

Pesticide Spill Kits¹

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Introduction

Most pesticide applicators are likely never to have the need for materials to be used in a pesticide spill cleanup. However, should a spill occur while handling concentrated pesticides, a cleanup kit will be well worth the small investment. A spill is any accidental release of a pesticide. The spill may be minor—involving only a dribble from a container—or major, involving large amounts of pesticide or pesticide-containing materials such as wash water, soil, and absorbents. You must know how to respond correctly when a spill occurs. Timely clean-up of spills helps protect our natural resources, particularly water.

Spill Kit Contents

Simple spill kits contain:

- Chemical-resistant gloves
- Chemical-resistant coverall
- Chemical-resistant boots
- Chemical splash goggles
- Respirator
- Temporary hazardous material storage bag
- Absorbent pad for water- or solvent-based chemicals
- Absorbent tube sock (containment snake)
- Bentonite/polymer mix paste for plugging leaking containers
- Floor absorbent granules
- Shovel or broom
- Dust pan
- Warning sign

More elaborate kits intended for larger facilities may also include:

- Pop-up containment pools (various holding capacities are available)
- Weatherproof, incinerable drum rated for hazardous materials

Spill kit materials may be stored in permanent fixtures or structures (Figure 1), or in portable containers as simple as a 5-gallon bucket (Figure 2). The spill kit/location should be clearly labeled. Containers that may be mounted to the cab of application equipment are also commercially available.



Figure 1. Permanent-sited spill kit cabinet.
Credit: UF/IFAS



Figure 2. Portable spill kit.
Credit: UF/IFAS

The cost of a spill kit ranges from less than \$100 to several hundred dollars. All materials are available from commercial vendors.

General Spill Clean-Up Procedures

1. Put on personal protective equipment (PPE). If you do not know how toxic the pesticide is or what type of PPE to wear, do not take a chance: wear a barrier-laminate apron, footwear, and gloves; eye protection; and a respirator.

2. Control the spill by stopping its source. If a small container is leaking, place it into a larger chemical-resistant container, such as a plastic drum or bag. If a spray tank is overflowing, stop inflow and try to cap off the tank. If a tank, hopper, or container has burst or has tipped over and is too heavy to be righted, you will need help. Contact the Florida Department of Environmental Protection. If the spill occurs while transporting pesticides, contact the local law enforcement agency.
3. Unless they are wearing suitable PPE, keep everyone out of the area until the spill is cleaned up.
4. As soon as the source of the leak is under control, keep the spill in an area as small as possible. For small spills, use containment snakes to surround the spill and keep it confined.
5. Cover the entire spill site with absorbent materials such as spill pillows, fine sand, vermiculite, sawdust, kitty litter, or absorbent pads.
6. After the spill has been contained and absorbed, the material must be picked up and put somewhere, such as a secure drum, for safe keeping in the pesticide storage facility. These materials will then have to be disposed of in a responsible manner. If they are dry pesticide materials, such as granular formulations, they can be placed back in their bag or into the hopper for use. Absorbent materials and soil contaminated in a spill of a liquid can be collected and placed in a suitable container (such as a plastic or metal bucket), and then applied as a pesticide to a site for which that pesticide can be applied as directed on the pesticide label. **Do not use this method to dispose of soil that has been contaminated over a long period by pesticide discharges, since some of this soil may be classified as a hazardous waste.** Clothing contaminated by most pesticides can be disposed of as solid waste (trash).
7. If the spill occurred on a containment pad, hose the area down following the spill's removal.
8. Use a mixture of chlorine bleach, dishwasher detergent, and water to clean vehicles and equipment that the spill contacted.
9. Hazardous waste must be disposed of properly, usually by a licensed hazardous waste contractor. A waste is hazardous if it has these types of characteristics:
 - **Ignitable:** wastes that are flammable or spontaneously combustible. If they have a flashpoint of less than 140°F or an alcohol content of 24% or more, they are hazardous wastes.
 - **Corrosive:** wastes that can burn the skin or corrode metal. Liquids with a pH of 2 or lower or 12.5 or higher are corrosive.
 - **Reactive:** wastes that are unstable and may explode or react violently with water or other materials.
 - **Toxic:** wastes that contain certain heavy metals above specific concentrations, such as chromium, lead or cadmium, or toxic organic chemicals.

To identify hazardous wastes:

- Ask for the Safety Data Sheet (SDS) before ordering new pesticides. Detailed information on interpreting the language of the SDS may be found in UF/IFAS Ask IFAS Document PI-35, *Understanding Safety Data Sheet Language* (<https://doi.org/10.32473/edis-pi072-2005>).
- Talk to product suppliers and manufacturers.
- Read product labels—this should be done before purchasing any pesticide product.

Additional Information

Nesheim, O.N. and F.M. Fishel. 2005. *Proper Disposal of Pesticide Waste*. PI-18. Gainesville: University of Florida Institute of Food and Agricultural Sciences. <https://ask.ifas.ufl.edu/publication/PI010>

¹ This document is PI159, one of a series of the Department of Agronomy, UF/IFAS Extension. Original publication date November 2007. Revised November 2016. Visit the Ask IFAS website at <https://ask.ifas.ufl.edu/> for the currently supported version of this publication.

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