

# Household Hazardous Waste: It's time to regulate this hazard



Toxics Link  
**Factsheet**  
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**W**ith new products added to the list of everyday utilities on a daily basis, the list of what we dispose-off as waste is increasing in an equal measure. But have you wondered how these impact your family, neighborhood and the environment?

Discarded waste in our households may contain hazardous and toxic chemicals. The typical Indian household uses many products that may contain various substances that can be categorized as hazardous. These include insecticides, pesticides and fungicides; wood preservatives; broken CFLs, tube lights; paints, thinners, stains and varnishes; adhesives and glues; medicines, cosmetics, nail polish and removers; batteries; various cleaners and polishes; and variety of electrical and electronic items.

**This fact sheet intends to describe some of the potential dangers associated with Household Hazardous Wastes (HHW), as well as to provide information about how to properly manage and prevent the generation of HHW.**

A 2006 survey amongst selected Delhi residents conducted by Toxics Link

revealed that every household has some or other kind of household hazardous product that are mostly thrown away with the municipal waste. The table at the bottom of the page provides the number of households with improper hazardous household waste disposal. This can include pouring them down the drain, on the ground, into sewers, and most commonly in Indian context putting them out with the household general waste bin.

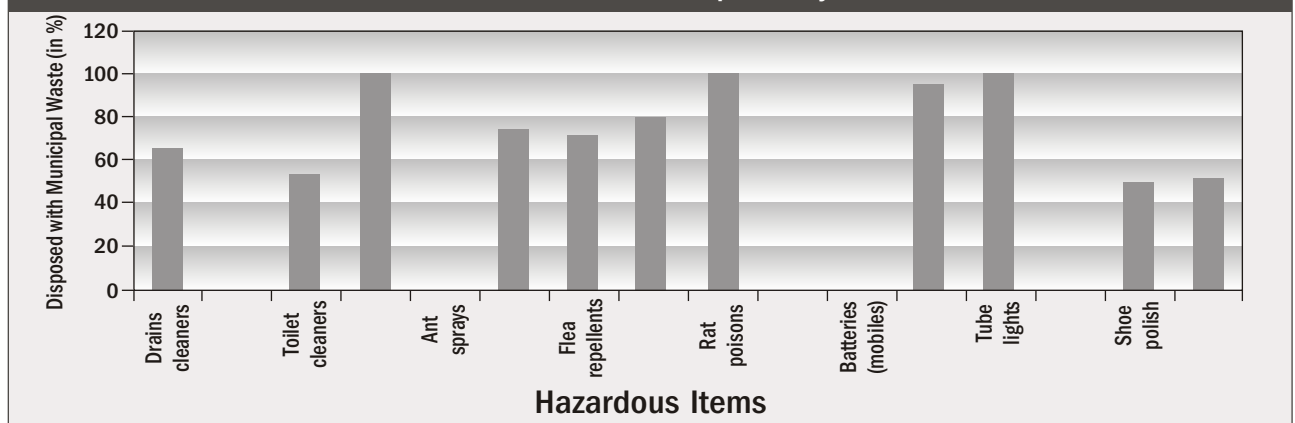
The dangers of such disposal methods might not be immediately obvious, but has every possibility to pollute the environment and pose a threat to human health. Some HHWs can cause physical injuries to sanitation workers, may contaminate our drinking water if poured down drains, toilets, or on the ground, and create hazards for children and pets.

The Municipal Solid Wastes Management and Handling Rules 2000, talk about the requirement of specially lined landfills for the disposal of waste contaminated with hazardous materials (S.O. 908 E, Schedule III, No. 22 b). The Bio-Medical Waste Management and Handling Rules 1998, do not allow bio-medical waste to be

## AT A GLANCE

- ◆ Household hazardous products harm children and pets if improperly stored or used.
- ◆ Refuse to buy household hazardous products; use safe alternatives.
- ◆ Leftover household products that contain corrosive, toxic, ignitable and reactive ingredients are hazardous waste when disposed.
- ◆ Household Hazardous Waste pollutes the environment and is a threat to human health if improperly managed.
- ◆ Industrialized countries have product legislation to ban the sale of certain household hazardous products and have special waste programs to properly manage household hazardous waste.
- ◆ India should not allow manufacturers to sell products that are banned in other countries.

Amount of hazardous waste disposed by households



### The household waste can be described as

- ◆ Products are considered as hazardous waste owing to their potential to harm the environment when disposed of incorrectly.
- ◆ Household hazardous waste is any product with the word danger (most hazardous) or warning or caution (less hazardous) on its label.
- ◆ A hazardous product will also have at least one of the following properties on its label:
  - Toxic
  - Flammable
  - Corrosive
  - Reactive



mixed with other wastes (S.O. 630 E, No. 6(1)). Thus, it is the law that states HHW must be properly managed in India.

### Risks of Household Hazardous Waste

Improper storage of chemicals in your household can turn out to be harmful to children or pets and be a fire hazard. Chemicals poured down the drain pollute our drinking water and can contaminate septic tanks and waste water treatment facilities. When thrown in the trash, some household hazardous waste can harm sanitation workers. In a line, whatever we do with our household hazardous wastes will affect everyone.

Household cleaners may contain solvents that are hazardous to breathe and can get into the body and skin. Many are irritants and can react with ammonia to create a toxic gas. Polishes usually contain petroleum distillates, which catch fire easily and can be hazardous to inhale.

Automotive products contain pollutants that are poisonous and catch fire. A small amount of oil, if disposed of improperly, can contaminate large quantities of drinking water.

Car batteries contain lead and sulphuric acid. The lead can contaminate the water and the acid can burn skin. Paints can contain heavy metals and additives, like lead and mercury that are toxic. Oil or solvent-based paints contain solvents that can be harmful to your lungs.

Pesticides are chemicals designed to kill rodents, insects, and plants. They can injure or potentially kill people by inhalation, ingestion or absorption through the skin.

For more information on risks of HHP please refer to:

Toxics Link Fact sheet No. 12, "Household Pesticides" April 2001  
Toxics Link Fact sheet No. 25, "Paints", July 2005

Toxics Link Fact sheet No. 23, "Household Batteries", December 2004



*Automobile batteries should never be mixed with garbage. Always give those back to battery recyclers.*

### Which items may be considered as a household hazardous waste?

- ◆ Paint products
- ◆ Beauty products, such as nail polish remover,
- ◆ Mercury-containing items such as thermometers
- ◆ Empty plastic cans of mosquito repellants
- ◆ Used up cans of termite, insect and cockroach repellent
- ◆ Discarded Medicines
- ◆ Household cleaners – Toilet Bowl cleaner, floor cleaner, other disinfectants

## Types of Household Hazardous Waste

### Cleaning Products

- Oven cleaners
- Drain cleaners
- Wood and metal cleaners and polishes
- Toilet cleaners
- Tile, shower cleaners
- Bleach (laundry)

### Indoor Pesticides

- Ant sprays and baits
- Cockroach sprays and baits
- Flea repellents and shampoos
- Bug sprays
- Houseplant insecticides
- Mosquito coils
- Moth repellents

### Other Flammable Products

- Compressed gas cylinders
- Kerosene
- Diesel fuel
- Gas/oil mix
- Lighter fluids
- Shoe

### Automotive Products

- Motor oil
- Fuel additives
- Air conditioning refrigerants
- Starter fluids
- Automotive batteries
- Transmission and brake fluid
- Antifreeze

### Painting Supplies

- Adhesives and glues
- Furniture strippers
- Oil or enamel based paint
- Latex or water based paint
- Stains and finishes
- Paint thinners and turpentine
- Paint strippers and removers
- Fixatives and other solvents

- Herbicides
- Insecticides
- Fungicides/wood preservatives

- Batteries
- Computers and electronics
- Mercury thermostats or thermometers
- Fluorescent light bulbs
- Discarded PVC Toys



## Women and HHWs

HHWs have a huge impact on women's health primarily because in the Indian context till date, women in the families handle the bulk household chores. Starting from cleaners to compressed gas cylinders or distorted freezer racks, women are in contact with all. In addition to these women are the primary consumers of most of the beauty products like nail polish, removers and shampoos that in process turn out to be HHWs. Therefore with lack of proper disposal and waste management systems in our society women become extremely vulnerable towards health risks pertaining to HHWs.

### What can you do?

#### 1. Read the Label and Refuse to Buy

Reading the label on a product can

provide a great deal of information including its ingredients, use, proper storage, and occasionally even disposal instructions. If the product contains hazardous ingredients, certain key words (amongst the list of unrecognizable chemical ingredients) can guide the purchaser to contents that can pose an environmental threat if not managed properly:

- For pesticides: DANGER means highly toxic; WARNING means moderately toxic; and CAUTION means slightly toxic.
- For general household products: POISON means highly toxic; DANGER means extremely flammable, corrosive, or highly toxic; and WARNING or CAUTION means less toxic, but still dangerous.

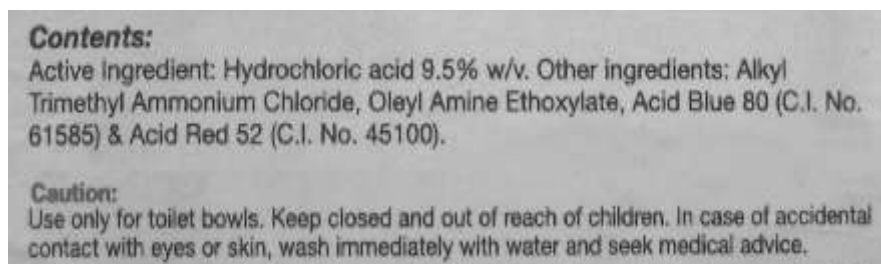
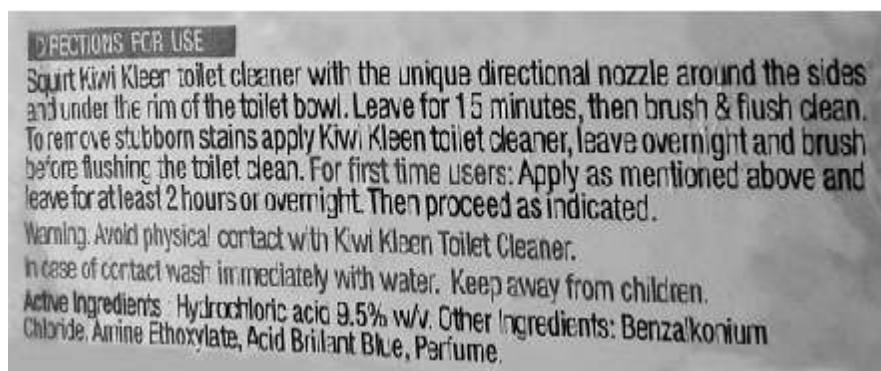
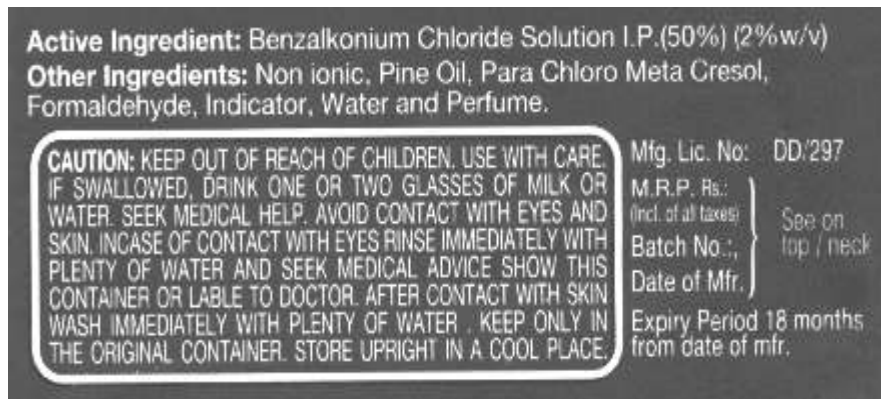
Identify hazardous products by checking the label for key words like



- **DANGER:** highly toxic, flammable or corrosive
- **POISON:** highly toxic
- **WARNING:** moderately toxic
- **CAUTION:** slightly toxic
- **TOXIC:** may cause death, cancer, or birth defects if swallowed, inhaled or comes in contact with skin
- **FLAMMABLE:** will burn or explode if exposed to certain temperatures or conditions
- **CORROSIVE:** can cause serious damage when it come in contact with skin

Other words on the label that indicate whether a product is hazardous include the following:

- "Wear gloves" is a sign of corrosive or dermal toxic substances.
- "Do not store near heat or open flame" suggests ignitability or flammability.
- "Do not store near..." indicates reactive qualities of the material.
- "Use only in well ventilated room" is used for toxic fumes and reactive chemicals.



## PVC and Environmental Hazards

PVC products are potential health hazards. When PVC products deteriorate and are exposed to heat and temperature change then this releases Lead and Cadmium as toxic dust. In a country like India having poor waste management systems where waste is largely dumped or burnt openly, improper disposal of these products may lead to severe environmental and health effects. Thus discarded PVC products are serious environmental hazards and need caution and guidelines for its disposal.

Above are some examples of labels available in products found in India and used commonly in our households. Do not purchase hazardous products. Use alternative products or homemade remedies and cleaners. If you have domestic cleaning services or painting and repair contractors, request that they only use non-hazardous products, for example latex paint without lead and other heavy metals. To learn about the use of alternative methods or products without hazardous ingredients refer to:

Toxics Link Fact sheet No. 2, "Toxics Free Home", August 1998.

Toxics Link Fact sheet No. 9, "Mosquito Bites", July 2000.



Following is the list of some items in our households that contain PVC. This list is not complete but it is comprehensive and provides a descent understanding:

- Cleaning product containers
- Clothes racks (covers metal to prevent rusting)
- Vinyl file folder covers
- Fake decorative trees
- Credit and debit cards
- Imitation leather furniture
- Mattress covers
- Pet care product containers
- Photo album sheets
- Self-adhesive labels and stickers
- Shelving
- Strollers
- Shower curtains
- Textiles
- Toys
- Appliance casings
- Dishwasher, refrigerator and freezer racks
- Drinking straws
- Food containers
- Food wrap
- Plastic utensils
- Table covers etc.
- Many more.....

### 2. Store and Use Properly

In case you purchase hazardous products buy only what you need and use it up completely. When using, read and follow the instructions on the label. Wear the proper protection and use the right amount. Always re-seal the unused portion between usages. Store the products safely. Never store hazardous products in food containers. Keep them in their original containers and never remove labels. Secure hazardous products away from children and pets. Do not mix chemicals together; they might react, ignite, or explode.

### 3. Reuse and Recycle

Share any leftover products with neighbors, family, friends, or organizations that can use them. Any products that cannot be used or given away should be properly disposed.



*Burnt Batteries found in waste dump*

### 4. Disposal

If you have no other option, follow these instructions for proper disposal of HHW -

- Read and follow disposal instructions on the product label.
- Never burn or dump any hazardous waste on the ground.
- Do not dispose any hazardous material "down the sink" unless you are sure it can safely be disposed into the sewer system or septic tank.
- Avoid burying any containers or leftover chemicals.
- Do not mix hazardous wastes and do not collect containers and chemicals to dispose of them at one time.
- Solidify any liquid waste. This involves using an absorbent material (dirt, sawdust, rags) to soak up a liquid hazardous material. Do not solidify more than one chemical at a time. Using gloves, sweep or dispose of the material into a plastic bag, and then dispose of with other household garbage.
- Use this same process with any "empty" container other than an aerosol container. It is often good to "open" a non-aerosol container with wire cutters or scissors and air-dry; wearing gloves, swab the inside before disposal. Dispose off the rags or paper towels after they have aired outside.
- With aerosol cans, turn the container upside down and depress spray button, with nozzle facing paper toweling, rags or any absorbent surface. When the spray has lost pressure, wrap the can in several layers of newspaper and dispose with household refuse.

- Latex or water based paint can be solidified by exposing the paint to air. When dried, the paint and container can be disposed with household refuse. Wrap empty containers in several layers of newspaper prior to disposal. This prevents environmental contamination and reactive potential.
- Some cleansers can be poured down a drain. If you have a septic tank, drain disposal should nearly always be avoided. If cleansers are designed to be used with water in a home or in sinks, showers, and toilet bowls, the material is probably draining disposable. Let the water run, rinse the container and slowly pour the water /chemical down the drain. Allow the water to continue running after the chemical is gone. Allow the container to air dry, wrap in newspaper and dispose in household refuse.
- Antifreeze can be flushed down the toilet if connected to a sewer system.
- Pesticides, herbicides, oil paints, paint cleaners, and oil and transmission fluids should never be flushed into a water system or disposed off on ground or put into household refuse. Use these products or share them with someone who can use them.
- Automobile batteries should never be mixed with garbage. Always give those back to battery recyclers.
- Used motor oil should be given to grease manufacturers.
- Batteries should never be thrown in to municipal dumps.

Note: Make use of any new reuse, recycling, and waste collection and management option for HHP as they become available in your area.

## HHP and HHW Management in Industrialized Countries

The United States, Canada and many countries in Europe have banned the sale of certain hazardous products like asbestos, lead-based paint, certain pesticides and mercury containing devices. Many other products like batteries, electronics, carpet and



automobiles are required through Extended Producer Responsibility (EPR) laws to be taken back and recycled by the manufacturers. These bans and legislations are instrumental in the protection of human health and the environment.

Household Hazardous Waste is usually collected by municipal solid waste operations in industrialized countries. The two most common ways to collect HHW are through special collection events and permanent collection centers. The special collection events are held for one or two days in a temporary location with hazardous waste transporters on site to take the HHW to a permitted hazardous waste treatment facility at the end of the event. Permanent collection centers are staffed several days a week to accept and store hazardous waste from homes and small businesses. The waste is packed and shipped to a permitted hazardous waste treatment facilities several times a year. These centers often have reuse or exchange programs, referred to as "swap shops" in which residents can exchange HHP. For those products covered by EPR laws or that have inherent value (batteries, electronics, used motor oil), retailers act as a collection point.

## Recommendations for HHP and HHW Management in India

- Household hazardous product ingredients and concentrations must be listed on the label along with warnings of potential human health and environment harm.
- India should include household hazardous products as a separate act/regulation under municipal waste rules.
- Manufacturers of household hazardous products must be held accountable for products at the end of their life through legislation.
- Residents must become aware of the risks and choose wisely when purchasing and reading labels carefully.
- Municipalities need to set up programs so that unwanted HHP can be collected and properly disposed.
- Residents and communities must take special care when disposing of HHW.

For more recommendations on HHP and HHW management refer to: Toxics Link Factsheet No. 25, "Paints", July 2005

Toxics Link Factsheet No. 23, "Household Batteries", December 2004

## References:

[www.epa.gov/msw/hhw.htm](http://www.epa.gov/msw/hhw.htm)  
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[http://www.co.el-dorado.ca.us/emd/solidwaste/hhw\\_fact\\_sheet.html](http://www.co.el-dorado.ca.us/emd/solidwaste/hhw_fact_sheet.html)

By Prashant Pastore  
Senior Programme Coordinator

for details contact

### Toxics Link

H-2, Ground Floor Jangpura Extn. New Delhi-110014

Tel : +91-11-24328006, 24320711 Fax : 24321747

E-mail : [info@toxicslink.org](mailto:info@toxicslink.org)



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