

The ChildSafe Guidelines: Green Cleaning Products for Schools

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ABSTRACT

The increasing incidence of environmentally mediated illness in children, combined with emerging science that links many of these illnesses with exposures to chemical toxins, has precipitated an increase in “green” cleaning products for use in schools and other facilities where children spend time. Accelerated Hydrogen Peroxide® (AHP®) is a patented chemical formulation that uses chemicals that have undergone stringent toxicity testing and have been proven to be a safe and sustainable alternative to legacy chemicals ensuring that AHP formulations will meet guideline requirements.

BACKGROUND

Children are at a greater risk from toxic exposures because of their immature immune systems and developing physiology as well as their natural behavioral patterns. Children live in their environments in ways that adults do not. They play on floors, sprawl on surfaces and engage in hand-to-mouth behavior which means that pound for pound, children ingest more contaminants than adults. Furthermore, schools and child care facilities are cleaned daily, leaving behind fresh residues of cleaning chemicals on surfaces with which children come into direct contact. This leads to higher exposure rates to contaminants and an increased risk to developing chronic disease.

Selection of Cleaners, Sanitizers and Disinfectants

Routes of children’s exposure to cleaning chemicals include inhalation, skin absorption and ingestion. Acute exposures (significant one-time exposures) may burn the eyes or skin, cause blindness, poisoning, headaches

and respiratory and gastrointestinal ailments. Chronic exposure (frequent low-dose exposures) on the other hand can lead to asthma, allergies, certain types of cancer, learning and behavioral disorders, endocrine disruption, chemical sensitivity and kidney or liver damage. To help making the decision process easier, the ChildSafe Guidelines recommends that decision makers choose products that meet an extensive list of criteria. In no specific order they are:

- i. Products must be certified by Green Seal or EcoLogo
- ii. For products not certified by Green Seal or EcoLogo, all ingredients must be disclosed to the purchaser
- iii. Product must be bio-based and biodegradable or based on naturally occurring ingredients
- iv. Product in concentrate form must have a health rating of 0 or 1 as designated by HMIS v.
- v. Product in concentrate form must have VOC content of less than 1%
- vi. Product in concentrate form must not contain known or suspected endocrine disruptors or ingredients or ingredients that are toxic to the liver or kidneys
- vii. Product must not contain added fragrances
- viii. Products must not contain chlorine-based ingredients
- ix. Products must not contain quaternary ammonium compounds

- x. Products must not contain phenolics
 - xi. Product labels must include instructions that the product should be used only after surfaces have been pre-cleaned
 - xii. Products must not be corrosive to skin or eyes
- Sanitizers and Disinfectants should be used judiciously and are not required for general cleaning. These products should be used to sanitize and disinfect surfaces in bathrooms, gymnasiums, nurses' offices and kitchens or for dealing with blood or body fluid spills.

CONCLUSION

A growing body of evidence suggests that children are more vulnerable to toxins in their environments than previously known, and that the effects of exposure may not be manifested for years. While scientists continue to probe for more answers to these complex issues, parents and school administrations should choose cleaners and disinfectants that minimize children's exposure to toxic chemicals to reduce negative health impacts.