



# Environmental Health and Safety Department

## Working With Chemicals - Housekeeping

### Ammonia and Bleach

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Bleach and ammonia are the most frequently used cleaning chemicals. When bleach and ammonia are mixed, a very deadly gas called nitrogen chloride is released. Keep this in mind when working with either product.

Bleach is a solution of sodium hypochlorite and water. It is useful because it can kill germs and effectively remove stains. Bleach is one of the ingredients in Babo and Ajax. Although bleach is widely used, it can be harmful to your health. Skin contact over the time can lead to cracking and blistering of the hands. Vapors from bleach can be breathed into the lungs, causing irritation and lung congestion. Your eyes can get very irritated as well.

Ammonia effectively cuts through dirt and grease. Products containing ammonia can be harmful to your health. Breathing in ammonia vapors can cause irritation of the eyes, lungs, nose and throat. Headaches, vomiting and an altered sense of smell can occur from higher exposures. Concentrated ammonia can burn the skin and eyes if splashed. As with bleach, the eyes must be flushed out immediately if splashed with an ammonia product.

### Germicidal Detergent

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Germicidal detergents contain chemicals that kill germs, as well as other detergents. Some contain "corrosive" chemicals which can burn and permanently damage the skin, eyes, or lungs. Find out if the product you work with contains **phenols** (or any chemical with "phene," "phenyl" or "pheno" in its chemical name). Phenols can pass through the skin and enter your bloodstream, causing damage to your nervous system.

Some workers may become allergic to the phenols in germicidal detergents. Accidentally swallowing or inhaling the detergent dust can cause serious irritation. Clear instructions regarding handling of powdered germicidal detergents will be printed on the label or MSDS. Get the information you need to work safely with these products.

### Bowl Cleaners and Polishers

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Acids can be found in many products used to clean porcelain and marble. Watch out for acid mist which can cause serious irritation to the skin, eyes and lungs. In larger amounts, permanent injury can occur.

### To work safely with solvents:

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Learn about the hazards from the MSDS.

- Work in properly ventilated areas.
- Use the proper personal protective equipment. ***It is against the law for an employer to give you a respirator or mask without a complete training program.*** You must be trained how to use, maintain, clean and store your equipment. Medical testing may be necessary to see if your heart and lungs can handle a respirator.
- Use special gloves. Make sure you have been issued the right kind. Use eye protection when working the sprays or mists or when pouring dangerous chemicals.
- Find out if a safe product can be substituted for the one you are using. For example: a chemical called 1, 1, 1, trichloroethane can be used instead of kerosene or benzene. It does the job just as well and is much less poisonous.



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Fire warning! Nearly all solvents are flammable. This means that they can ignite at temperatures under 100 degrees Fahrenheit. If enough vapor is in the air, a simple spark can cause an explosion.

To avoid these hazards:

- Never smoke where solvents are used or stored.
- Store solvents in fireproof cabinets.
- Use aerosol products away from heat or flames.
- Learn where fire extinguishers are located and how to use them.
- Participate in your building's Fire Safety Program.

### Scouring Powders and Pastes

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Some brands contain silica flour, a mineral which helps to scrub surfaces clean. Inhaling large amount of silica can damage your lungs and cause scar tissue to form. Avoid breathing in the dust when using these products. Protect your skin from becoming dry and cracked by using the right kind of gloves.

Contact your supervisor if you do not have the personal protective equipment you need to work safely with cleaning chemicals. You have the right to information about the chemicals you work with. Use it!

### Floor Strippers, Graffiti Removers, Baseboard Cleaners

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Most of these products contain both corrosive chemicals (acids) and **solvents**. **Metal polish, ceiling file spray and disinfectant detergents** also contain solvents. Solvents are chemicals which dissolve other chemicals. Because they dissolve other chemicals. Because they dissolve grease, dirt and old wax, solvents are used in thousands of products. But they can also dissolve the natural layer of fat in our skin, causing the skin to dry out and crack. This allows chemicals to enter our bloodstream where they can be carried all over the body. Most solvents can cause a reddening, swelling and blistering of the skin called "dermatitis."

Certain solvents are much more poisonous than others. Find out if benzene, ethylene chloride, or methyl ethyl kettle are among the ingredients of the products you use. These are very dangerous solvents and can be replaced with safer products. You can get a headache, become nauseous, dizzy and lightheaded when you breathe in solvent vapors. Exposure to high levels of solvents may cause you to faint, collapse, or even die. Over time, solvents can cause muscle weakness, tingling in the arms and legs, and problems with eyesight. Solvents can accumulate in the body and the health effects can become more. **Solvent exposure is serious business!**

Some workers who are overexposed to a solvent can become "sensitized" to that chemical. This means that any exposure (even very small amounts) will make them feel sick. Once sensitized, sometimes a wide variety of chemical products will make them feel ill.