



# Green Carpet Care: Implementing Responsible Cleaning Practices



*Faster. Cleaner. Greener.*



## Responsible Cleaning

In recent years, the professional cleaning industry has made giant strides in converting from conventional products to environmentally responsible cleaning tools, chemicals, and equipment. “Green” product equivalents for everything from window cleaners to harsh degreasers have been certified by such leading organizations as the U.S. Environmental Protection Agency’s Design for the Environment (DfE), GreenSeal® and EcoLogo™ and are available to both consumers and professional users.

The goal of these cleaning products is to reduce the impact cleaning has on workers, building occupants, and the environment and reduce the impact on human health and the environment when compared to similar products used for the same purpose.

Green Cleaning is beginning to move beyond safe products and is now evolving to promote sustainability\* as well. This means, among other things, that the products, tools, and equipment used should be derived from renewable resources and packaged in recyclable materials and that cleaning procedures should minimize the use of nonrenewable resources.



## Water: A Resource in Crisis

Sustainability is no longer a luxury, but quickly becoming a necessity of staying in business. Consider this: The experts who were surveyed said water scarcity will deeply influence virtually every major company that wants to stay in business in the 21st century.

Population growth, urban development, farm production, and climate change is increasing competition for fresh water and producing shortages so acute that virtually every industry in the world anticipates sweeping systemic transformation over the next decade in their strategic planning, production practices, and business models.

*These findings should sound the alarm for companies that haven’t yet established robust water strategies.*

**Chris Coulter,**

Senior Vice President, GlobeScan

Companies should also be prepared to enter the public forum to expand knowledge and awareness, and to make public authorities feel that they will be supported in moving to better water policies. It is more and more evident that there is a growing, intuitive and widespread appreciation of the fact that access to water can no longer be taken for granted and that something must be done.





## Greening Carpet Cleaning

In what may be one of the most important events affecting the professional carpet cleaning industry in decades, the Carpet and Rug Institute (CRI), Dalton, Georgia, has developed a new testing and “Seal of Approval” certification program for evaluating carpet cleaning extractors. The system uses X-ray fluorescent (XRF) technology to measure soil removal as well as the extractor’s effectiveness in recovering water from carpets. LEED supports this testing for carpet extractors and requires that machines are CRI approved through the Gold, Silver or Bronze classifications.

The certification criteria include high standards for water recovery because of the potential for mold to develop. Additionally, CRI believes too much water left in the carpet negatively affects its appearance and can damage carpet fibers.

The Seal of Approval program evaluates extractors based on the following criteria:

**Soil removal** — XRF technology is used to measure the precise amount of soil removed from the carpet after cleaning.

**Water removal** — The extractor must remove most of the moisture resulting from a wet cleaning process. Dirty water that remains in the carpet could be a source of fungal growth and could prolong the drying process.

Through a unique rapid recovery process that atomizes the carpet solution and controls moisture, some carpet extractors use a revolutionary, eco-friendly system that:

- Consumes less water, chemical and energy;
- Minimizes the development of mold, fungus and allergens in carpets;
- Delivers faster drying times so your space is clean, dry and ready for immediate use;
- Provides enhanced ergonomics with an optional lightweight, forward-push wand system for those hard to reach places.

**Appearance** — The extractor must not harm the carpet pile.

This program is important to facility managers and the environment for a number of reasons:

- It is encouraging manufacturers of carpet cleaning extractors to develop more effective cleaning equipment.
- The machines developed are helping extend the life of carpets, a major cost savings as they improve their appearance.
- The health of the consumer and both the indoor and outdoor environment is protected. Typically, these are more powerful machines with more effective moisture recovery. More chemical and moisture is removed from the carpets during the cleaning process with less chance of mold or mildew to develop.

## Recycling Technology

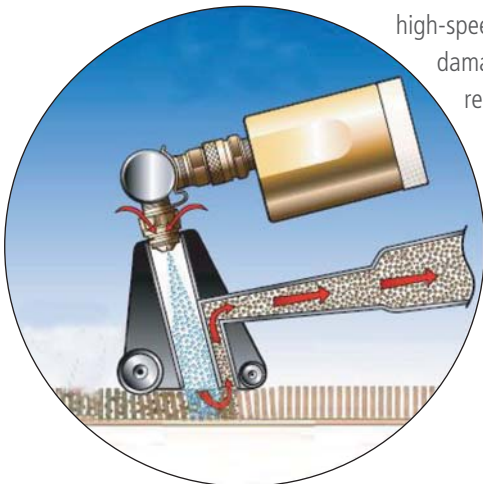
In the United States, the per capita residential water usage is 8 times greater than that of other nations. It is critical that we minimize both residential and commercial per capita water usage to preserve and protect this precious resource.

LEED provides guidelines and credits for water efficiency and reduction in commercial facilities. By adopting the use of eco-friendly carpet care equipment used during the commercial cleaning process, significant environmental gains can be made. One technology that provides water-reducing benefits are units that clean or filter the cleaning solution and then recycle it, minimizing water and chemical consumption by 1/7th. The benefits of using "recycling" carpet extractors include:

- Reduction in chemical usage
- Reduction in water usage
- Reduction in waste water being dumped into the sanitary sewer
- Less transportation and storage related activities due to the reduction of chemical and water usage.

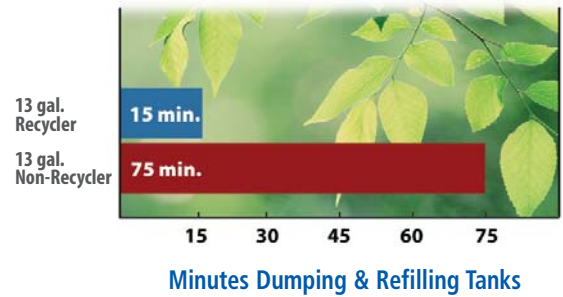
## Low-Moisture Wand Technology

Units that incorporate low-moisture atomization technology within the extraction wand provide another way to control and minimize water that comes in contact with the carpet. A Rapid Recovery Atomization process occurring within the wand (pictured at right), cleans and recovers solution all in one step to ensure that moisture never rests on the carpet during the extraction process. The atomized, high-speed cleaning solution works as an agitator, deep-cleaning the fibers without damaging the carpet. This atomized solution is then recycled and used repeatedly to reduce water and chemical usage, and minimize moisture, mold, allergens, contaminants and odors that can reside in carpets. To get the same level of clean with a traditional extractor using a standard wand and hand-tool, you have to go over the same area three to four times!

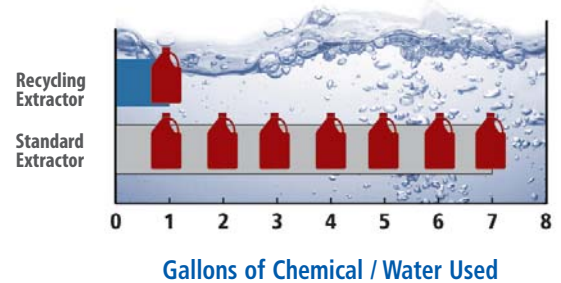


Low-moisture Atomization Wand Technology

## Time Savings



## Recyclers Use Up to 1/7th the Chemical and water





## Green Vacuuming

Facilities implementing Green Cleaning Programs must include environmentally responsible vacuum cleaners as part of their program. Specifically, LEED states that vacuum cleaners shall be:

- Certified by CRI
- Operate with sound level of 70 dBA or less

Nearly fifteen years ago, the U.S. Environmental Protection Agency (EPA) conducted a study that found proper maintenance and effective cleaning procedures reduce building airborne dust burdens in schools and other facilities by as much as 52 percent. Looking deeper as to how this was accomplished, the researchers found that the use of "quality vacuum cleaners with high-efficiency air filtrations systems" was at the top of the list.

Studies such as this laid the groundwork for establishing the Carpet and Rug Institute's (CRI) Green Label program. Through independent testing, this program identifies vacuum cleaners that have a reduced impact by meeting the following criteria:

- **Soil removal:** The machine's performance in soil removal is measured using NASA-enhanced X-ray fluorescence (XRF) technology.
- **Dust containment:** The vacuum cleaner must not release more than 100 micrograms of dust particles per cubic meter of air. It must also keep soils and contaminants locked within the vacuum, preventing them from escaping back into the air where they can be inhaled.

Typically this is accomplished through the use of HEPA filtration systems that trap more than 99 percent of all contaminants, preventing them from being released in the machine's exhaust. Further, more advanced vacuum cleaners are often referred to as true-HEPA vacuum cleaners. This means the machine has been designed and engineered so that its casing is airtight. All dust and soils are contained within the machine.

And the results speak for themselves according to tests conducted by Lees Commercial Carpets, a leading manufacturer of commercial carpets and a division of Mohawk Carpets. The researchers found that using randomly selected CRI Green Label vacuums on carpet for only four minutes results in a tenfold reduction in airborne dust burdens compared to the use of non-Green Label vacuums.

The implications of these findings are quite significant. They mean that ten times less dust was released into the air; ten times less dust blanketed facility furnishings and fixtures. Less dust reduces cleaning needs, which can help reduce maintenance costs, and most notably as it relates to human health, ten times less dust is inhaled.



## The LEED Connection

Because floor care can have such an impact on the environment, and because more and more facilities are seeking Leadership in Energy and Environmental Design (LEED) certification, the U.S. Green Building Council, which developed the LEED program, has established criteria and credits specifically addressing floor care equipment.

For instance, LEED-EBOM 6.5.2 (existing buildings, operation, and cleaning equipment maintenance) Credit 3.7 is awarded to those facilities that select and using floor care equipment that has a "reduced exposure to building occupants and maintenance personnel of potentially hazardous chemical, biological, and particulate contaminants, which [can] adversely affect air quality, human health, building finishes, building systems, and the environment."

The intent of these criteria, according to Ashkin, is to reduce floor care's impact on the environment, including reducing water and chemical consumption. And because there is increasing evidence that environmental savings also translates to cost savings, selecting more environmentally responsible floor care chemicals and equipment can also help facilities reduce costs related to floor care tasks.

## Foot Notes

\* The word sustainability has become a widely used term and can mean different things in different settings and discussions. The word is derived from the Latin *sustinere* (tenere, to hold; sus, up). A simple yet widely accepted definition of sustainability is using natural resources in a way that meets the needs of today without sacrificing the needs of future generations.

\*\*\* In recent years, equipment that is considered easy to use, ergonomic, and has low decibel ratings has also been recognized as part of Green cleaning. This is because such machines have less impact on the health of the user, which improves worker productivity and morale.

## Resources

### Cleaning Industry Management Standard's Green Building (CIMS-GB):

Sets forth a specific framework to ensure that the organization uses environmentally preferable cleaning practices.

Link: [http://www.issa.com/data/File/CIMS/CIMS-GB%20FINAL%202010\\_13\\_09.pdf](http://www.issa.com/data/File/CIMS/CIMS-GB%20FINAL%202010_13_09.pdf)

### Cost Analysis Tool:

Use this simple tool to show how much might be saved by going green. Answer some basic questions about your facility and you will get an idea of potential savings by going green.

Link: [www.ofee.gov/janitor/buildinginfo.asp](http://www.ofee.gov/janitor/buildinginfo.asp)

### U.S. Green Building Association:

The U.S. Green Building Council is a 501(c)(3) non-profit community of leaders working to make green buildings available to everyone within a generation.

Link: [www.usgbc.org](http://www.usgbc.org)

### Healthy Schools Campaign:

This advocacy group promotes healthier schools.

Links: [www.greencleaningschools.org](http://www.greencleaningschools.org) or [www.healthyschoolscampaign.org](http://www.healthyschoolscampaign.org)

### EPA Tools for Schools:

A program for schools to improve Indoor Air Quality.

Link: [www.epa.gov/iaq/schools](http://www.epa.gov/iaq/schools)

### The Carpet and Rug Institute (CRI):

Provides science-based facts about carpet and rugs and offers a Green Label certification program.

Link: [www.carpet-rug.org/index.cfm](http://www.carpet-rug.org/index.cfm)



## About CFR

CFR Corporation is dedicated to delivering carpet care equipment and after-sale service that meets and exceeds the expectations of our customers. We have a strong entrepreneurial history of partnering with in-house cleaners, contractors and facility managers to provide cleaning solutions that deliver innovation, reliability and competitive pricing. CFR's machines are created to maximize cleaning efficiency and speed, minimize the impact of cleaning on indoor environments, and reduce the total cost of cleaning — all factors resulting in greater profitability for your organization. CFR's industry-acclaimed products tackle the unique cleaning challenges faced in a variety of markets including:

- Hospitality
- Health care
- Industrial / Manufacturing
- Retail
- Education
- Food Service
- Building Service Contractors (BSC)
- Government
- Transportation

## Commitment to the Environment

As an organization, we are deeply committed to creating a clean, safe and healthy workplace through the use of innovative cleaning technology developed to minimize the impact of cleaning on indoor and outdoor environments. CFR embraces core ecological and corporate values including water conservation, less use of harsh chemicals, improvement of Indoor Air Quality (IAQ) through the use of HEPA filtration and advanced filtration systems, and the use of components that are reusable and recyclable. We proudly support the standards and criteria established by the U.S. Green Building Council, The Carpet and Rug Institute's (CRI) Green Label Certification program, EPA's Design for Environment (DfE), among others.



### U.S. Green Building Association

The U.S. Green Building Council is a 501(c)(3) non-profit community of leaders working to make green buildings available to everyone within a generation. [www.usgbc.org](http://www.usgbc.org)



### LEED Green Building Certification Program

The LEED green building certification program encourages and accelerates global adoption of sustainable green building and development practices through a suite of rating systems that recognize projects that implement strategies for better environmental and health performance.



### Design for the Environment

The EPA's Design for the Environment program recognizes products that are safer for the environment. The DfE logo on a product means that product contains only those ingredients that pose the least concern among chemicals in their class.



### Eco-Logo Program

Founded in 1988 by the Government of Canada but now recognized world-wide, EcoLogo™ provides customers – public, corporate and consumer – with assurance that the products and services bearing the logo meet stringent standards of environmental leadership.



### Healthy Schools Logo

HSC advocates for policies and practices that allow all students, teachers and staff to learn and work in a healthy school environment.



### CRI Seal of Approval

The CRI Seal of Approval program identifies effective carpet cleaning solutions and equipment that clean carpet right the first time and protect a facility's carpet investment. Not all products clean well enough to earn the Seal of Approval distinction, so look for the blue and green CRI Seal of Approval as proof that you are purchasing or using a quality product.



### CRI Gold Silver Bronze Space Logos

CRI uses NASA-enhanced x-ray fluorescence (XRF) technology to measure the precise amount of soil removed from carpet by deep cleaning extractors and residential and commercial vacuums cleaners. Soil removal efficiency is rated on three levels: Gold, Silver and Bronze. Manufactures receiving these ratings can also apply to use the seal of the Space Foundation, signifying use of space technology for earthly applications.



### CRI Green Label

The Green Label and Green Label Plus testing programs, overseen by independent labs, are designed for architects, builders, specifiers and facility managers who want assurances that carpet and adhesive products meet the most stringent criteria for low chemical emissions and help improve indoor air quality. Currently, carpet, cushion and adhesives as well as vacuum cleaners are tested in these programs.