compliant. The Division may assist the contractor with the development and presentation of some training programs

Guideline 11 Training & Education Programs

13. Public Awareness Program

Consists of a strategy to ensure that the Campus Community is aware of and supports the Divisions role in creating and maintaining a sustainable environment. Identifies a number of tools that may be used to provide the Campus community with information on the services provided by the Division and how these services help to create and support a sustainable campus. Tools include but are not limited to; articles in Folio, Gateway, Division web page, signage and posters. Participation in the new hire orientation is being discussed with the hope of developing a short presentation and an information brochure for all new employees to the University.

Guideline 12 Public Awareness Program

Guidelines

These Guidelines are intended to.

- identify the various components of the program
- provide a methodology to ensure a consistent provision of our services and standards across Campus
- provide specifications for the purchase of products and equipment required to provide our services

Guideline 1 - Cleaning Services

To achieve leadership in environmental responsibility within cleaning services systems, the University must consider the life cycle of their building materials and maintenance methods, and incorporate concepts of total cost of performance, safety in use and application, and overall environmental impact. All stages of sustainable building can be measured for environmental performance, including product selection, installation, operation, long-term maintenance, and eventual disposal.

- Facility safety, health & environmental practices must be compliant with all University, local, provincial & federal regulatory requirements as a minimum.
- The Division shall develop and communicate proper disposal methods for all housekeeping wastes.
- Cleaning services personnel shall be trained in the use, and safe disposal of cleaning chemicals, the use & and maintenance of equipment, and recycling of packaging. Training records certifying each person's specific training dates shall be kept by the University and cleaning services contractor.
- Supplier's Material Safety Data Sheets and Technical Bulletins for all cleaning services chemicals shall be provided by suppliers. The suppliers of cleaning products shall provide full disclosure of ingredients on Material Safety Data Sheets. Additionally, suppliers must provide training materials on the hazards and proper use of cleaning services chemicals for workers.
- A facility disclosure policy that is responsive to the needs of health and safety personnel. If, however, the disclosure requirements noted below, are not met on the MSDS, then disclosure can be provided by suppliers through other means that are easily accessible to health and safety personnel.

"Full Disclosure" for products which are not formulated with listed suspect carcinogens is defined as

(i) disclosure of all ingredients (both hazardous and non hazardous) that make up 1% or more of the undiluted product and

(ii) use of concentration ranges for each of the disclosed ingredients.

"Full Disclosure" for products which are formulated with listed suspect carcinogens is defined as

(i) disclosure of all ingredients (both hazardous and non-hazardous) that make up 0.1% or more of the undiluted product and

(ii) use of concentration ranges for each of the disclosed ingredients. Suspect carcinogens are those which are listed on authoritative lists available for MSDS preparation: Concentration range definitions are available from the Canada WHMIS regulation.

A log shall be kept that details all cleaning services chemicals used or stored on the premises. The log shall include the manufacturer's Material Safety Data Sheets and Technical Bulletins. Enviro Choice certification will be recognized standard for cleaning chemicals, Green Guard and or CRI will be the recognized the standard for cleaning equipment. Cleaning chemicals that are stale dated shall be disposed of by contacting Environmental Health & Safety.

- A MSDS and /or label from the manufacturer specifying that the product meets the VOC content level for the appropriate product category. The MSDS or manufactures label will be provided by the supplier.
- A copy of the Enviro Choice certification.

  If the product has not been certified by Enviro Choice, the manufacturer will provide test data documenting that the product meets each of the environmental health & safety criteria set forth in Enviro Choice standards.

- Selection of flooring used in the facility, whether a new installation or replacement, shall consider all potential environmental impacts over the full life of the floor system, including raw material extraction and use, installation practices, maintenance requirements, overall useful life, hygiene, appearance and safety attributes, and eventual disposal. A scoring system should be used to develop and evaluate alternatives, including consideration of the total cost of ownership. The selection of flooring materials and their maintenance must consider the full life cycle impacts in order to ensure they will offer the most sustainable floor care system.
- The use of floor treatments that require no additional finishes to be applied or floor treatments which allow the Division to maintain floors through the use of motorized equipment using neutral cleaners should be considered.
- Resilient tile and hard flooring coating systems, including floor finishes and restoration products shall be slip-resistant (as defined by ASTM Std D-2047) and shall be highly durable in order to maintain an acceptable level of protection and gloss for a minimum of one (1) year before stripping/removal and recoating is necessary.
- A written floor maintenance plan and log will be kept which details the number of coats of floor finish being applied as the base coat and top coats, along with relevant maintenance/restoration practices and the dates of these activities. The duration between stripping and recoat cycles shall be documented.
- A log shall be kept for all powered cleaning services equipment. The log should identify the date of purchase and all repair and maintenance activities. Equipment shall meet requirements in Guidelines 6&7.
- Preference will be given to purchasing products with reduced packaging formats and recyclable packing formats. All packaging will be recycled where possible.

Guideline 2 - Cleaning Chemicals

There are a number of positive environmental benefits derived from the purchase of cleaning chemicals in a concentrated form. The Division will consider these benefits when purchasing cleaning chemicals.

- Significantly lower transportation costs between manufacturer and end-user.
- Significantly lower use of packaging materials.
- Lower real chemical use to obtain same performance.
- Potentially lower exposure of cleaning services personnel to hazardous chemicals

As the chemicals are in a concentrated form there is a need to ensure that they are stored correctly and staff are trained to ensure that they are aware of the proper dispensing and usage protocol.

- Chemicals purchased in concentrate form must have:
  - tamper proof or ready to dispense formats that will eliminate or reduce the accidental exposure to cleaning chemicals by cleaning staff.
  - chemical concentrates dispensed from closed dilution systems must be used as alternatives to open dilution systems or non-concentrated products.
  - dilution tips that are tamper proof.
  - workplace bottles in which the end product is placed must be color coded or if not the labels affixed to the bottles shall be color coded

General requirements

- ***Green certification*** by a specified third party (ECOLOGO, Green Seal or GreenGuard). As of 2015, all approved cleaning products are part of the Avmor EcoPure line of products. Details of certification are described below for each product.
- Non green certified products are restricted and cannot be used on campus.
- Chemicals dispensed in aerosol formats shall not be used.
- Cleaning services personnel shall be trained in the correct use of each cleaning chemical.
- The types of cleaning products used will be evaluated to ensure that the minimum varieties are being used.
- The supplier shall ensure that up to date WHMIS sheets are provided for all cleaning chemicals.
- Managers & supervisors shall ensure that area WHMIS Manuals are kept current.

The following tables outline products that meet the criteria in Guideline 2 and are approved for use.

Name:	Stabilized Aqueous Ozone (Tersano treated ozonated water)
Item Number:	lotus® PRO High Capacity cleaning system (various components)
Manufacturer:	Tersano Inc.
Certification(s):	Green Seal
Description:	The lotus® PRO High Capacity cleaning system transforms tap water into Stabilized Aqueous Ozone on-the-spot. Stabilized Aqueous Ozone is then easily transferred for use in mop buckets, floor cleaners and auto scrubbers. It provides residue-free performance for a

	longer lasting clean and low slip/fall hazard on even the smoothest floors.

The following are all are part of the Avmor EcoPure line of green cleaning products
http://avmor.com/avmor_EN/sustainability-certifications.php

Name:	EP80 MULTI USE FLOOR COAT 20L
Item Number:	7770041
Manufacturer:	AVMOR LTD.
Certification(s):	ECOLOGO; U.S. EPA Design for the Environment
Description:	Avmor Ecopure EP80 Multi-Use Floor Coating is designed with the newest in environmentally preferable polymer technology. It contains NO zinc or other heavy metals to interfere with industrial wastewater treatment processes. The gloss, durability, recoatability and removability of EP80 Multi Use Floor Coating are excellent. It dries to a smooth, hard, clear and colourless coating in 30 minutes under almost any condition. Nothing has been sacrificed in this environmentally responsible product. Excellent for vinyl composition, linoleum, sheet vinyl, concrete, terrazzo, quarry, Mexican tile and most resilient type flooring.
Name:	EP86 LOKSEAL FLOOR SEALER 20L
Item Number:	7770062
Manufacturer:	AVMOR LTD.
Certification(s):	ECOLOGO
Description:	EP86 LOKSEAL Floor Sealer is highly recommended for sealing pores and leveling floor surfaces in preparation of floor finish application. EP86 LOKSEAL Floor Sealer is designed with the newest in environmentally preferable polymer technologies. EP86 LOKSEAL is compatible with all Avmor floor finishes. It is highly recommended for sealing pores and leveling floor surfaces in preparation of floor finish application. Excellent for: Vinyl composition, linoleum, sheet vinyl, concrete terrazzo, quarry, Mexican tile and most resilient type flooring.
Name:	EP87 ULTRA FLOOR STRIPPER 20L
Item Number:	7770064
Manufacturer:	AVMOR LTD.

Certification(s):	ECOLOGO
Description:	EP87 is a high performance floor stripper. It has been designed to remove both conventional and environmentally preferable floor finishes. EP87 is a concentrated floor stripper that dissolves multiple coats of finish without the strong and unpleasant odour associated with conventional strippers. EP87 rinses quickly without leaving residual alkali to interfere with finish application.
Name:	EP61 GLASS & SURFACE CLEANER 1.8L
Item Number:	7770021
Manufacturer:	AVMOR LTD.
Certification(s):	ECOLOGO
Description:	Ecopure EP61 Glass and Surface Cleaner is a highly concentrated cleaner that dissolves, suspends and removes soil from glass, plexiglass, windows, mirrors, windshields, walls, countertops, cabinets, partitions, light fixtures, stainless steel, chrome, plastic, vinyl, appliances, desks and other surfaces not harmed by water. Leaves no residue. Helps prevent re-soiling. Ideal for use in hospitals, schools, food service, kitchens, restrooms, shower rooms, hotels, gymnasiums, offices, lunchrooms, jails, fitness centers and virtually every other kind of facility.
Name:	EP64 NEUTRAL PH CLEANER 1.8L
Item Number:	7770037
Manufacturer:	AVMOR LTD.
Certification(s):	ECOLOGO; U.S. EPA Design for the Environment
Description:	EP64 Neutral pH Multi-Use Cleaner is a highly efficient cleaner for floors, walls, and other hard surfaces where a neutral pH range solution is desirable. The powerful cleaning agents in EP64 will quickly remove soils without dulling, damaging, etching or harming floor finishes even when used for daily applications. It is free rinsing and will leave no film or residues. EP64 is also an effective carpet cleaner and will resist re soiling. EP64 is ideal for use in hospitals, schools, food service, kitchens, restrooms, shower rooms, hotels, gymnasiums, offices, lunchrooms, fitness centers and virtually every other kind of facility.
Name:	EP70 WASHROOM CLEANER 1.8L
Item Number:	7770070

Manufacturer:	AVMOR LTD.
Certification(s):	ECOLOGO
Description:	Avmor Ecopure EP70 Washroom Cleaner is a concentrated general purpose washroom cleaner for removal of soap scum, suntan and body oils/lotions, mildew, lime, water scale and rust deposits on porcelain, tile, ceramic tile and fibreglass surfaces. It will also remove stains and brighten urinals and toilet bowls. EP70 Washroom Cleaner can be safely used daily on porcelain, porcelain enamel, painted surfaces, aluminium or stainless steel without etching or damaging them.
Name:	EP50 CLEANER DISINFECTANT 1.8L
Item Number:	7770071
Manufacturer:	AVMOR LTD.
Certification(s):	ECOLOGO
Description:	Avmor EP50 CLEANER DISINFECTANT is an oxidizing multi-purpose degreaser, effective against Herpes Simplex Type 2, Influenza Type A2 and HIV-1 (Human Immunodeficiency Virus), for hard, non-porous surfaces in industrial and institutional areas. EP50 CLEANER DISINFECTANT is designed for use in hospitals, nursing homes, hotels, schools and food service establishments. Effective on sinks, faucets, counters, urinals, toilets (non-water covered surfaces), and all hand contact surfaces as well as walls, stalls and floors. Organic ingredients in this product are readily biodegradable in accordance with OECD 301 standard.
Name:	EP74 BOWL URINAL CLEANER 946ML
Item Number:	7770092
Manufacturer:	AVMOR LTD.
Certification(s):	ECOLOGO
Description:	Ecopure EP74 is a unique formulation designed to effectively and effortlessly clean bowls, urinals and porcelain sinks. Mild citric acid based all-purpose cleaner for porcelain and tile. Thick lotion clings to all vertical surfaces rendering cleaning fast and scrub-free. Cleans in one application. Effectively removes hard water deposits, soap scum and urine salts. Will not harm plumbing systems. No VOCs (Volatile Organic Compounds). No APE (Alkyl Phenol Ethoxylates). Fragrance free. Phosphate free. Organic ingredients in this product are readily biodegradable in accordance with OECD 301 standard.

Name:	EP76 CREAM CLEANSER 946ML
Item Number:	7770093
Manufacturer:	AVMOR LTD.
Certification(s):	ECOLOGO
Description:	EP76 Cream Cleanser quickly and easily removes soil, stubborn stains, grease, soap scum, and scuff marks from a variety of surfaces leaving them smooth and clean. EP76 Cream Cleanser clings to both vertical and horizontal surfaces providing a longer contact time to ensure superior cleaning and more effective stain removal. It is ideal for sinks, wash basins, bathtubs, shower stalls, chrome, copper, brass, stainless steel, porcelain, enamel, ceramic tiles, and many other hard surfaces. No Tetrasodium Salt of EDTA. No glycol ethers. No phosphates. No NPEs (Nonyl Phenol Ethoxylates). 0% VOCs (Volatile Organic Compounds). INGREDIENTS ARE READILY BIODEGRADABLE IN ACCORDANCE WITH OECD 301 STANDARD.
Name:	EP88 CAPRICE 4L
Item Number:	7770065
Manufacturer:	AVMOR LTD.
Certification(s):	ECOLOGO
Description:	Neutralizes alkaline residues and effectively removes salt and calcium deposits on most floor surfaces and industrial carpeting. This remarkable detergent not only neutralizes the residual effects of strippers and cleaners, but it also is a super efficient cleaner. Its deep penetrating action helps suspend the dirt and residues, lifting it to the surface for easy neutralization and removal.

Guideline 3 - Cleaning Chemical Storage

Every effort will be made to store cleaning chemicals in isolated areas of the building and in rooms that are accessible by cleaning staff only.

Proper isolation includes:

- Structural deck-to-deck partitions and locked doorways.
- Proper ventilation systems to assure direct-to-outside air exhaust, no air recirculation, and negative static pressure in the storage room.
- Water supplies and sink drains plumbed for appropriate disposal of liquid wastes.

Cleaning chemical storage rooms shall be keyed in such a fashion to allow only Division personnel and authorized contractor's staff to gain access to these storage areas. The Division shall maintain a record of all areas where cleaning chemical storage occurs in a building, and shall document appropriate design and maintenance of the supporting building systems. University specifications shall dictate where chemical storage occurs in the building. Cleaning chemical storage practices shall be reviewed by Division Management and the Cleaning Service Provider at least annually to assure compliance with these requirements.

Guideline 4 – Carpet Care & Maintenance

- Vacuuming is the single most important function of carpet care; it is intended to remove dry soil from carpet fibers prolonging the life of the carpet.
- Equipment used for carpeted floors and entrance matting (e.g. vacuums, extractors) will be green certified. Documentation will be kept on each piece of equipment identifying performance capabilities.
- A log will be maintained which lists all carpet care equipment including vacuums (e.g. canister, upright, backpack, wide area and wet/dry). Documentation will be kept on each piece of equipment identifying performance capabilities.
- Carpets shall be thoroughly vacuumed prior to restorative work being performed.
- Wherever possible, soil transfer extraction or a dry foam extraction method shall be used to reduce chemical use and drying time.
- Carpets that can no longer be cleaned thoroughly due to the condition of carpet (torn or severely worn sections) shall be reported to the Area Manager.
- Dedicated crews will be responsible for performing restorative work on carpeted areas
- These crews will be trained in the current carpet cleaning techniques.
- The extraction process will consist of one or two treatments with CHEMSPEC -DFC 210 Powered Carpet pre-spray and clear water rinses

Guideline 5 - Hard surface floor care

Resilient - (VAT, Linoleums, marmoleum, vinyl composites etc.)
Non resilient - (quarry tile, stone, slate, ceramics, concrete)
Wood

- Equipment used for maintaining hard surface floors (e.g. vacuums, buffers, burnishers, and auto-scrubbers) will be green certified. Documentation will be kept on each piece of equipment identifying performance capabilities.
- Dry soil / dust will be removed from floor surfaces prior to the floors being washed
- Floors will be washed using a neutral cleaner (Fast 365 PCS – Micro Clean or Tennant Eco-System)
- Specialty floors such as marmoleum and linoleum will be maintained according to manufacturers recommendations
- Floor finishes will not be applied to **non resilient** hard surface flooring
- Where no burnishing program is in place floors will be refinished once every twelve months
- Pioneer Eclipse 'Envirostar' will be used to remove floor finish
- A minimum of 4 coats of Pioneer Eclipse ENVIROSTAR Green Floor Care System floor finish will be applied to freshly stripped and neutralized floors
- Burnishing of floors will be used to delay the need for strip refinishes
- Equipment used for burnishing will be equipped with dust vacuum systems

The Division is responsible for the day to day servicing of wood floors such as gymnasiums and dance studios. These floors will be serviced with products approved by the manufacturer to ensure warranties are not voided.

Guideline 6 – Cleaning Equipment and Products

Consists of both manual and mechanical equipment such as but not limited to powered mechanical equipment such as vacuums, mechanized floor maintenance equipment, carpet extractors, etc. and manual equipment such as mopping, dusting, washing systems. Also included are custodial products such as waste and recycle containers, maid and utility carts.

General

- All campus cleaning equipment and products will be selected for effectiveness of cleaning, ease of operation, productivity enhancement, cost effectiveness, ergonomics, reliability, serviceability, lowest impact on the environment and price.

- Mechanical equipment shall be certified green**,** by Green Guard and/or the Carpet & Rug Institute (CRI). A log will be kept of all mechanical equipment, noting operating hours, repair and maintenance.

- All equipment and products will be tested by Division staff as part of the evaluation process to ensure staff involvement and input.

Mechanized Floor & Carpet Care Equipment

- Equipment shall be ergonomically designed to minimize vibration, noise, and user fatigue. Additionally, the weight, ease of motion and profile of equipment will be considered as part of the evaluation.

- The use of environmentally preferable gel batteries will be considered & evaluated when purchasing battery powered equipment.

- Low environmental impact janitorial equipment includes the use of durable carpet care equipment, such as canister, back pack and wide area vacuums equipped with power-heads. Vacuum cleaners shall meet Carpet and Rug Institute Green Label Program and or the Green Guard standards for cleaning equipment. Specifically, equipment should be capable of capturing 98% of particulates 0.3 microns in size, have an air flow of >90 CFM, have suction/static lift of >80 inches and have a manufacturer's warranty of two (2) years or greater.

- Carpet care equipment shall be electric or battery powered and shall have a maximum sound level less than 70dBA and equipped with Hepa like filtration systems. Carpet extraction equipment shall be capable of removing sufficient moisture such that carpets can dry in less than 24 hours

- All equipment shall have rubber bumpers to reduce potential damage to building surfaces.

- A log will be used to record the condition of each piece of mechanical cleaning equipment

- Automated scrubbing machines shall be equipped with variable speed feed pumps to optimize the use of cleaning fluids, low water use systems are preferable.

- Powered maintenance equipment shall operate with a sound level less than 70dBA.

- Where possible ride on equipment will be considered to reduce operator fatigue and increase productivity.

- Carpet care equipment shall be ergonomically designed to minimize vibration, noise, and user fatigue. Additionally, consider weight, ease of motion and profile of equipment when evaluating ergonomically designed equipment.

Guideline 7 – Disposable Products, Equipment & Supplies

The following points will be considered when purchasing disposable cleaning products, equipment or supplies

- Plastic trash can and other liners will utilize a minimum of 30% post-consumer recycled content.

- Manufacturer's technical bulletins for plastic liners, which indicate grade, total recycled content, post-consumer recycled content, and processes used, shall be provided.

- Where appropriate, active micro fiber technology shall be used to reduce cleaning chemical consumption and prolong life of disposable scrubbing pads and eliminate the use of cloths. Cloths shall be color coded to help prevent cross contamination. The following colors shall be used for specific cleaning areas.

- The use of ergonomically designed disposable equipment such as mops, brooms, wands etc. shall be encouraged whenever possible to reduce or prevent injuries.

- A good quality hand soap will be provided in all washroom facilities

- The soap will be provided in a cartridge format, the dispensing cartridge (packaging) will be 100% recyclable.

Paper Products and Dispensing Systems

The following points will be considered when purchasing paper towels and bathroom tissue.

- Low environmental impact janitorial supplies will include the use of disposable paper (toilet tissue and paper towels) utilizing a minimum of 100 % recycled content (30% recycled material from lumber process and a minimum of 70% post-consumer recycled content, AND which are manufactured without the additional use of elemental chlorine or chlorine compounds (Processed Chlorine Free).

- These products will be dispensed in such as fashion as to eliminate the need for the user to touch the dispensing unit.

- Towel dispensers shall be: easy loading to reduce labor; equipped with a locking mechanism to prevent vandalism; capable of utilizing stub rolls, to prevent waste; dispense towels in 12" lengths to maximize usage; equipped with an emergency feed knob;

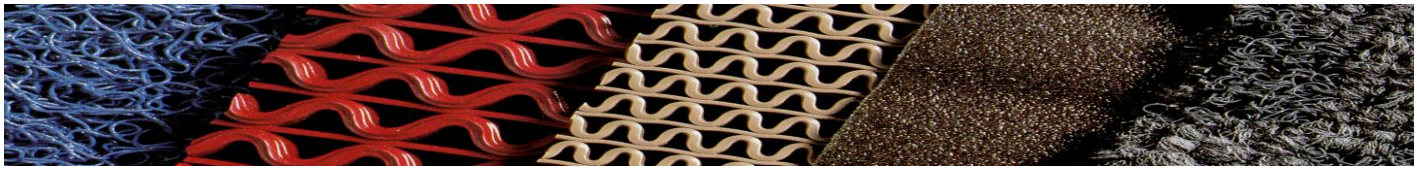
- Towels and tissue shall be packaged in formats that utilize the minimum of packaging material.

- Towels shall be purchased in 800' rolls, tissues in 1000' rolls.

Guideline 8 - Entryway Matting Systems

The University uses a variety of entrance matting products manufactured by 3M Canada. The Facility Service Manager in conjunction with the building's service provider will be responsible to develop a site specific maintenance program based on the traffic patterns of their buildings utilizing the manufacturers recommended maintenance programs as guidelines. The site specific plans will allow for areas to customize the plans to address work load issues and ensure that the matting is kept at optimal performance levels. Matting systems are to be left in place year round and only removed for restorative maintenance. A program will be in place to record the year the matting was installed and to evaluate annually the life expectancy of the matting. Funding will allow for annual replacement of matting.

A log shall be maintained to document that the entrance mat system has been effectively maintained. This log and system performance shall be reviewed at least annually by the Division.



3M™ Nomad™
Carpet Matting
6500/8850/9800

Daily Maintenance

For Mats, Rolls and Wide Rolls

Vacuum daily or as required to maintain matting to optimal performance levels. Use an upright beater-brush dry vacuum adjusted to its most powerful setting. Move nozzle slowly over mat to allow for dirt to be picked up.

For Mats and Rolls less than 80 sq. ft. (7.43 m^2)

In heavy traffic, and pivot points, rotate matting end for end when repositioning.

IMPORTANT: Keeping the backing of the mat clean is critical in preventing the mat from "walking". Floor under mat must also be kept clean (swept and/or damp mopped while mat is in service).

Weekly Maintenance

For Mats and Rolls less than 80 sq. ft. (7.43 m^2)

1. Remove matting from service.
2. Turn matting over and run beater bar, dry vacuum on back side of matting.
3. Pick up matting.
4. Clean up dirt/debris from floor (sweep, vacuum, damp mop, etc.)
5. Place matting back in service and vacuum top surface of matting.

Wet Conditions

For Mats, Rolls and Wide Rolls

1. Use an extractor or wet vacuum to remove as much water as possible from mat.
2. Allow mat to dry. Hang up if necessary. Use of fan or blower will reduce dry time.

Restorative Maintenance

Frequency of restorative maintenance will depend on the amount of traffic and soil in the area of application.

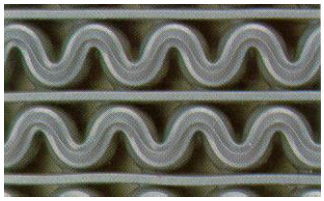
For Mats, Rolls and Wide Rolls

Rotary Shampoo and Extract

1. Wet matting with solution of pretreatment cleaner or extraction cleaner.
2. Loosen dirt using a rotary brush.
3. Extract at least two times. (If heavily soiled, repeating complete procedure may be required.)

-OR-

3M™ Nomad™ Scraper Matting 9100



For Mats and Rolls of less than 80 sq. ft. (7.43 m^2)

1. Hang mat up.
2. Use high pressure washer
3. Wash & rinse mat thoroughly.
4. Let mat dry.

Regular cleaning and maintenance of Entrap Recessed Well Matting will prolong its life and keep it at a high appearance level.

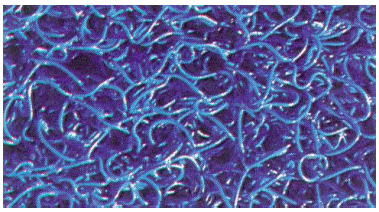
Routine Maintenance

1. Remove/sweep large debris from top of mat. Remove any debris caught between ridges.
2. Roll back matting sections half-way toward the center of the well. Thoroughly remove all dirt and debris which has been trapped in the well. Put matting back.
3. Repeat above at the opposite end of the well.
4. Damp mop the surface of the mat with a general purpose cleaner.

Restorative Maintenance

1. Remove matting from well.
2. Carefully hang or drape mat over a rounded (not sharp) surface.
3. Scrub the mat with a general purpose cleaner and rinse with water using a hose or pressure washer.
4. Be sure recessed well has been thoroughly cleaned before returning mat to service.

3M™ Nomad™ Scraper Matting 6050/8150/6250 Backed & 8100 Unbacked



All Nomad™ Matting with Backing

Daily Maintenance

1. Turn mat over and shake it vigorously to remove loose dirt.
2. Clean up dirt and place mat coil side up on a clean, dry surface.
3. Vacuum the top surface of mat and return it to service.

Periodic Maintenance

1. Remove loose dirt (see Daily Maintenance).
2. For difficult-to-remove dirt, spray or mop on a general purpose detergent prior to cleaning.
3. Clean mat using one of the following methods:

   Water Spray Method: Hang mat vertically (avoiding sharp hooks) and flush out embedded dirt using a high pressure washer. Spray mat with a side to side motion, working from top to bottom. Lay mat flat.

   -OR-

   Extraction Cleaning Method: While mat is in place, extract with warm water, using a carpet drag wand or hand tool.

   -OR-

   Rinse Method: While mat is in place, rinse mat by hosing or flushing thoroughly with water. Extract or wet vacuum excess water using a carpet drag wand or a hand tool.

4. Turn mat face down and allow to dry flat before placing it back in service.

All Nomad™ Unbacked Matting

Routine Maintenance

For Dry Areas

1. Shake dirt from mat and remove mat from service area.
2. Sweep dirt from service area and remove.
3. If needed, flush both sides of mat with warm water to remove remaining dirt.
4. Allow mat to dry flat before placing it back into service.

For Wet Areas

Hose off both sides of mat daily with warm water.

Periodic Maintenance

Severely soiled matting can be restored to a high level of appearance with one of the following cleaning methods:

Scrub mat with a brush and general purpose cleaner. (For heavy grease buildup, use a water-based degreaser.) Flush mat with hot water and allow to dry before placing it back into service.

OR

Clean mat with a high pressure washer and general purpose cleaner. Flush mat with hot water and allow to dry before placing it back into service.

Guideline 9 – Zero Waste Program Rolling Cart/Container Service Levels

	Daily	Weekly	1x/2 Weeks	As Required
Recyclables				
	Lunch rooms/kitchenettes			Hallways, common areas, classrooms, teaching & research labs, conference & seminar rooms, printer rooms
Organics				
	Lunch rooms/kitchenettes, hallways, common areas			
Landfill Waste				
	Lunch rooms/kitchenettes, hallways, common areas, washrooms, classrooms, teaching labs, conference & seminar rooms	Research labs	Offices, reception areas	Printer rooms

Notes:

- office occupants are responsible for emptying their desk side recycle containers into the larger, main zero waste stations
- As required means when the rolling cart/container is ¾ full; hallways , common areas are checked daily and classrooms, teaching & research labs, conference & seminar rooms and printer rooms are checked three times per week

Guideline 10 - Low Environmental Impact - Integrated Pest Management

Pest Monitoring and Control

The Division has a desire to balance the use of chemicals for the control of insect pests and the need to provide an environment that is free from pests that may affect the health of occupants of our buildings or cause destruction to university property. We recognize that by educating Division staff and the occupants we may be able to in some cases to reduce the likelihood of pest infestations. We also recognize that if after education, design measures and operational practices have not prevented an insect infestation, the use of

pesticides is the most effective method of control and will be required to be used. In these instances the contractor will provide the Division with recommendations to reduce further occurrences.

The following guidelines have been established to ensure that we are providing rigor in our practices prior to using chemicals to control insect pests.

Insect pest indoors

When a request is made to treat for insect pests indoors, such as cockroaches or silver fish, a Division designate will visit the area in question and place monitoring traps as required. These monitoring traps will be used to determine the extent of the infestation as well as to confirm the insect pest to be dealt with. The monitoring traps will reviewed after two days. If the infestation of the insect pest is below the threshold for that pest the trap will be replaced and monitored on a regular basis. Treatment will only be carried out when the threshold is met. Additionally the occupant of the area will be provided with information on the pest and methods of making the site unattractive to such pests.

Insect pest outdoors

When a request is made to treat for insect pests outdoors, such as wasps or bees, a Division designate will visit the area in question to confirm the report. Once confirmed and determined that the pest is creating a hazard for people the Division designate will ask that the Contractor attend to the concern. In addition the contractor will provide the Division with recommendations to reduce further occurrences.

Note under no circumstances is spraying of pesticides or herbicides to be undertaken within 10 metres of the exterior of the Bio- Sciences Building, Earth Sciences Building or Earth Sciences Greenhouse.

Other pests indoors & outdoors (non - insect)

When a report is made to remove animals such as squirrels, pigeons, skunks, racoons etc. a Division designate will visit the area in question to confirm the report. Once confirmed and determined that the pest is creating a hazard for people the Division designate will ask that the Contractor attend to the concern.
Live trapping is the preferred method of removing these pests. The contractor will provide details of how the captured animals are dealt with after release from the trap. In addition to setting, monitoring and removing pests once they are captured the contractor will provide the Division with recommendations to reduce further occurrences. .

Insect threshold levels

- **Cockroaches** – Zero tolerance. As soon as one is found a formal request for treatment should be initiated.

- **Grain Beetles** – once these are found, please refer to the fact sheet. Clean up and sanitation procedures should be followed before calling the pest control contractor to assess need for spraying.

- **Silverfish** –
  a) Zero tolerance in Libraries or where books are stored.
  b) 1-3 will require sanitation procedures – refer to fact sheet
  c) 5 or more will require treatment and further investigation on the source of infestation and method of control

- **Sow bugs** – remember that the source of infestation is on the outside and therefore treatments will be focused on the external perimeter to the buildings unless a heavy infestation is noted on the inside (greater than 5 on a trap). Also it is very important to note where the infestation is noted. Most of it should be in rooms that are in contact with the ground on the outside. If infestation is noted on 2nd, 3rd or upper floors, then an in depth investigation needs to be carried out on the source of infestation.

- **Bedbugs** – Zero tolerance. Pest control contractor should be contacted at once.

- **Mice** – there should be no monitoring for mice, based on our discussions during the training session. If evidence is noted (mouse droppings or sightings) – pest control contractor should be contacted to assess and treat.

http://www.organizedchaostech.com/newEcopest/index.html

Guideline 11 Training & Education Programs

To ensure that Division staff have the knowledge and training to operate in safe and effective manner the Division is committed to a providing training in a variety areas and topics. The following represents the core training provided to all staff.

	Topic	Who	Frequency
1.	Area Orientation	new hires	once first shift
2.	Division Orientation	new hires	once first week
3.	F&O Health & Safety Orientation	new hires	within first 3 months
4.	WHMIS Training –	new hires	every two years
5.	Sustainable Cleaning –	all staff	once then updates as required
6.	Safety Training –	all staff	continually
7.	General Task training –	all staff	every 3 years
8.	Chemical and equipment updates	all staff	continuing as required
9.	First Aid / CPR	required staff	as required by regulations
10.	Harassment Workshops	all staff	every 3 years
11.	Other workshops sponsored by HPaWS, EHS, (etc).		as required

Staff are encouraged to identify training needs from an individual or Division wide perspective to their manager, supervisor or the Manager Human Resources & Procurement directly.

Guideline 12 Promotion and Awareness

This is the key to a successful program it is intended for promotion within division as well as the bigger campus community.

The Division wishes the Cleaning for a Healthy U program to be recognized by the staff of the Division and the overall University community as contributing to a sustainable Campus.

We desire that the community understands what services we provide, how & why we provide those services and the positive impact we have on the University environment.

The intent of the Promotion and Awareness guideline is to provide us with a method(s) to do that.

Those methods will include the use of a number of communication vehicles;
Cleaning for a Healthy U pins
The Division Website
Articles in Folio and Gateway
Application for Awards (CAUBO, APPA, others)
Application to do presentations at conferences Posters in public areas
Wash your hands stickers
Annual report to community on sustainable initiatives

Appendix A Staff Orientation & Task Training Program

Appendix B Cleaner Task Wall Charts