

STORE PESTICIDES PROPERLY

TEXAS A&M UNIVERSITY
TEXAS AGRICULTURAL EXTENSION SERVICE
J. E. HUTCHISON, DIRECTOR, COLLEGE STATION, TEXAS

STORE PESTICIDES SAFELY

(With Special Reference to Fire Hazards)

JACK D. PRICE*

Pesticides Stored at Home

Pesticides labeled for household or home garden use should be stored in a cabinet, always in the original container and only with a legible label. The storage unit should be away from food, feed or clothing, clearly identified and locked. The cabinet should be outside the living quarters and in an area not subjected to temperature extremes, particularly high temperatures. Many formulations for household use are aerosol bomb types and subject to rupture under extremely high temperature.

Large Volumes of Pesticides

Pesticides intended for uses other than household and home garden, such as agricultural, vector control and industrial uses, require storage under more exacting conditions because of greater toxicity and volume of material or both. Proper storage serves to protect the health and well-being of people, to protect against environmental contamination and often to extend shelf life of the chemical.

Kinds of Pesticides

Dusts and wettable powders cake when wet, and packages may deteriorate. *Water soluble powders* also may cake when wet or subjected to wide variations in temperature.

Containers of *liquid formulations* should be kept closed tightly. Air vents that have been punched in cans to facilitate pouring should be plugged. At high

*Extension leader-agricultural chemicals, The Texas A&M University System.

temperatures, chemicals may expand and cause bulging of drumheads and leaks in the container. High temperatures may reduce the effectiveness of emulsifiers, hasten erosion of containers and speed deterioration of chemicals. At low temperatures (32 degrees F. or below) chemicals may crystallize out of solution. Containers stored on pallets are less likely to deteriorate than those placed in contact with floors.

Fire and Explosion Hazards

When purchasing and storing chemicals, handle them in accordance with label directions to prevent the hazard of fires and explosions.

A stored chemical with a low flash point (140 degrees F. or less) is dangerous. Formulations having flash points at or below 20 degrees F. must bear the statement, **"Danger—Extremely Flammable! Keep away from sparks and heated surfaces."**

Chemicals with flash points above 20 degrees F. but not over 80 degrees F. must be labeled, **"Warning—Flammable! Keep away from heat and open flame."**

Chemicals with a flash point above 80 degrees F. but not over 150 degrees F. must be labeled, **"Do not use or store near heat or open flame."**

Certain powder formulations also present fire and explosion hazards. Sodium chlorate will ignite when in contact with organic matter, sulfur, sulfides, phosphorus, powdered metals, strong acids or ammonium salts. Once a container of sodium chlorate is opened, the entire contents should be used. Dusts or powders, particularly finely divided dusts such as sulfur may ignite as easily as gases or vapors and spread so rapidly as to seem explosive.

Fires involving pesticides present uncommon hazards; for example, highly toxic fumes, phytotoxic fumes, toxic runoff and toxic ash or other residue.

Once Fire Begins

In addition to *wearing protective clothing and using self-contained breathing apparatus*, firemen should observe the following:

1. Stay upwind of the fire.
2. Use air temperature measurements to estimate the amount of dilution air available.
3. If the fire cannot be fought successfully from a position where sufficient dilution air is available, people should be moved away and the property allowed to burn.
4. A fireman's sense of smell can sometimes serve as a warning device.
5. Hot pools of pesticide (following extinguishing of the flame) may liberate large amounts of vapors in extremely hazardous concentrations. *Firemen* should not enter the area until the pools of pesticides have cooled.

Additional suggestions include:

1. Avoid heavy hose streams if possible, since the force of the stream spreads contamination and causes dusts to become airborne. Airborne dust may present an explosion hazard as well as a toxic hazard.

2. Containers may rupture violently if they become overheated; keep a safe distance from a fire in which these are present. If drums are not leaking, they may be cooled with a water spray to prevent overheating.

3. If possible, dike the runoff water from a fire to prevent its entering sewers or streams.

If Class B poisons¹ are involved, adequate personal protection is possible in most cases by the following measures:

1. Notify local hospital personnel and the owner of the goods of the fire. Advise as to the pesticides and other chemicals involved, and the nearest poison control center.

¹The label of every economic poison (pesticide) which is highly toxic to man must bear the word "danger" along with the word "poison" in red on a contrasting background in immediate proximity to the skull and crossbones and an antidote statement. Thus, the presence of the symbols and signal words identify economic poisons that probably fall within the Department of Transportation's description of a Class B poison.

2. Wear self-contained breathing apparatus.
3. Wear rubber gloves, hats, suits and boots.
4. When firefighting operations have ended, wash rubber clothing before removing it. Shower thoroughly and put on a complete set of clean clothing.
5. Contact a physician in all suspected cases of poisoning.
6. To avoid pollution of water, confine wastes for collection and proper disposal.

Anyone storing more than a few gallons of pesticide should consult with local fire protection authorities and public health officials, advising them of the location of storage and type and volume of pesticide.

When Storing Pesticides, Remember to

1. Store in a well-ventilated area.
2. Storage in a separate building is preferable; however, isolated storage rooms can be used in certain instances.
3. Always store pesticides in the original containers with the label intact and legible.
4. Do not locate storage near food, feed or seed.
5. Post the storage area with signs at each point of entry and on all sides of the building.
6. Keep storage area locked when not in use.
7. Keep a log of pesticides and amounts of each in storage.
8. Fireproof the storage area to the extent possible.
9. Check containers periodically for corrosion, leaks, breaks, tears etc.
10. Store "empty containers" in the storage area pending disposal.

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