



Cooperative Extension Service
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Flood Clean-Up: Questions about Cleaning Products

Charlotte Crawford, Lois E. Smith

The right type of cleaner can make a major clean-up job or an everyday clean-up job easier. In either situation, the best product choice is one that not only cleans away soil, but also kills bacteria and/or a wide variety of microorganisms. Clean-up after a flood requires a lot of time, patience and skill. It helps if you have the right cleaner, one that is appropriate for the job and is a disinfectant as well. Any retailer's shelf contains many brands of various types of cleaners: all purpose, glass, basin-tub-tile, bathroom, detergents, bleaches and so forth. Many companies use one brand name for several types of products, both powdered and liquid. It's very confusing, but you can choose an appropriate cleaner if you take time to read the label.

What is on a cleaning product label? Important information appears on cleaning product labels:

- Product name and manufacturer.
- Directions for use: amount to dilute; how to apply.
- Materials (such as wood, marble, aluminum or textiles) that can be damaged by product use.
- If the word "disinfectant" is on the label, an Environmental Protection Agency (EPA) registration number must be listed.
- Signal words (**Caution, Warning, Danger, Poison.**)
- Ingredients contained in the product (such as ammonia, pine oil, isopropanol.)
- Toll-free number for information or poison control assistance.

- Statement of practical treatment, such as: "If swallowed, give a glassful of water. Call a physician."

Do all cleaning product labels have hazard warnings? No, not unless they involve a potential specific hazard. All products are governed by the Federal Hazardous Substances Act that was passed in 1960. This covers household cleaning products that are expected to be stored in the home or garage, but specifically excludes food, drugs and pesticides. These are covered by other legislation. The signal words **Caution, Warning, Danger** must appear on the main panel of the label with the specific hazard following. Additional information such as "Keep out of reach of Children" is also required.

What products typically have the "Caution" label? Most automatic dishwashing and laundry detergents. Common warnings are: *Eye Irritant, Skin Irritant, Harmful if Swallowed*. These generally are not expected to cause permanent damage, but an inflammation of the affected area might occur. Caution or Warning also appears on products that are flammable or apt to explode if heated.

What products are likely to have Danger or or Poison on the label? Oven cleaners, rust cleaners, clogged-drain openers, or highly flammable products. **Poison** is rarely used, but household lye, antifreeze and some car-care products stored around the house may have this label.

What is trisodium phosphate? TSP or trisodium phosphate (NaPO) is an ingredient used in few cleaning products today. Trisodium phosphate is a water softening agent that makes water more basic in pH and precipitates calcium and magnesium in

hard water. Other ingredients are common substitutes today, because phosphates are banned in many locations. Sodium tripolyphosphate (Na₅ P₃ O₁₀) was a widely used detergent builder that is now banned or restricted in many states because of concern that phosphates contribute to eutrophication of lakes.

How can I know if a product is a disinfectant?

Cleaning products that actually have germ killing power will be labeled using the word "disinfectant" on the label. Products that claim to disinfect must be registered. The EPA registration number should be on the label. This indicates the product has met government specifications for effectiveness. Products vary greatly in their directions for use, so reading the label is very important. Some, but not all, liquid chlorine bleaches are registered as "disinfectants." The percent of active ingredient in chlorine bleach varies with brands.

Do other cleaning agents kill germs? Cleaning agents, such as detergents, are not all designed to kill germs, but their use will remove large numbers of microorganisms. The word disinfectant must appear on the label if the product is effective in killing microorganisms. The active ingredient and percentage of this ingredient in the product formulation determines if the product meets the standards for it to function effectively as a disinfectant. What does antibacterial agent mean? It means that it kills bacteria. This is used interchangeably with the term disinfectant. However, the antibacterial agent may be less effective against viruses and parasites that also cause illness.

Is borax a disinfectant? Not unless the label says it includes ingredients that kill germs.

What is special about pine-oil cleaners? Pine oil cleaners are terpenes, such as terpineol, found in nature. Products made with them often contain petroleum distillates (much like a dry-cleaning solvent) that dissolve grease easily, but are highly flammable. These cleaners have a variety of precautionary statements based on their concentration and contents, and can be very dangerous if swallowed or if the volatile fumes are inhaled. They must be used with adequate ventilation and all label precautions must be followed.

What is bleach? The most commonly used and least expensive disinfectant is probably liquid chlorine bleach. A 5.25% solution of sodium hypochlorite is required for a liquid chlorine bleach to function effectively as a disinfectant. Depending on the task, bleach may be diluted in different ways. A common recommendation for final disinfecting rinse after flood cleanup of most hard surfaces is 1/2 cup per gallon of water. If working with bleach as a cleaner, wear rubber gloves to protect your hands. Keep the room well ventilated, because the fumes can be dangerous. In high concentrations, bleach can be quite damaging to fabrics, so the dilution recommended for laundering clothing is 1 cup per wash load for top-loading washers and 1/2 cup for regular sized front-loading washers. Bleach should not be added on top of clothes, but with a dispenser or as a diluted solution. This is necessary to prevent clothing damage. Liquid chlorine bleach will ruin wool or silk fabric. Dark or bright-colored clothing will probably be faded by liquid chlorine bleach. **DO NOT MIX BLEACH WITH AMMONIA CLEANERS. THE FUMES ARE TOXIC.**