

## Ingredients Checklist

This list was developed to assist custodians in identifying the hazards of ingredients in *common cleaning and maintenance products*.

Although all cleaning chemicals need to be *used with caution*, some cleaning chemicals are more toxic than others and should be avoided. The following table is a list of cleaning chemicals that should be avoided whenever possible.

Custodial staff should keep safety in mind and wear personal protective equipment as recommended by each manufacturer.

Substance	CAS #	Health Concerns <sup>1</sup>	Product
Acetone	67-64-1	Suspected gastrointestinal or liver, cardiovascular, central nervous system, kidney, respiratory, and skin or sense organ toxicant	Graffiti removers Stainless cleaners
Aliphatic petroleum distillates	64741-44-2	Respiratory system, gastrointestinal and eye and skin irritant <sup>2</sup>	Dust mop treatments Furniture polishes
*Alkylphenol Ethoxylates (APEs), Ethoxylated nonyl phenols (NPEs)  See Below for Additional Names	26027-38-3 9016-45-9 9002-93-1 25154-52-3 27193-28-8 various	Suspected endocrine toxicant Toxic to aquatic organisms	All-purpose cleaners Carpet cleaners Carpet pre-sprays Cleaner/disinfectants Dust mop treatments Floor finishes Floor strippers
Ammonia Aqueous Ammonia	7664-41-7	Suspected gastrointestinal, central nervous system, and skin or sense organ toxicant. Forms toxic gas when mixed with bleach. <sup>3</sup>	Aerosol air fresheners All-purpose cleaners Deodorizers Disinfectants Floor finishes Floor strippers Glass cleaners
Ammonium Chloride	12125-02-9	Suspected cardiovascular or blood toxicant	Hand soap
Ammonium Hydroxide	1336-21-6	Suspected respiratory toxicant	Chalkboard cleaners Disinfectants Glass cleaners
Amyl Acetate	628-63-7	Suspected central nervous system, respiratory and skin or sense organ toxicant	Furniture Polishes Graffiti Wipes
Benzene	71-43-2	Recognized carcinogen, developmental and reproductive toxicant	Heavy-duty cleaners Solvent
Benzalkonium Chloride (alkyl dimethyl benzyl ammonium chloride)	8001-54-5	Respiratory sensitizer, suspected gastrointestinal, immunological, neurological and skin or sense organ toxicant	Disinfectants
Butane	106-97-8	Suspected central nervous system toxicant	Aerosol products Air fresheners Furniture polishes

Substance	CAS #	Health Concerns <sup>1</sup>	Product
2-Butoxyethanol- also butyl cellosolve, ethylene glycol monobutyl ether, ethylene glycol butyl ether, ethylene glycol n-butyl ether, butyl cellulose, butyl glycol, and butyl oxitol.	111-76-2	Suspected human carcinogen, cardiovascular, developmental, endocrine, gastrointestinal or liver, kidney, central nervous system, reproductive, respiratory and skin or sense organ toxicant Absorbed through the skin <sup>4</sup>	All-purpose cleaners Baseboard strippers Carpet cleaners Disinfectants Floor strippers Glass cleaners
Chlorine	7782-50-5	Suspected cardiovascular, gastrointestinal or liver, kidney, central nervous system, respiratory, and skin or sense organ toxicant. Forms toxic gas when mixed with ammonia, quaternary ammonium compounds or acids <sup>3</sup> .	All-purpose cleaners Bleach Cleansers Disinfectants Toilet Bowl Cleaners
Crystalline Silica	14808-60-7	Suspected carcinogen, endocrine, gastrointestinal, immunological, and respiratory toxicant	Cleansers
Dibutyl Phthalate Diethyl Phthalate	84-72-2 84-66-2	Suspected endocrine disruptor, reproductive, developmental, central nervous system and kidney toxicant	Floor finishes Floor strippers Fragrances
Dichloromethane	75-09-2	Recognized carcinogen, suspected cardiovascular, endocrine, gastrointestinal or liver, kidney, neurological, reproductive and respiratory toxicant	Graffiti remover
Diethanolamine, Cocamide DEA	111-42-2	Suspected carcinogen, cardiovascular, gastrointestinal, kidney, neurological, skin and sense organ and respiratory toxicant	Hard surface cleaners
Diethylene Glycol Butyl Ether	112-34-5	Suspected cardiovascular, kidney, neurological and reproductive toxicant	All-purpose cleaners
Diethylene Glycol Ether	111-46-6	Suspected liver, kidney, central nervous system toxicant	Glass cleaners
Diethylene Glycol Monoethyl Ether	111-90-0	Suspected cardiovascular, gastrointestinal, kidney, liver and central nervous system toxicant	Carpet cleaners Floor cleaners Glass cleaners Oven cleaners Tub and tile cleaners
Diethylene Glycol Monomethyl Ether	111-77-3	Suspected developmental, endocrine, gastrointestinal or liver, kidney and central nervous system toxicant	Air fresheners Floor finishes
Ethanolamine	141-43-5	Absorbed through the skin; suspected skin and sense organ and immunotoxicant, eyes and respiratory irritant; asthmagen <sup>6</sup> – use with caution	Floor Strippers
Ethanol	64-17-5	Suspected carcinogen, cardiovascular, developmental, endocrine, gastrointestinal, central nervous system, reproductive respiratory and skin or sense organ toxicant	Aerosol products Deodorizers Hand soaps

Substance	CAS #	Health Concerns <sup>1</sup>	Product
Ethylbenzene	100-41-4	Recognized carcinogen, suspected cardiovascular, developmental, endocrine, gastrointestinal, kidney, central nervous system, reproductive, respiratory and skin or sense organ toxicant	Graffiti removers
Ethylene Glycol	107-21-1	Suspected cardiovascular, developmental, gastrointestinal or liver, kidney, central nervous system, reproductive, respiratory, and skin or sense organ toxicant	Floor finishes Glass cleaners
Ethylene Glycol Monobutyl Ether	111-76-2	Suspected cardiovascular, kidney, central nervous system, developmental, endocrine system, gastrointestinal, respiratory, skin or sense organ and reproductive toxicant	Air fresheners Carpet cleaners Furniture polishes Tub and tile cleaners
Ethylene Glycol Monoethyl Ether	110-80-5	Recognized developmental and reproductive toxicant, suspected cardiovascular, endocrine, kidney, central nervous system and respiratory toxicant	Floor Finishes
Formaldehyde	50-00-0	Recognized carcinogen, suspected gastrointestinal or liver, immune system, central nervous system, reproductive respiratory and skin or sense organ toxicant	Air fresheners Carpet cleaners Disinfectants
Hydrochloric Acid	7647-01-0	Corrosive, burns to skin and eyes, asthma-like symptoms. <sup>5</sup> Suspected gastrointestinal or liver, immune system, musculoskeletal, respiratory and skin or sense organ toxicant	Toilet bowl cleaners
Isobutane	75-28-5	Suspected neurotoxicant	Aerosol products Floor strippers Heavy-duty cleaners Glass cleaners
Methylene Chloride	75-09-2	Recognized carcinogen. Suspected cardiovascular, kidney, central nervous system, endocrine, gastrointestinal, respiratory, skin or sense organ and reproductive toxicant	Graffiti removers
Monoethanolamine	141-43-5	Hormone disrupting chemical that can form cancer-causing nitrates Use with caution Restricted in Europe due to carcinogenic effects Asthmagen <sup>6</sup>	Floor strippers
N-Methyl-2 pyrrolidone	872-50-4	Recognized developmental toxicant, suspected cardiovascular, kidney, reproductive and neurological toxicant	Graffiti Remover
Napthalene	91-20-3	Recognized carcinogen, suspected respiratory, cardiovascular, developmental, gastrointestinal, skin and sense organ and central nervous system toxicant	Carpet cleaners Floor strippers Carpet spotters
Nitilotriacetic Acid	18662-53-8	Recognized carcinogen	Carpet cleaners

Substance	CAS #	Health Concerns <sup>1</sup>	Product
Ortho-phenylphenol (2 phenylphenol)	90-43-7	Recognized carcinogen, suspected cardiovascular, developmental, neurological, reproductive, respiratory, skin and sense organ toxicant	Disinfectants
Oxalic Acid	144-62-7	Suspected gastrointestinal, neurological, reproductive and skin and sense organ system toxicant	All-purpose cleaners
Paradichlorobenzene	106-46-7	Recognized carcinogen, suspected cardiovascular, developmental, gastrointestinal or liver, kidney, central nervous system, respiratory, skin or sense organ toxicant	Moth balls Urinal blocks
Perchloroethylene Tetrachloroethylene	127-18-4	Recognized carcinogen, suspected reproductive, kidney, developmental, gastrointestinal, central nervous system, respiratory, skin and sense organ and liver toxicant	Carpet spotters Graffiti removers Metal cleaners
Phenol	108-95-2	Suspected cardiovascular, respiratory, developmental, gastrointestinal or liver, kidney, central nervous system, reproductive, skin or sense organ toxicant	Air fresheners Disinfectants Furniture polish
2-Phenylphenol	90-43-7	Recognized carcinogen, cardiovascular, developmental, central nervous system, reproductive, respiratory and skin or sense organ toxicant.	Disinfectants Air fresheners
Phosphoric Acid	7664-38-2	Corrosive to skin and eyes. <sup>2</sup> Suspected central nervous system, respiratory, and skin or sense organ toxicant	Toilet bowl cleaners
Potassium Hydroxide	1310-58-3	Skin or sense organ toxicant	All-purpose cleaners
Propane	74-98-6	Suspected central nervous system and respiratory toxicant	Aerosol products Air fresheners Chewing gum removers
Quartz	14808-60-7	Suspected carcinogen, endocrine, gastrointestinal, immunological, and respiratory toxicant	All-purpose cleaners Cleansers
Sodium Hydroxide (Lye)	1310-73-2	Caustic, contact burns eyes and skin, ingestion damages stomach and esophagus. <sup>2</sup> Suspected respiratory and skin or sense organ toxicant	Degreasers Floor strippers Oven cleaners
Sodium Nitrate	7632-00-0	Suspected cardiovascular, gastrointestinal, developmental, kidney, neurological, and respiratory system toxin	Air fresheners
Stoddard Solvent	8052-41-3	Suspected central nervous system toxicant	All-purpose cleaners Carpet cleaners Furniture polishes Glass cleaners

Substance	CAS #	Health Concerns <sup>1</sup>	Product
Sulfuric Acid	7664-93-9	Suspected musculoskeletal, respiratory, and skin or sense organ toxicant	Drain cleaners Hard surface cleaners Metal cleaners
Toluene	108-88-3	Recognized developmental toxicant, suspected cardiovascular, respiratory, immune system, gastrointestinal or liver, kidney, central nervous system, reproductive, skin or sense organ toxicant	Graffiti removers Hard surface cleaners
Trichloroethane	71-55-6	Suspected cardiovascular, developmental, gastrointestinal or liver, central nervous system, reproductive, skin or sense organ toxicant	Furniture polish
Trichloroethylene	79-01-6	Recognized carcinogen, suspected liver, kidney and respiratory toxicant	Degreasers Spot cleaners
Triclosan	3380-34-5	Suspected of causing liver damage and resistant strains of bacteria <sup>7</sup>	Hand soaps
Triethanolamine	102-71-6	Suspected immune system, respiratory and skin and sense organ toxicant Asthmagen <sup>6</sup>	All-purpose cleaners Floor cleaners Furniture polishes Metal cleaners
Tributoxyethyl Phosphate	78-51-3	May cause nervous system effects such as ataxia, breathing abnormalities and tremors with prolonged or repeated contact. <sup>1</sup>	Floor cleaners and finishes
Zinc	7440-66-6	Suspected cardiovascular, developmental, immune system, reproductive, respiratory and skin or sense organ toxicant	Floor finishes
Zylene	1330-20-7	Suspected cardiovascular, developmental, immune system, reproductive, respiratory, central nervous system, gastrointestinal, kidney and skin or sense organ toxicant	Graffiti Remover

**\*Additional Alkylphenol Ethoxylates as listed by Vermont Purchase and Contract Administration:**

Nonylphenoxy Ethanol  
p-Octylphenol Diethoxylate  
p-Octylphenol Ethoxylate  
Tetramethylbutyl Phenoxy

Nonoxynol-9  
Nonylphenoxyglycol  
Dodecylphenol Ethoxylates  
Nonylphenol Polyethylene Oxide

Octylphenoxy poly  
p-Tert-Octylphenoxy polyethoxyethanol  
Nonylphenol monoethoxylate 4-1,1,3,3  
Branched Alkylphenol Ethoxylate

**Notes**

<sup>1</sup>The Environmental Working Groups Scorecard, 2005—Human Hazards, Chemical Profiles, available at <http://www.scorecard.org/>

<sup>2</sup>Manufacturer MSDS, 2005 – available at <http://www.msdsonline.com>

<sup>3</sup><http://www.nlm.nih.gov/medlineplus/ency/article/002488.htm>

<sup>3</sup>Proctor and Hughes' *Chemical Hazards of the Workplace*, Hughes, James P. MD, Gloria J. Hathaway, Nick H. Proctor

<sup>4</sup>International Chemical Safety Cards, <http://www.cdc.gov/niosh/ipcsneng/neng0059.html>

<sup>5</sup> <http://www.epa.gov/ttn/atw/hlthef/hydrochl.html>

<sup>6</sup> *Occupational Asthma Caused by Ethanolamines*, Allergy 1994: 49:877-88

Risks to Asthma Posed by Indoor Health Care Environments, Health Care Without Harm

<sup>7</sup>Toxin-Free Basics – Toxic Ingredients to Avoid, available at [http://www.tfbasics.com/learning\\_more.html](http://www.tfbasics.com/learning_more.html)

## Additional Resources

### Information on the health effects of chemicals was gathered from:

Information on ingredients, CAS numbers and health effects:

Green Seal, 2005, available at <http://www.greenseal.org>

Janitorial Products Pollution Prevention Project, 2005, available at <http://www.wrppn.org/Janitorial/jp4.cfm>

Household Products <http://householdproducts.nlm.nih.gov/cgi-bin/household/brands?tbl=brands&id=5021>

For related information about green cleaning, see the following INFORM fact sheets: Cleaning for Health: Best Practices; Implementing Environmentally Preferable Cleaning Practices: An Eight Step Plan; Cleaning Products and Practices Evaluation Check List; and Asthmagens in Institutional Cleaning Products.

## Contact

Carol Westinghouse

Cleaning for Health

Program Manager

[westies@ecoisp.com](mailto:westies@ecoisp.com)

802-646-8643