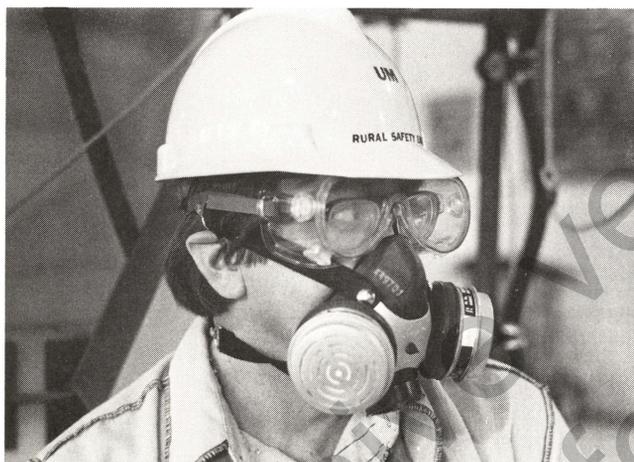


# Personal Protective Equipment for Working with Pesticides

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Adjust equipment so it fits well.

Pesticides can enter the body through many routes. The most common entry is through skin contact. To prevent dermal (skin) contact and also inhalation of pesticides, applicators should wear protective equipment and clothing.

No safety recommendation can cover all situations. Always read and follow label recommendations on the use of protective equipment and clothing. WEAR IT!!!

## General Protection

When using any pesticide, at least wear a long sleeved shirt and long trousers or coveralls (all of closely woven fabric). When handling pesticide concentrates during mixing and loading or when using moderately or highly toxic materials or concentrates, you also should wear rubber gloves, rubber boots and a light weight rubber apron. The apron will offer some body protection while you pour or mix concentrates.

## Gloves

Always wear *unlined*, elbow length neoprene or rubber (liquidproof) gloves when handling any pesticide concentrate or chemicals which carry the signal words "Danger - Poison" or "Warning." When spraying overhead, wear shirt sleeves inside gloves. At all other times, wear shirt sleeves on the outside to prevent chemicals from entering gloves at the cuff. Pay special attention to labels when determining what type of gloves to wear, since some fumigants are absorbed readily by neoprene.



You may need a chemical cartridge respirator and chemical splash goggles.



Always read the label and use the recommended protective equipment.

Never wear cotton or leather gloves. They absorb the pesticide and provide constant exposure to the chemical; that can be more hazardous than not wearing gloves at all.

Always check gloves carefully for leaks before wearing them. Fill the gloves with water and squeeze. If leaks appear, discard the gloves. Before removing gloves, wash them with detergent and water to prevent contaminating your hands.

## Boots

When handling or applying chemicals, wear unlined, lightweight rubber boots which cover your ankles. Wear trouser legs on the outside so pesticides cannot drain down into the boots. The boots should be washed daily and dried thoroughly inside and out to remove pesticide residues.

## Goggles or Face Shields

Wear tight fitting, nonfogging chemical splash goggles or a full face shield when pouring, mixing or applying pesticides. Clean the equipment often and make sure the sweatband on the face shield is cleaned since some materials used in sweatbands on face shields absorb and hold chemicals. If possible, wear the sweatbands under the head covering. Eye wear should meet or exceed the current requirements of ANSI. (American National Standards Institute; Z87.1, 1968.)

## Head and Neck Coverings

The hair and skin on your neck and head should be protected. Several available types of head gear, such as waterproof rain hats, washable wide brimmed hard or bump hats or caps can be used. Waterproof or repellent parkas will protect the neck and head at the same time. The headgear should not have a cloth or leather sweatband, since these bands absorb chemicals and are difficult to clean, thereby causing continuous and dangerous dermal exposure. Avoid cotton or felt hats since they also absorb pesticides.

## Respirators

Respirators prevent inhalation of toxic chemicals. Wear a respirator when the label calls for it and when applying toxic organophosphates (for example, TEPP, parathion, Guthion, Di-Syston, Thimet, or Phosdrin) or carbamates (for example, Furadan or Temik). They are especially necessary when handling concentrated, highly toxic pesticides. Workers who will be exposed to small amounts of toxic pesticides constantly for a day or more always should wear a respirator.

Specific cartridges and canisters protect against specific chemical gases and vapors. Be sure to choose the type made to protect you against the pesticides you will use. The respirator must fit the face well to insure a good seal. Long sideburns, a beard or glasses may prevent a good seal.

**Chemical Cartridge Respirator.** The chemical cartridge respirator is usually a half-face mask, containing one or two "cartridges," which cover the nose and mouth only. The inhaled air which enters the cartridge is pulled through a filter pad and a cartridge of activated charcoal. Use chemical cartridge respirators either for relatively short exposure

periods to high concentrations of toxic chemicals or for long exposure periods to low concentrations of toxic chemicals. This respirator should never be used in areas where the oxygen level is too low to support life (below 16 percent).

**Chemical Canister Respirator (Gas Mask).** Gas masks are designed to protect applicators longer than cartridge respirators. A gas mask usually protects the face better than the cartridge respirator since it covers the entire face (that is, it protects your eyes, nose and mouth). Use a gas mask when you will be exposed to toxic fumes in a high concentration or for a long period of time. Also, wear a gas mask when applying pesticides in enclosed or poorly ventilated areas. As with the chemical cartridge respirator, a gas mask should never be used in areas where the oxygen level is too low to support life.

**Air Supplied Respirator.** An air supplied respirator should be worn in areas where the oxygen supply is low or where the applicator is exposed to high concentrations of very toxic pesticides in enclosed areas. Fresh air is pumped through a hose to the face mask by a blower from an uncontaminated area or from a backpack carried by the applicator.

**Care and Maintenance of Respirator.** If breathing becomes difficult during heavy spraying, change the filters in chemical cartridge respirators two or more times a day. Cartridges should be changed after eight hours of use or sooner if you detect pesticide odor. The face piece should be washed with soap and water, rinsed, dried with a clean cloth and stored in a clean dry place away from pesticides. A tightly closed plastic bag works well for storage.

The useful life of a cartridge or canister depends on the type and amount of chemical fill used in the cartridge or canister, the concentration of contaminants in the air, the breathing rate of the wearer and the temperature and humidity. The manufacturer's instructions on the use and care of a respirator and its parts should be read carefully before the respirator is used. Use only respirators approved by the National Institute for Occupational Safety and Health (NIOSH) or the Bureau of Mines.

## Use Pesticides Safely

The label is your guide to the safe and effective use of a pesticide of any type. **ALWAYS READ AND FOLLOW LABEL DIRECTIONS.**

Wear a clean set of clothing each day you spray. If pesticide solutions get on your clothing, change immediately.

Do not store or wash contaminated clothing with the family laundry because your clothing could contaminate theirs. Additionally, contaminated clothing may require special attention to assure it is thoroughly cleaned.

If pesticides have heavily contaminated your clothing, discard them. You may not be able to clean and safely use them again.

All personal protective equipment should be washed daily with soap and water, rinsed, dried with a clean cloth and stored in a clean dry place away from all pesticides.