

Making sense of green cleaning

A guide to environmentally sensitive floor maintenance

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“Green cleaning” is a term heard everywhere these days — *but what does it mean?*

Philosophically, the goal of green cleaning is to minimize the impact of cleaning on the environment and human health. In practice, green cleaning aims to reduce the use of chemicals, water and energy. And, ideally, green cleaning maintains or even improves the effectiveness of cleaning programs.

Green cleaning has become increasingly popular in schools, healthcare facilities, manufacturing and warehouse facilities, and many other building types, and the trend is expected to continue. But exactly how does one go about the job of green cleaning and, specifically, green floor cleaning?

Whether you are a facility manager or a building service contractor (BSC), this guide provides clear and basic information that can start you on the path toward environmentally friendly floor cleaning.

Growth drivers for green cleaning

Naturally, interest in green cleaning is due in part to the beneficial effects on people and the environment. But there's more to the story than altruistic motives. For example, it turns out that green cleaning can actually be good for business, according to Jerry Yudelson, a prominent sustainability consultant. Yudelson cites several reasons for the positive impact on business, including reduced energy use and increased satisfaction among tenants and employees in buildings cleaned by environmentally friendly products and processes.



One widely accepted definition of green cleaning is “cleaning to protect health without harming the environment.”

— From U.S. Presidential Executive Order 13101



Certifications for cleaning chemicals

Green Seal

Describing its missions as providing science-based environmental certification standards, Green Seal certifies products in more than 40 categories — from household cleaning products to floor finishes and strippers for facility maintenance. Green Seal also established GS-42, a standard that provides guidance and certification for green cleaning services. Many Advance machines meet the requirements of GS-42.

EcoLogo

EcoLogo is recognized worldwide as a standard and certification mark for over a dozen broad product categories, including cleaning and janitorial supplies. EcoLogo standards address environmental attributes throughout the entire life cycle of the product or service and also require that certified products meet performance requirements to ensure they perform as well as conventional alternative products.

EPA Design for the Environment

The U.S. Environmental Protection Agency's environmental program awards the DfE label to products in 15 broad categories based on a review of the ingredients in individual products. Applied to products such as commercial floor cleaners, a DfE label means that in the EPA's judgment and based on current knowledge, the product contains only those ingredients that pose the least concern among chemicals in their class.

"The focus of the green-building industry will continue to switch from new buildings to greening existing buildings."

— Jerry Yudelson, principal of green-building consulting company Yudelson Associates

In addition to businesses, government entities at all levels are now requiring the use of green cleaning products in their buildings. With demand for green cleaning surging among both public- and private-sector clients, many BSCs view their ability to satisfy this demand as a key feature of their business.

THREE COMPONENTS OF FLOOR CLEANING

Floor cleaning can be broken into three major components: chemicals, equipment and policies/procedures. Let's take a look at some green standards that have been established for each of these components.

1. Chemicals

Cleaning chemicals get the most focus in any discussion of environmentally sound cleaning practices. In "The Business of Green Cleaning," the International Facility Management Association notes that over six billion pounds of cleaning chemicals are used each year in the performance of cleaning tasks. Reducing the environmental harm done by these substances is the goal of several product-certifying organizations, including Green Seal, EcoLogo and EPA Design for Environment. (See sidebar at left.) Green cleaning programs nearly always mandate the use of chemicals certified by one of these organizations.

2. Equipment

While chemicals come to mind first when people think about green cleaning, the equipment used can also make a significant contribution to a facility's green cleaning program. Brands with reputations for high-quality construction, corrosion resistance and component reliability can help reduce the impact of equipment manufacturing on the environment while also providing long-term economic benefits.



LEED Existing Building: Operations and Maintenance Rating System

LEED-EBOM contains the most specific equipment recommendations of any green cleaning standard. Here are some of the requirements of the system's IEQ Credit 3.4 — Sustainable Cleaning Equipment:

- Vacuum cleaners are certified by the CRI testing program and operate with a sound level of less than 70 dB A.
- Carpet extraction equipment is certified by the CRI Seal of Approval testing program for deep-cleaning extractors.
- Powered floor maintenance equipment is equipped with vacuums, guards and/or other devices for capturing fine particles.
- Propane-powered floor equipment has high-efficiency, low-emissions engines with catalytic converters and mufflers that meet the California Air Resources Board (CARB) or Environmental Protection Agency (EPA) standards for the specific engine size and operate with a sound level of less than 90 dB A.
- Automated scrubbing machines are equipped with variable-speed feed pumps and onboard chemical metering to optimize the use of cleaning fluids; alternatively, the scrubbing machines use only tap water with no added cleaning products.
- Battery-powered equipment is equipped with environmentally preferable gel batteries.
- Powered equipment is ergonomically designed to minimize vibration, noise and user fatigue.
- Equipment is designed with safeguards, such as rollers or rubber bumpers, to reduce potential damage to building surfaces.

Examples of green cleaning equipment may include:

- **Automatic scrubbers** should offer low-flow dispensing to minimize chemical and water use and allow for water-only cleaning and the use of green-certified chemicals.
- **Burnishers** and **buffers** should be designed for energy efficiency, operate quietly and maximize the life of floor surfaces.
- **Carpet extractors** should offer low-moisture cleaning to save resources and speed drying time.
- **Multi-purpose machines** such as sweeper-scrubbers and extractor-scrubbers help reduce the environmental impact of manufacturing equipment by replacing two machines with one.
- **Outdoor cleaning machines** that re-use water can drastically reduce water consumption during outdoor surface cleaning and aid EPA stormwater runoff compliance.
- **Sweepers** that provide dust control can help maintain healthy levels of indoor air quality for building occupants
- **Vacuums** can contribute to indoor air quality by employing filters that capture dust particles

The most frequently used standard for green cleaning equipment is found in the LEED Existing Buildings: Operations and Maintenance Rating System. These guidelines define the specific attributes of floor equipment required for a green cleaning program and address equipment design, features, performance and noise levels. (See sidebar at left.)

Another standard-setting organization for equipment is the Carpet and Rug Institute (CRI). CRI's Seal of Approval programs for vacuums and extractors measure soil removal and carpet fiber protection.

3. Policies/procedures

Green floor-cleaning policies and procedures specify when and how cleaning activities are performed. Help for those developing such policies and procedures is available in ASTM International E1971-05,





About Advance:

Advance floor-cleaning equipment is designed to increase cleaning productivity and reduce the cost to clean — while also minimizing environmental impact and meeting today's newest green cleaning standards. From vacuums and carpet extractors to sweepers, scrubbers and outdoor cleaning machines, Advance delivers efficient, easy-to-use equipment backed by professional, local maintenance and service support.

For an up-to-date list of the green certifications that Advance equipment has earned, contact a local Advance equipment dealer or visit www.advance-us.com/solutions/greencleaning.aspx.

"Standard Guide for Stewardship for the Cleaning of Commercial and Institutional Buildings." This document does not recommend a specific cleaning process; instead, it provides information and options for developing a stewardship plan that fits a specific facility.

Green cleaning policies have also been addressed by ISSA, the worldwide cleaning industry association, which recently made an addition to its Cleaning Industry Management Standard (CIMS). The new CIMS-GB (Green Building) certification is awarded to building services contractors who meet all the requirements of the original CIMS, which is intended to help cleaning organizations ensure quality, efficiency and overall customer satisfaction. The new CIMS-GB can also help BSC customers earn points in the LEED-EBOM rating system.

CONCLUSION

Green floor cleaning is one way to minimize the environmental impact of the cleaning process in commercial, industrial, public and institutional buildings. Facility managers and BSCs interested in environmentally friendly floor cleaning should look for chemicals and equipment that meet green requirements laid out by various independent organizations. In the process, however, potential purchasers must remember that even the greenest chemicals and machines are no good if they can't do their main job: cleaning hard floors and carpets to the satisfaction of building owners and facility managers.

FOR MORE INFORMATION

Visit these web sites for more information on green floor cleaning:

American Society for Testing and Materials: www.astm.org

Carpet & Rug Institute: www.carpet-rug.org

Cleaning Industry Management Standard—Green Building: www.issa.com/cims-gb

Design for the Environment: www.epa.gov/dfe

EcoLogo: www.environmentalchoice.com

Green Guide for Health Care: www.gghc.org

Green Seal: www.greenseal.org

U.S. Green Building Council and LEED Building Rating Systems: www.usgbc.org

For white papers that describe CRI testing programs:

www.advance-us.com/solutions/greencleaning.aspx

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