

## GREEN CLEANING OVERVIEW



Some widely-used cleaning products are known to have adverse effects on the health of humans and the natural environment. Some health issues related to the hazardous exposure of some cleaning chemicals may include gastro-intestinal symptoms such as vomiting, cramping and diarrhea; eye irritation; respiratory complications such as coughing and asthma; and chest pains. In some individuals exposure to low levels of exposure to chemicals can cause illness; a condition known as chemical sensitivity syndrome. Since most of the workforce spends their time in-doors, there is a continuous exposure to any number of cleaning chemicals.

In addition to human health concerns, some cleaning products can adversely affect the natural environment. Not only are Volatile Organic Compounds (VOC) linked to asthma, they also contribute to smog formation and inhibit plant growth. Endocrine disruptors such as alkyphenol ethoxylates that are found in industrial detergents and emulsifiers, are slow to biodegrade and can be found in the tissues of some animals, can cause developmental growth issues. Other chemicals such as phosphates introduce nutrients into aquatic ecosystems resulting in algal blooms that choke other aquatic life.

### Green Cleaning

Green cleaning is defined as “products or services that have a lesser or reduced effect on the health and the environment when compared with competing products or services that serve the same purpose”. Building health is evaluated based on the environmental sustainability of cleaning operations, rather than building appearance (i.e. deodorizers).

National Corporate Housekeeping (NCH) is committed to developing and implementing a green cleaning program, with the ultimate goal of leaving the smallest ecological footprint during the cleaning process by minimizing the release of toxic substances into the environment and by minimizing the consumption of resources.

# National Corporate Housekeeping Green Cleaning Program

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National Corporate Housekeeping will implement a green cleaning program through these four main areas:

**Equipment:** by using the most advanced, energy efficient equipment with environmentally friendly batteries, low noise emissions, and the ability to contain particulate matter.

**Cleaning Products:** by using only “green certified” products through the cleaning and dilution control process, and the elimination of bleach, phenolic disinfectants, and aerosol deodorizers that contain VOCs (e.g. urinal blocks). Cleaning procedures will be used that minimizes water consumption and chemical use.

**Paper Products:** by using certified paper products that meet the environmental standards for bleaching, de-inking and packaging. These products contain no added inks, dyes or fragrances, and may be unbleached or bleached without the use of chlorine. Products will be purchased in bulk to reduce packaging waste to minimize transportation costs.

**Conservation:** by reducing, reusing and recycling wherever possible; by conserving water and electricity; and through staff training to understand the importance of green cleaning and to ensure appropriate green cleaning procedures.

## EQUIPMENT



### **Taski 755 Eco Pad Assist Floor Machine**

Floor care can be directly linked to the overall appearance of the building and is a critical component assuring the safety and health of the building occupants. Due to the number of hours spent on labour, chemicals used and frequency of maintenance; floor care is an important component of “green cleaning”.

The Taski 755 is self-propelled floor machine, using centripetal force with pad assist. Traction drive is not used as the moving force of the machine; therefore reducing the amount of power needed for its operation. Noise levels emitted by the machine are less than 70 decibels.

The Taski 755 is powered by an Absorbed Glass Mat (AGM). Like a gel battery, the Advanced AGM battery is a recombinant battery, which means that all gases given off during the charging process remain in the battery housing and are re-absorbed into the system. Additionally, maintenance is reduced as no water is required and there are no corrosive fumes to contend with. As with a gel battery, the sealed system eliminating harmful off-gassing makes this a “green” battery. AGM is made of recycled lead and plastic and is 97% recyclable. The casing and lead can be recycled, and electrolyte solution can become fertilizer. Complete with the battery charger, which prevents deep discharging of the batteries and also monitor the charging process, the life of the batteries are extended. Longer run times and shorter charging cycles result in a 20% electrical power savings.

With the use the Taski 755, water consumption will be reduced by 40%. Cold water will be used and the water may be set on different volumes: more water for dirty areas and less water for the cleaner areas. Chemicals are placed in a 40-litre dispensing tank with a 40-litre pickup tank, ensuring proper chemical/water dilution and leaving very little chemical and water on floors.

## Technical Data for Taski Eco 755

Theoretical performance (Economy/Power)	1290/1935 m <sup>2</sup> /h
Working width	43 cm
Squeegee width	69 cm
Solution tank	40 L
Recovery tank	40 L
Nominal consumption	900 W
Rated voltage	24 V
Battery capacity	50 – 70 Ah/C5
Battery autonomy (nominal)	2 h
Machine weight ready for use (Eco/Power)	155/160 kg
Dimensions (LxWxH)	1160x 475 x 1195 mm
Turning circle	1.12 m
Brush system	1 x 43 cm
Brush pressure (with/without wheel drive)	40/43 kg
Working speed (Economy/Power)	3.0/4.5 km/h
Cable length of integrated battery charger	3.0 m
Sound level	
Electrical protection class (BMS/non-BMS)	Class I/II
Approvals	CE/CB Test cert./ÖVE

## Taski Vento 15 Vacuum

The Taski Vento 15 is the leader in industrial filtration systems. The machine has ergonomical and safety designed features such as on/off foot-operated power switch, as well as a cable-tidy cord retraction system. The new handle design as well as the maneuver castor (wheel) system allows for easy maneuverability, with maximum stability.

The Vento 15 enhancements to the filter system includes new reusable/washable fleece bags, filter cloth, motor protection filter and optional exhaust filter. The result being significantly improved air quality during operation as well as increased motor life.

With the addition of the micro-filter HEPA filtration kit as well as the machines sound level of 59 decibels, the Taski Vento 15 will become an important part of meeting LEED certification requirements.

## Technical Data for Taski Vento 15

Dust Bag Capacity	15 litres
Bag Type (paper / fleece)	Both
Nominal consumption	1000 W
Voltage	220/240 V
Weight (with cable)	8 kg
Sound Level	59 dB(A)
Vacuum	22 KPa
Maximum Air Flow	61 l/s
Filtration (stages)	4 (6 including exhaust & HEPA)
Cable Length	10.5 m
Hose Length	2.2. m
Suction Tubes	Metal
Floor Tool Width	300 mm
Dimensions	420 x 390 x 489 mm
Protection Class	Class II
Exhaust Filter Option	Yes
Micro-filter (HEPA) Option	Yes
Approvals	CE

### **Ergonomic Maid Carts**

Designed to reduce back, shoulder, and wrist strain, the Numatic carts are wider at the front, to allow easier freedom of movement. With the dual mop buckets, contaminated water is separated from clean water. Only clean water is placed on the floor, reducing cross contamination. Mopping and cloth wringing maybe done by hand or the foot controlled wringer may be used.

Two cleaning buckets are located on the top of the cart allowing for clear water as well as a chemical mixture to be carried at the same time. This will allow for clear water cleaning when chemicals are not required.

## CLEANING PRODUCTS & FLOOR CARE



### Cleaning Products

Green products which are environmentally responsible will be used in NCH's green cleaning program. The Vert-2-Go line of cleaning products has been chosen due to its chemical compounds as well as its unique dispensing/dilution control system. Wall-mounted dilution control systems are safe because the product is always mixed to the proper dilution for the job at hand. Controls allow for a stronger concentration of product to be used if necessary, therefore reducing the amount of chemicals needed in the facility. The concentrated solution also reduces packaging, which is made with recycled content, and saves energy in transportation.

Chemicals are mixed with cold water from the dispensing system and placed into spray trigger bottles. The risk of dangerous chemical spills is low, since the operator will not handle the chemical at full concentration.

Vert-2-Go line formulations are low in VOCs, scent free, bio-degradable and NPE/APE/NTA free.

The Vert-2-Go products meet both Green Seals and Tera Choice's Ecologo\* stringent product requirements. Some of the areas that are examined by these organizations are:

- carcinogens and reproductive toxins
- skin and eye irritations
- skin sensitization
- combustibility
- indoor and outdoor air quality
- toxicity to aquatic life
- aquatic biodegradability
- eutrophication
- packing
- labeling
- concentrates
- fragrance
- prohibited ingredients
- training
- animal testing

# National Corporate Housekeeping Green Cleaning Program

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Disinfectants will only be used at primary contact points such as bathroom sinks and toilets. Deodorizers and urinal blocks will be eliminated.

## **Floor Care**

Sealers, finishers, and strippers are still required as part of routine floor maintenance in order to achieve maximum effectiveness. However, restorative floor care will occur on an as-needed basis and not on a pre-determined schedule. Certain types of floor such as natural stone floors and cement floors do not require the application of sealers and finishers. Unfinished or unsealed floors do not require chemical treatment.

Building occupants will receive a minimum of 24 hour notification of restorative floor maintenance. This should allow sufficient time to seek alternative work space or discuss options (i.e. postpone work), if they are chemically sensitive.

## **Carpet Care**

To minimize chemical residue in carpets, cleaning chemicals will be not mixed in the water tank. Instead, carpets will be sprayed with a thin layer of cleaning products prior to extracting with the carpet machine to avoid saturating the carpet fibres. Water use is reduced, accelerating drying times and minimizing the potential for mold growth. Fans and blowers can also be used to expedite drying times.

Building occupants will receive a minimum of 24 hour notification of restorative floor maintenance. This should allow sufficient time to seek alternative work space or discuss options (i.e. postpone work), if they are chemically sensitive.

By controlling migration with use of entrance matting, chemical use is reduced and air quality remains intact. Frequent cleaning of the entrances and exit points of the building also reduces vacuuming and electricity use, floor refinishing and chemical use, and also prevents the deep penetration of stains that would require more than one application and water.

## PAPER PRODUCTS



All of our paper products are Green Seal™ Certified that have standards for recycled content (post-consumer waste recycled content, post-industrial and pre-consumer waste recycled content), generated packaging waste, controlled dispensing, and ecologically sustainable forestry practices and certifications. Alternative paper products may be used as long as they meet the same environmental standards.

### Paper Towels

Multi-fold and C-fold paper towels are not used. Instead, rolls of paper towels are used to minimize energy costs during manufacturing, packaging waste, and user waste.

### Toilet Tissue

Large rolls of toilet tissue used to reduce packaging waste and tube inserts.

## CONSERVATION



### Day Cleaning

Day cleaning is one of the most effective ways for facilities to reduce energy/electrical consumption. Cleaning is done during operation hours of the building, conserving energy and bulbs by eliminating the need for light to be on while only one or two cleaning personal are in the facility at night.

Day cleaning allows for immediate response to spills, entrance maintenance, and disinfection of contact points, thus preventing the migration of soil and contaminants throughout the building.

When cleaners have direct contact with the facility operators, cleaning arrangements can be readily made for special events, immediate cleaning after maintenance, and areas of increased traffic flow; restoring the cleanliness, appearance and health of the buildings in a prompt manner.

### Reduce Plastic Bag Use

Trash collection and replacing trash liners are a large part of any housekeeping service. The procedure will be to empty the trash into a collection container located on the maids cart. Bag liners will only be changed when they are soiled. Trash bags will contain the highest level of recycled plastic as possible.

# National Corporate Housekeeping Green Cleaning Program

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## **Recycling**

Cleaning staff will be trained to minimize the amount of garbage that is placed into landfill sites. A visual inspection will be made before garbage bins are emptied. If it contains items that can be recycled then they will be removed and placed in the appropriate recycling bin. All cardboard will be broken down and placed in recycling rooms.

## **Towel and Matting Services**

Careful consideration has been given to the decision to continuing the use of 100% cotton towels. Cotton is a natural fiber and eco-friendly practices of cotton farming have improved greatly.

In contacting our towel/mat supplier we were given an insight into the environmentally friendly practices that are used in the cleaning process:

- non-phosphate detergents are used
- a maximum water temperature of 165 degrees Fahrenheit (74 degrees Celsius) is used to sanitize towels
- the most modern and energy-efficient dryers are used to reduce electricity consumption
- ability to recycle 30% of the water used through holding tank filtration systems
- all products are graded to maximize the life of the products. For example, a single towel may start at a high-end restaurant and end its life at a mechanics garage.

## PROGRAM SUMMARY



PROGRAM AREA	PRACTICE	DETAILS / BENEFITS
<p align="center"><b>Equipment</b></p>	<p align="center">Hard Surface Floor Care</p>	<p>Taski 755 Pad Assist Floor Machine</p> <ul style="list-style-type: none"> <li>• Self-propelled floor machine with pad assist which reduces energy requirements by 20%</li> <li>• Operators have the ability to control and minimize low water consumption, reducing water use by 40%.</li> <li>• Large tank system means fewer tips required to empty water tank. Worker productivity and battery use is maximized.</li> <li>• The machine is powered by rechargeable/recyclable AGM battery that contains fume emissions.</li> <li>• Little chemical residue will be left on the surface</li> <li>• Cold water will be used while cleaning hard surface floors, conserving energy wasted on heating water and prolonging the life of the floor finish.</li> <li>• Low noise levels emitted during operations (&lt; 70 dB)</li> </ul>
	<p align="center">Carpet Care</p>	<p>Taski Vento 15 Vacuum</p> <ul style="list-style-type: none"> <li>• Designed with ergonomic and safety features for easier maneuverability and maximum stability.</li> <li>• Filter system includes new reusable/washable fleece bags, filter cloth, motor protection filter and optional exhaust filter for improved air quality during operation as well as increased motor life.</li> <li>• Micro-fibre HEPA filtration system to contain particulate matter</li> <li>• Low noise levels emitted during operations (&lt; 70 dB)</li> </ul>
	<p align="center">Ergonomic Maid Carts</p>	<p>Numatic Carts</p> <ul style="list-style-type: none"> <li>• designed to reduce back, shoulder, and wrist strain</li> <li>• duel mop buckets to separate contaminated water from clean water</li> <li>• Two cleaning buckets to allow for clear water as well as a chemical mixture to be carried at the same time.</li> </ul>

<b>Cleaning Products &amp; Floor Care</b>	Cleaning Products	<p>Use Vert-2-Go line of green cleaning products</p> <p>Safe, wall-mounted dilution control system that always properly dilute the cleaning products for the job at hand, minimizing the need for a number of different cleaning products and chemicals, and minimizing the risk of spills.</p> <p>Cold water used to mix chemicals to conserve energy required for heating water</p> <p>Concentrated solutions reduce packaging, which is made with recycled content, and saves energy in transportation.</p> <p>Disinfectants only used as required (i.e. primary contact points).</p> <p>Deodorizers and urinal blocks will be eliminated.</p>
	Floor Care	<p>Restorative floor care will occur on an as-needed basis and not on a pre-determined schedule, reducing the number of chemicals required.</p> <p>Conduct floor assessment to determine the need for restorative maintenance. Certain types of floor do not require the application of sealers and finishers. Unfinished or unsealed floors do not require chemical treatment.</p> <p>Building occupants will receive a minimum of 24 hour notification of restorative floor maintenance.</p> <p>Entrance matting will be used to minimize the migration of soil and contaminants into the building. Restorative floor maintenance will be reduced resulting in the use of fewer chemicals, and prolonging the life of the floor finish.</p>
	Carpet Care	<p>Cleaning chemicals will be not mixed in the water tank to avoid saturating the carpet fibres.</p> <p>Water use is minimized, expediting drying times and reducing the possibility of mold growth. Fans and blowers can also be used to expedite drying times.</p> <p>Carpets will be sprayed with a thin layer of cleaning products prior to extracting with the carpet machine.</p> <p>Building occupants will receive a minimum of 24 hour notification of restorative floor maintenance.</p>

<b>Paper Products</b>	Paper Towels	<p>Paper towel products are Green Seal™ Certified paper products or a similar product that meets the same environmental standards.</p> <p>Multi-fold and C-fold paper towels are not used. Paper towel rolls are used to minimize energy costs during manufacturing, packaging waste, and user waste.</p>
	Toilet Tissue	<p>Toilet tissue products are Green Seal™ Certified paper products or a similar product that meets the same environmental standards.</p> <p>Large rolls of toilet tissue used to reduce packaging waste and tube inserts.</p>
<b>Conservation</b>	Day Cleaning	<p>Cleaning is done during operation hours of the building, conserving energy and light bulbs.</p> <p>Immediate response to spills, entrance maintenance, and disinfection of contact points, thus preventing migration of soil and contaminants throughout the building. Frequent cleaning of the entrances and exit points of the building also reduces vacuuming and electricity use, floor refinishing and chemical use.</p> <p>Direct contact with the facility operators so that the cleanliness of the buildings can be restored promptly.</p>
	Reduce Plastic Bag Use	<p>Bag liners will only be changed when they are soiled.</p> <p>Trash bags will contain the highest level of recycled plastic as possible.</p>
	Recycling	<p>Items that can be recycled will be removed and placed in the appropriate recycling bin. .</p>
	Towel and Matting Services	<p>Towels and mats are cleaned with non-phosphate detergents.</p> <p>Supplier has the ability to recycle 30% of the water used through holding tank filtration systems.</p> <p>A maximum water temperature of 165 degrees Fahrenheit (74 degrees Celsius) is used to sanitize towels.</p> <p>The most modern and energy-efficient dryers are used to reduce electricity consumption.</p> <p>All products are graded to maximize the life of the products.</p>