

# Common Hazardous Ingredients in Household Cleaning Products.

## Part 1

**Acetone** - A neurotoxin, acetone may cause liver and kidney damage, and damage to the developing fetus. It is a skin and eye irritant. Found in spot treatment cleaners, mark and scuff removers, and other products.

**Aerosol products**- Aerosol propellants may contain propane, formaldehyde, a carcinogen, neurotoxin and central nervous system depressant, ethylene chloride, a carcinogen, neurotoxin and reproductive toxin, and nitrous oxide. Products applied with aerosol sprays are broken into minute particles, which can be more deeply inhaled than larger particles, which may increase their toxic effect.

**Ammonia** - Undiluted, ammonia is a severe eye and respiratory irritant that can cause severe burning pain, and corrosive damage including chemical burns, cataracts and corneal damage. It can also cause kidney and liver damage. Repeated or prolonged exposure to vapors can result in bronchitis and pneumonia. Found in a wide range of cleaning products. Ammonia will react with bleach to form poisonous chlorine gas that can cause burning and watering of eyes, as well as burning of the nose and mouth.

**Bleach**: see sodium hypochlorite

**Diethanolamine (DEA)** - Listed as a suspected carcinogen by the State of California, this chemical is a skin and respiratory toxicant and a severe eye irritant. Used in a wide range of household cleaning products.

**D-limonene** - cold-pressing orange peels produce this chemical. The extracted oil is 90% d-limonene. It is a sensitizer, a neurotoxin, a moderate eye and skin irritant, and can trigger respiratory distress when some sensitive individuals inhale vapors. There is some evidence of carcinogenicity. D-limonene is the active ingredient in some insecticides. It is used as a solvent in many all-purpose cleaning products, especially 'citrus' and 'orange' cleaners. Also listed on labels as citrus oil and orange oil.

**Ethoxylated nonyl phenol** - Nonyl phenols are hormone disruptors and some contain traces of ethylene oxide, a known human carcinogen. They are eye and skin irritants. Used in laundry detergents and other cleaning products.

**Formaldehyde** - In lab tests, formaldehyde has caused cancer and damaged DNA. Formaldehyde is also a sensitizer, with the potential to cause asthma. Several laboratory studies have shown it to be a central nervous system depressant. Exposure to formaldehyde may cause joint pain, depression, headaches, chest pains, ear infections, chronic fatigue, dizziness and loss of sleep. While formaldehyde naturally occurs in the human body in minute amounts, it is estimated that 20 per cent of people exposed to it will experience an allergic reaction. Used in a wide range of products, including some furniture polishes. Formaldehyde may be released by other chemicals, eg. quaternary 15.

**Fragrance** - Fragrance on a label can indicate the presence of up to 4,000 separate ingredients, most of which are synthetic. Many compounds in fragrance are human toxins and suspected or proven carcinogens. In 1989, the US National Institute of Occupational Safety and Health evaluated 2,983 fragrance chemicals for health effects. They identified 884 of them as toxic substances. Synthetic fragrances are known to trigger asthma attacks. The US Environmental Protection Agency found that 100% of perfumes contain toluene, which can cause liver, kidney and brain damage as well as damage to a developing fetus. Symptoms reported to the FDA from fragrance exposure have included headaches, dizziness, rashes, skin discoloration, violent coughing and vomiting, and allergic skin irritation. Clinical observations by medical doctors have shown that exposure to fragrances can affect the central nervous system, causing depression, hyperactivity, irritability, inability to cope, and other behavioral changes. Fragrance is a common skin irritant.

**Ethylene chloride** - Ethylene chloride is a carcinogen, a neurotoxin and a reproductive toxin. On inhalation, it can cause liver and brain damage, irregular heartbeat, and even heart attack. It is a severe skin and moderate eye irritant. Used in stain removers.

**Monoethanolamine** - This chemical may cause liver, kidney and reproductive damage, as well as depression of the central nervous system. Inhalation of high concentrations - when cleaning an oven for example - can cause dizziness or even coma. The chemical can also be absorbed through the skin. It is a moderate skin irritant, and a severe eye irritant. Found in many cleaning products, including oven cleaners, tub and tile cleaners, laundry pre-soaks, floor strippers and carpet cleaners.

**Morpholine** - This corrosive ingredient can severely irritate and burn skin and eyes, and can even cause blindness if splashed in eyes. It can cause liver and kidney damage, and long-term exposure can result in bronchitis. It reacts with nitrites (added as a preservative in some products, or present as a contaminant) to form carcinogenic nitrosamines. Morpholine is a moderate to severe eye, skin and mucous membrane irritant. Used as a solvent in a number of cleaning products, including some furniture polishes and abrasive cleansers.

**Naphthalene** - This registered pesticide is listed as a suspected carcinogen in California and is most commonly found in mothballs, and some other pest repellants, as well as in deodorizers. As a reproductive toxin, it is transported across the placenta and can cause blood damage. It can cause liver and kidney damage, and corneal damage and cataracts. Skin exposure is especially dangerous to newborns.

**Parabens** - Parabens are hormone disruptors. Widely used in cleaning products as preservatives, paraben is usually preceded by the prefixes methyl-, ethyl-, butyl-, or propyl. Parabens may cause contact dermatitis in some individuals

**Para dichlorobenzene** - This highly volatile registered pesticide is in the same chemical class as DDT. It is a suspected carcinogen, and may cause lung, liver and kidney damage. It is used in mothballs and some washroom deodorizers and urinal blocks.

**Phosphoric acid** - Extremely corrosive, it can severely irritate and burn the skin and eyes. Breathing vapors can make the lungs ache, and it may be toxic to the central nervous system. Found in some liquid dishwasher detergents, metal polishes, some disinfectants, and bathroom cleaners, especially those that remove lime and mildew.

**Sodium dichloroisocyanurate dehydrate** - This corrosive chemical is a severe eye, skin and respiratory irritant. It may cause liver and gastrointestinal damage, and may be toxic to the central nervous system. It will react with bleach to form poisonous chlorine gas that can cause burning and watering of eyes, as well as burning of the nose and mouth. It is found in some toilet bowl cleaners and deodorizers, as well as industrial detergents and some institutional dishwashing detergents.

**Sodium hypochlorite (bleach)** - A corrosive chemical, sodium hypochlorite is an eye, skin and respiratory irritant, as well as a sensitizer. It is especially hazardous to people with heart conditions or asthma, and can be fatal if swallowed. It may be a neurotoxin and toxic to the liver. Found in a wide range of household cleaners.

**Sodium Lauryl Sulfate** - Sodium lauryl sulfate (SLS) is used as a lathering agent. This chemical is a known skin irritant. It also enhances the allergic response to other toxins and allergens. The U.S. government has warned manufacturers of unacceptable levels of dioxin formation in some products containing this ingredient. SLS can react with other ingredients to form cancer-causing nitrosamines.

**Toluene** - Exposure to toluene may cause liver, kidney and brain damage. It is also a reproductive toxin, which can damage a developing fetus.

**Turpentine** - This chemical can cause allergic sensitization, and kidney, bladder and central nervous system damage. It is an eye irritant. Found in specialty solvent cleaners, furniture polishes and shoe products.

**Xylene** - Xylene has significant neurotoxin effects, including loss of memory. High exposure can lead to loss of consciousness and even death. It may damage liver, kidneys and the developing fetus. It is a severe eye and moderate skin irritant. Used in some spot removers, floor polishes, ironing aids and other products.