

## IN THIS ISSUE

### Janitorial Supplies Considerations:

- Toxicity
- Volatile Organic Compounds (VOCs)
- Asthmagens
- Skin, Eye and Respiratory Irritation
- Skin Sensitization
- Biodegradability
- Concentration and Dilution
- Recycled Content
- Certification
  - Green Seal
  - UL ECOLOGO
  - EPA Design for the Environment

Janitorial supplies, including paper products, can be purchased using a statewide contract with [BISM](#).

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### Environmentally Preferable:

- OXYSMART
- OXYSMART Carpet Cleaner and Spotter
- Vibrance Low Acid Bowl Cleaner
- Clear Choice Glass
- Terra Green Floor Finish
- Crystal Brite Floor Finish
- Terra Green Stripper
- Meteor Stripper
- Terra Green Neutral Floor Cleaner
- Essence Degreaser
- GOJO Soaps and Cleaners (except anti-bacterial)
- Purell Sanitizers
- All toilet tissue products
- All paper towel products
- All trash can liners

## Winter 2014 Product Focus: Janitorial Supplies

### The Importance of Green Cleaning

Janitorial supplies help owners and managers maintain clean, healthy, safe and functional buildings. But these products may also present negative health and environmental risks. They can contain chemicals associated with skin, eye or respiratory irritation, toxins harmful to aquatic species or allergens that compromise the health of workers and occupants. Concentrated forms of some products are classified as hazardous, creating handling, storage, and disposal issues for users.

Other environmental impacts come from the raw material content of paper products and the waste generated from excess packaging and improper and excess use of janitorial supplies.

### Product Performance

All janitorial products - chemical cleaners, hand soaps, paper products, and trash can liners - should meet basic performance standards such as ASTM standards for removing particulate soil and other standards for cleaning efficacy, resoil resistance, strength and/or absorbency.

### Environmental, Health and Safety Considerations

#### Toxicity

Heavy occupational exposure to, and inhalation of, toxins such as 2-butoxyethanol, a solvent in carpet, hard-surface, glass and oven cleaners, can present hazards to the central nervous system, blood, liver, and kidneys of users and occupants. Alkylphenol ethoxylates (APEs), common surfactant ingredients in cleaners and detergents, have been shown in laboratory studies to function as "endocrine disrupters," leading to adverse reproductive effects in aquatic species exposed to polluted waters.

#### Volatile Organic Compounds

Volatile organic compounds (VOCs) are gases emitted by the organic chemical ingredients in a wide array of products that include cleaning supplies. According to the [Environmental Protection Agency](#), concentrations of some VOCs are consistently higher indoors than outdoors, elevated concentrations can persist in the air long after use of a product is discontinued, and exposure of users and others can result in eye and respiratory tract irritation, headaches, dizziness, visual disorders, and memory impairment.

#### Asthmagens

According to the American College of Allergy, Asthma and Immunology, asthma affects more than 26 million people in the United States, including almost 7 million children, and respiratory irritants, including chemicals and fragrances found in cleaning, disinfectant and floor care products, can provoke or exacerbate asthma. The [Association of Occupational and Environmental Clinics](#) lists hundreds of asthmagens that may be found in occupational environments, including monoethanolamine (MEA), used in detergents and surfactants and a common solvent in floor strippers, and quaternary ammonium compounds (NOS, often referred to as quats), found in many disinfectants.

#### Skin, Eye and Respiratory Irritation

Ingredients in some cleaning products can cause skin, eye and respiratory irritation in exposed workers. The irritant response may occur immediately or after some time, can be affected by concentration and seasonal variation, and may or may not recur.

#### Skin Sensitization

Skin sensitization - also referred to as allergic contact dermatitis (ACD) - is a biochemical allergic reaction to chemical substances that come in contact with skin. In contrast to irritation, sensitization is a permanent immune system response brought on by repeated exposures.



*According to the US Bureau of Labor Statistics, the [2012 Incidence Rate of Occupational Injuries Requiring Days Away From Work](#) for janitors and cleaners was 263 per 10,000 full-time workers and considered a high case count occupation (the public sector rate was more than double that of the private sector). 4% of injuries requiring days away from work were caused by exposure to harmful substances or environments.*



[Green Seal](#) is a non-profit organization that develops life cycle-based sustainability standards for products, services and companies, including nine standards for janitorial products and services.



[UL Environment ECOLOGO](#) is a third-party certification program that identifies environmentally preferable products, including seven standards for cleaners and paper products that comply with the requirements of green cleaning programs.



[EPA Design for the Environment](#) is a labeling program that identifies cleaning and other products that perform well, are cost-effective, and are safer for the environment.

### Biodegradability

"Ready biodegradability" refers to a material's ability to be broken down by microorganisms into simple compounds relatively quickly and safely in an aquatic aerobic environment. Products made from synthetic compounds (or natural compounds that have been heavily processed) and in combinations that do not exist in nature cannot be broken down by microorganisms and thus persist, often with negative impacts for ecosystems, in the environment.

### Recommendations

#### General Purpose Cleaners

Cleaning Products should be Green Seal or EcoLogo certified, or Design for the Environment (DfE) labeled. Green Seal and ECOLOGO both have standards for Cleaning Products, Floor-Care Products, and Cleaning and Degreasing Agents, which address product performance requirements and environmental and health considerations. In addition, Green Seal has a standard for Specialty Cleaning Products and ECOLOGO has a standard for disinfectants.

Design for the Environment has developed Master Criteria for Safer Ingredients, which establishes thresholds for safer ingredients by defining the "low concern" end of the ingredient hazard spectrum. DfE labels all-purpose cleaners, carpet cleaners, degreasers, floor care products, metal polishes, toilet bowl cleaners, tile cleaners, and glass cleaners.

#### Specialty Cleaners

For specialty cleaners that fall outside the scope of Green Seal and ECOLOGO standards and Design for the Environment designation, products should be VOC compliant with [California Code of Regulations, Title 17, Division 3, Chapter 1 \(Air Resources Board\), Subchapter 8.5 \(Consumer Products\), Article 2 \(Consumer Products\)](#).

#### Disinfectants

Disinfectants should not be used as cleaners. When disinfection is required, disinfectants should only be used in areas where it is necessary and should be UL ECOLOGO certified or contain only hydrogen peroxide, citric acid, lactic acid, and/or caprylic acid as active ingredients.

#### Hand Cleaners and Hand Soaps

According to the [Centers for Disease Control \(CDC\)](#), washing hands with soap and water is the best way to reduce germs. If soap and water are not available, the CDC recommends the use of an alcohol-based hand sanitizer that contains at least 60% alcohol. Hand soaps should not have antibacterial or antimicrobial ingredients, which have not been proven to prevent the spread of infection better than products that do not contain antibacterial chemicals. Hand sanitizers should not contain triclocarbon or triclosan, an ingredient added to many consumer products to reduce or prevent bacterial contamination, which the [US Food and Drug Administration](#) is currently reviewing for safety and effectiveness.

#### Concentration and Dilution

Janitorial staff and others who perform cleaning can be exposed to concentrated cleaning products. Use of a Chemical Management System (a set of formal procedures to ensure proper storage, handling, and use) can greatly minimize or prevent exposure to concentrated cleaning product during handling and use.

#### Recycled Content

The [EPA's Comprehensive Procurement Guidelines](#) promote the use of materials recovered from solid waste in 61 products designated in eight categories. Buying recycled-content products ensures that the materials collected in recycling programs will be used in the manufacture of new products. EPA recommends the following minimum level of postconsumer recycled content for Commercial/Industrial Sanitary Tissue and Plastic Trash Can Liners.

Product	Material	Postconsumer Content (%)
Bathroom Tissue	Recovered Fiber	20-100
Paper Towels	Recovered Fiber	40-100
Trash Can Liners	Plastic (HDPE, LDPE, or LLDPE)	10-100