



Assessing Hazardous Products in Your Household

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The goal of *Home•A•Syst* is to protect your health and the environment from pollutants in and around your home.

The following statements are designed to help you pinpoint potential problems with hazardous products in your household. These problem areas may contribute to the pollution of your environment if they are not managed properly. If a statement reflects the current situation in your household, check “Agree.”

If the statement does not describe your household, check “Disagree.”

If you disagree with any of these statements, or if you are unsure, you may have a situation in your home that could affect the environment or your health. Refer to the fact section with the same number as that statement (under the heading, “What you should know about . . .”) for more information.

Agree Disagree

- | | | |
|-----------------------|-----------------------|---|
| <input type="radio"/> | <input type="radio"/> | 1. I always read the labels before I buy household products. |
| <input type="radio"/> | <input type="radio"/> | 2. I never mix products to make my own household cleaners. |
| <input type="radio"/> | <input type="radio"/> | 3. I purchase only as much product as I need, after checking on my current inventory. |
| <input type="radio"/> | <input type="radio"/> | 4. I keep all products out of the reach of children. |
| <input type="radio"/> | <input type="radio"/> | 5. When I have leftover products, I store them in their original containers. |
| <input type="radio"/> | <input type="radio"/> | 6. The area where I store my products is well-ventilated. |
| <input type="radio"/> | <input type="radio"/> | 7. I never dump or bury hazardous products on my property. |
| <input type="radio"/> | <input type="radio"/> | 8. I don't burn wastes on my property. |
| <input type="radio"/> | <input type="radio"/> | 9. I never pour hazardous products directly into a storm sewer. |
| <input type="radio"/> | <input type="radio"/> | 10. I never dump used antifreeze, batteries, or solvents near a well or waterway. |

Don't be alarmed if you disagreed with many or even all of these statements. That does not automatically mean you have a hazardous-waste problem. It may, however, tell you that change is needed to avoid potential problems. In the same way, agreeing with every statement does not mean you are *not* at risk or cannot make improvements.

Why should you be concerned?

Some commercial products commonly used at home have the potential to be harmful to your health and the environment. They require special measures for disposal and are thus classified **hazardous**. Hazardous products are toxic, flammable, corrosive, or reactive. **Toxic** means that the product can cause death, cancer, or birth defects if swallowed, inhaled, or absorbed through the skin. **Flammable** means that the product will burn or explode if it is exposed to certain conditions or temperatures. **Corrosive** products can cause serious injury if they come in contact with the skin. They will also eat through certain containers if stored improperly. **Reactive** substances can explode or react violently even under normal circumstances. Following is a list of common hazardous products.

Household Trash:

- ash/sludge from burned trash (from the home or garage)
- used motor oil
- plastic wraps/containers
- pesticide or solvent containers
- empty containers from other products classified as hazardous

Clothing and Fabric Care Products:

- mothballs
- dry-cleaning fluids
- solvent-based spot removers
- shoe/leather polishes

Hobby and Recreation Products:

- paints and solvents
- charcoal lighter fluid
- strong acids and bases*
- bottled gas
- household batteries (mercury or cadmium)

Building/Wood Cleaners and Repair Products:

- wood polishes
- products for wood-floor and panel cleaning
- strong acids and bases*
- lead-based paint
- oil/alkyd paint
- paint primer
- aerosol paint products
- stains and finishes
- roof coatings and sealants
- rust removers
- lubricants
- adhesive removers
- paint and finish preparation products
- adhesives, such as glue and caulk
- wood-preserving products
- products for brush or spray-gun cleaning
- water repellents for wood and cement
- solvents, as used in degreasers, paint thinners, stains, and varnishes

Pesticides:

- pesticides labeled "restricted use"
- old pesticides

Vehicle Maintenance Chemicals:

- vehicle maintenance products, such as antifreeze, oil, grease, and fuel
- solvents for oil and grease removal and disposal
- engine, parts, and equipment cleaners (transmission fluid, carburetor fluid, brake quieter)
- paints and paint preparation products
- lead-acid batteries
- battery terminal protectors
- tire cleaners
- rust removers
- ignition wire dryers
- gasket removers
- aerosol paint and primer products
- lubricants
- brush and spray-gun cleaners

*Strong acids or bases are present in a product if:

- there is a hazard warning label (which requires use of skin protection or warns against breathing the fumes),
- the product is intended for use in a commercial situation (industrial-strength cleaner, for example), or
- the product is intended to manage difficult stains or dirt (rust or lime remover, for example).

If these types of products are not stored and disposed of safely, they pose a threat to your health and to the environment. In choosing household products, it is important to ask yourself:

- 1) Which product best meets my needs?
- 2) Are there safer alternatives?
- 3) What is the safest way to store it?
- 4) How do I use it safely?
- 5) How do I dispose of leftovers?
- 6) Is it dangerous to children?

This *Home•A•Syst* assessment helps you make choices that reduce risks to your family's health and the environment.

What you should know about . . .

1. Product labels

Household consumer products that are hazardous or contain hazardous substances are required to have warning labels.

Three signal words should draw your attention to important safety information: **Caution**, **Warning**, and **Danger**. **Caution** means that the product is low in toxicity or even non-toxic, but may still be deadly to humans if an ounce to a pint is ingested. Some products labeled this way are not lethal, but cause illness when consumed at any level. **Warning** means that the product is moderately toxic and can be deadly if a teaspoonful to a tablespoonful is consumed. The signal word **Danger**, along with the skull-and-crossbones symbol, is required on any product that is extremely flammable, corrosive, or toxic. (Teach your children to recognize this symbol!) These products can kill if a taste to a teaspoonful is consumed. Products labeled **Danger**, **Flammable**, **Poison**, **Vapor Harmful**, or **Fatal If Swallowed** are not only potential threats to your health, but also probably contain ingredients that can harm the environment if not disposed of properly. Try to buy products that are the least harmful.

Terms on some labels may be misleading. The Federal Trade Commission has provided manufacturers with guidelines about environmental terms, such as **Ozone-Safe** or **Environment-Friendly**, but their use is not regulated on any products except pesticides.

If you need more information about a product than is provided by the label, you can request a Material Safety Data Sheet (MSDS) from the manufacturer, or consult Poison Control, a national computer data network for hazardous product emergencies. Most manufacturers provide a phone number on their product label and are willing to answer questions by phone.

In case of a health emergency, never rely on the label alone for information. Consult Poison Control. Look up your local or state Poison Control number, and keep it close to your phone. For information about what to do if a hazardous product spills, read the label or contact Poison Control.

2. Homemade products

It is not recommended that you create your own household cleaners by mixing products. Many organizations have distributed information about making cleaners from common household ingredients in an effort to reduce risk from hazardous chemicals. You should know, however, that your homemade product may not be a safer alternative.

If you choose to make your own household products, be sure to take these precautions:

- Use only one ingredient at a time. *Never* mix ingredients or products. When using two different products for the same job, be sure to rinse the area after using the first product. Then apply the second.
- Always test a cleaner on a small area before using it for an entire job.
- Do not use food products for cleaning (such as vegetable oil or milk). These can spoil, and also support the growth of bacteria or mold.
- Use clean containers when storing your homemade product, and clearly label the contents and date. *Never* store them in old containers from commercial products, because the residues from the old products could react with the new. Also, you may mistake one product for another.

3. Product selection

If you buy more hazardous products than you need, they will accumulate and create storage problems. If they remain on your shelves unused, the containers may become damaged or corroded and leak. Products may also change chemically and become ineffective. Some, like pesticides, may have been restricted or banned since you purchased them, making

safe and legal disposal much more difficult. Avoid these problems by purchasing and using only what you need.

4. Accessibility to children

Ideally, hazardous products should be kept in a locked cabinet or another location completely inaccessible to children. At the very least, they should be placed on a high shelf, out of a child's direct reach. *Never* keep them in an unlocked place within a child's reach, such as below the kitchen sink.

5. Storage of leftovers

When you have leftover products, you may have to store them until you use them again or dispose of them. Store leftover products in their original containers, if at all possible, at least 100 feet from any well or waterway.

If you must use alternative containers (like glass jars or milk jugs), label and date them clearly, and shelve them by type to avoid confusion among products. This is especially important for corrosives such as acids or lye, which can produce dangerous chemical reactions if they come in contact with other products. Keep your storage containers tightly sealed. If you can smell a household product in storage, either the lid is too loose or the storage area is inadequately ventilated.

Check the product label for any special storage instructions. (Some products should not freeze or become too hot.) Never store products near food. Check storage areas routinely to ensure that no containers are leaking or bulging.

Keep batteries and flammable chemicals out of direct sunlight. Store pesticides that come in cardboard containers inside plastic bags, making sure that each pesticide is in a separate bag.

6. Ventilation

Never store chemical products in areas with poor ventilation such as basements, closets, or crawl spaces. If your containers are not tightly sealed, fumes from the products can make you seriously ill or can ignite.

7. Product disposal

Disposing of hazardous household products is a tricky problem, because there are few methods that are truly safe for your health and the environment. You can avoid this dilemma by buying and using only what you need, using up the leftovers or giving them away, or recycling.

Some hazardous wastes can be thrown in the trash *after special treatment*. Liquid cleaners, paint, shoe polish, and nail polish can be thrown in the trash after they have been evaporated. Leave these products out in a well-ventilated area until they are hardened and dry; then wrap them in newspaper and place them in the trash. When these products are in solid form, they are less likely to mix with other chemicals, leak into the water supply, or cause fires at the waste facility.

Water-soluble cleaning products can be safely flushed down the drain if plenty of water is used. Only small quantities should be flushed. If you have a septic system, follow these guidelines: 1) Never mix chemicals while flushing. 2) Do not use a sink near a food preparation area. 3) Make sure the room where you are flushing is well-ventilated. 4) Use plenty of water. 5) Rinse the empty container before placing it in the trash.

It is *never* a good idea to dump or bury hazardous products on your property, especially near wells or other water sources. Products should *never* be dumped down storm sewers, which flow directly to the nearest body of surface water. These practices threaten your drinking water as well as the beauty of your nearby ponds and lakes.

Your options for recycling are increasing. For example, used motor oil, antifreeze, brake fluid, and batteries are accepted in many auto repair shops for recycling. Pesticide containers can often be returned to the place of purchase for safe disposal. Many communities now sponsor hazardous-waste collection programs. If you aren't sure what opportunities exist for disposal or recycling of a certain product, contact local sanitation officials for advice.

8. Burning wastes

Burning hazardous wastes in a burn barrel or stove is never an alternative you should consider. This often releases toxic gases into the air, and creates poisonous ash or sludge. If you dump this ash or sludge within 100 feet of your well, you are posing a serious threat to your drinking-water supply. If you dump it near a body of surface water, you place wildlife at risk.

9. Storm sewers

Storm sewers are direct pathways to surface-water bodies, and dumping hazardous products (especially strong acids or bases) down them presents an unsafe situation. The best way to handle strong acids or bases is to share the leftovers with someone who

can use them or turn them in at a hazardous-waste collection program. In some areas, local sewage treatment facilities allow you to pour them down the drain if they are properly diluted. Check with your local facility to be sure.

10. Antifreeze, battery, and solvent disposal

These products should all be recycled if suitable facilities or programs exist in your area. Otherwise, used antifreeze should be disposed of in a septic system or municipal treatment system, and batteries and solvents should be taken to a community landfill. *Never* dump these items on your property, especially near a well or waterway.

Make a note:

The table on page 6 of SP508M, *Assessing Your Homesite*, provides a space for you to list all the problem areas in your home that you find while completing *Home•A•Syst*. Take a few minutes now to list any hazardous-waste problems you discovered as you completed *Assessing Hazardous Products in Your Household*. Later, when you complete *Assessing Your Homesite*, you will include these items on the map you draw of your property. Potential items from this factsheet include:

- stored hazardous products
- dump sites
- burn sites

Remember:

- Read product labels carefully and follow their instructions.
- In case of a health emergency involving hazardous products, call Poison Control. Keep the number near your telephone.
- Homemade products may not be safe alternatives to store-bought chemicals.
- Never mix chemicals.
- Don't use food products as cleaners.

- Buy only as much of a product as you will use.
- Keep chemicals in an area inaccessible to children.
- Store products in their original containers, and keep the containers tightly sealed.
- Keep corrosive chemicals separate from other products.
- Store products only in a well-ventilated area.
- Never dump, bury, or burn hazardous products on your property.
- Never pour chemicals down storm drains.
- Seek out recycling and hazardous-waste collection programs in your community.

If you want more information . . .

Contact:

- Your local Extension office
- Poison Control Center
1(800)288-9999
- Your local sewage treatment facility

Read:

- *Household Chemicals—Alternatives and Precautions*. SP 365-A.
- *Hazardous Household Products*. SP 365-B.
- *Disposing of Hazardous Household Products*. SP 365-C.

The above publications are available from your University of Tennessee Agricultural Extension Service county office.

- *Household Chemicals and Your Septic System*. 329FSHCS. \$2.00.
- *Disposal of Household Hazardous Waste*. 329FSHHW. \$2.00.

- *Household Cleaning Products: What About Substitutes?* 329FSHCP. \$2.00.

The above publications are available from:
Cornell University Resource Center
8 BTP
Ithaca, NY 14850

Download:

- <http://funnelweb.utcc.utk.edu/~utext>
The University of Tennessee Agricultural Extension Service's home page.
- <http://ianrwww.unl.edu/ianr/pubs/nebfacts/nf94-193.htm>
Nebraska Extension Service's "Handling Wastes: Household Solvents."
- http://hermes.ecn.purdue.edu:8001/server/water/bib/Waste_Management/Household_Hazardous.html
"Disposal of Household Chemical Wastes."
- <http://www.ag.uiuc.edu/~robsond/solutions/consumer/docs/barb067.html>
Illinois Cooperative Extension Service: Home and Consumer Solutions.
- <http://www.logicnet.com/cathy.kitlar/world.htm>
Site recommended by Infoseek with links to information about recycling, composting, lead poisoning, ozone, acid rain, and more.
- <http://www.ncg.nrcs.usda.gov/public.html>
The Natural Resources Conservation Service home page. See section entitled, "Public Service Information," for information on household hazardous waste and other topics.
- <http://www.webdirectory.com>
Comprehensive environmental search engine/bulletin board—a great way to find information about any environmental topic.

This *Home•A•Syst* assessment does not cover all potential health or environmental risks related to hazardous household waste. It is meant to be a starting point for identifying and addressing the most apparent risks.

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