

Some Things to Know About Personal Protective Equipment BEFORE You Handle a Pesticide



Always read and follow label directions before buying or using a pesticide. Follow all federal, state, tribal, and local laws on the use of pesticides and personal protective equipment (PPE). PPE instructions, pesticide labels, and laws can change at any time. If you cannot read the pesticide label, someone must explain it to you before you handle the product. ***If you don't have the PPE that is required on the pesticide label, don't apply the pesticide.***



PPE is anything worn to protect the body from contact with pesticides or pesticide residues. PPE includes aprons, chemical-resistant suits, coveralls, footwear, gloves, headgear, protective eyewear and respirators. The pesticide label may also require certain types of work clothes.

If you are handling pesticides as part of your job, your employer must:

- Give you the PPE required on the label for the job you are doing.
- Make sure that the PPE fits you and is worn correctly.
- Clean, store, and replace PPE properly.
- Give you safety training.
- Have someone take you quickly for medical care, when needed.

Contact your state pesticide regulatory agency if your employer does not follow all laws.

PPE must be selected according to the pesticide label. It must also be inspected, used, cleaned, and stored according to the PPE instructions. ***If the PPE instructions are missing, get them from your employer, the PPE manufacturer or its website – or get new PPE equipment that has the instructions.*** You or your employer may still have questions after reading both the pesticide label **and** the PPE instructions. If so, call your extension agent, the pesticide product manufacturer, the PPE manufacturer, or your state pesticide regulatory agency.

Select the Right Personal Protective Equipment

Pesticide products are different in how they can affect the skin, mouth, lungs, and eyes. So, the required PPE will be different **for different products**. Even liquid and dry products having the same brand name often require different PPE.

You may need different PPE **for different types of jobs**. These jobs include mixing, loading, applying, cleanup, and early entry into a treated area. If you are handling more than one product, choose the most protective PPE.

Use the **exact** PPE that is listed on the pesticide label. "Water-resistant" is different from "chemical-resistant". Chemical-resistant PPE does not give the same protection from all types of pesticides. The type of work and length of pesticide contact will also affect how long the chemical-resistant PPE works. Protection will also depend on whether diluted sprays, concentrated product splashes, granules, or powders contact the chemical-resistant PPE.

PPE must be working correctly every time you use it. When several pieces of PPE are used together, they must not hinder each other. Before and after every use, check for any type of damage to the PPE. If it is damaged, dispose of it properly.

Aprons must be made of chemical-resistant material. The apron must cover the front of the body from mid-chest to the knees. It is a good idea to wear an apron when mixing or loading chemicals or cleaning spray equipment, even when not required.

Coveralls are usually made of fabric such as cotton or a cotton-polyester blend, which is **not** chemical-resistant. The pesticide label may say that coveralls must be worn over work clothes.

Eye protection required may be shielded safety glasses, goggles, a face shield, or a full-face respirator. Special goggles are needed when wearing a half-mask respirator or prescription glasses. Tuck straps under any required protective headgear. Goggles and safety glasses that have simple air holes will not protect against splashes.

Footwear includes water-proof boots, chemical-resistant boots, and shoe covers worn over regular shoes or work boots. Make sure spray cannot soak into footwear. Always wear the pant legs **outside** the footwear. Exposed footwear should be cleaned after each day's use, and never worn indoors.

Gloves are made of different materials that provide different levels of protection. Barrier laminate gloves are very good for all pesticides. Nitrile gloves are very good for many pesticides. Waterproof gloves are good only for certain dry and water-based formulations. All glove materials must be rinsed off at breaks if pesticide contact occurs. ***Pesticide labels will usually list "examples of glove types – use the exact examples listed."*** Always wear unlined gloves. Never wear canvas, leather, cotton, or other fabric gloves unless the pesticide label allows it.



Wear long sleeves outside the gloves if spraying below the shoulders. Wear long sleeves tucked inside the gloves (and sealed with duct tape) if spraying above the shoulders. Elbow length gloves are better and are sometimes required.



Headgear includes chemical-resistant hoods/hats with a wide brim. Make sure spray cannot soak into headgear.

Respirator type required on the pesticide label will

usually be a dust/mist filtering respirator (which removes particles), or a respirator with an organic-vapor cartridge or canister fitted with a prefilter. Use only respirators that say "NIOSH" (certified by the National Institute for Occupational Safety and Health).

Depending on your state laws and the pesticide, you may require medical approval to wear a respirator on the job. If you are not a worker, medical approval is still strongly advised if the pesticide label requires a respirator (or if you choose to use one).

Respirators that require a tight seal to the face must be **fit tested** before use. Fit testing is also required every year, **or** when the type of respirator changes, **or** when there are major changes in weight or facial features. Only a trained person should conduct the fit testing. You cannot wear a respirator that requires a tight seal if you have any facial hair, jewelry, etc. where the respirator contacts the face.



A respirator **seal check** is very different than a fit test. It must be done **EVERY** time the respirator is worn. Follow the PPE instructions on how to do a proper seal check.

Replace filters, canisters, cartridges, etc. according to the PPE instructions or pesticide label (whichever is more often). Also replace parts when there is damage, breathing resistance, odor, taste, irritation, or soiling.

Cleaning, Storage, and Disposal of Personal Protective Equipment

Cleaning instructions from the PPE manufacturer must be followed. Never reuse disposable (one-time use) PPE. You could be exposed to pesticide from the last use, or to pesticide getting through damaged PPE. Even reusable PPE must be discarded if not cleaned and stored properly.

Remove PPE as soon as you complete the job that required it. First wash your disposable or reusable gloves with soap

and water. Then remove other PPE while still wearing the gloves. Then wash the gloves again with soap and water before removing them. Clean reusable PPE according to the PPE instructions, without contaminating yourself.

Wash regular work clothes that have been exposed to pesticides **as soon as possible**. Wash them separate from other laundry, with detergent and hot water. Use an outdoor clothesline to help destroy any remaining pesticide.

Storage instructions from the PPE manufacturer must be followed. Keep PPE in its sealed package until use. Never store PPE with pesticides. When not in use, PPE must be protected from chemicals, sunlight, extreme temperatures, excessive humidity, and moisture. If PPE has not been stored properly, discard it.

Disposal must be done without contaminating yourself, garbage collectors, or the environment. Read the PPE instructions to determine when to dispose PPE. Disposal may depend on an expiration date, damage, and/or wear.

Clean disposable, washable items with soap and water prior to disposal, without contaminating yourself. Properly cleaned PPE can be disposed as regular garbage.



PPE that is contaminated with a pesticide must be disposed of according to directions on the pesticide label. Follow all federal, state, and local regulations. If there are no label directions or government regulations, dispose as household hazardous waste. This waste can be taken to a suitable waste collection event or disposal site.

Your Safety is Very Important!

Sometimes PPE is uncomfortable. This may be due to hot weather, poor fit, or long use. However, there is no good excuse for not using the required PPE. Try to work outdoors during the coolest part of the day. Avoid heat stress by resting often in shaded areas. Drink plenty of water – not caffeinated drinks. Do not work alone. Know the signs of heat stress and how to treat it. Make sure the PPE fits properly, and try to share the job (but not your PPE) with someone.

If you have an accident, the proper first aid depends on the pesticide product. So it is critical that the label is always **immediately** available – and it is the law! Follow the first aid instructions **immediately** after exposure to the pesticide, even if you have no symptoms.

Please select, inspect, use, clean, and store personal protective equipment according to the pesticide label and PPE instructions. Your personal safety is **VERY** important!



The National Association of County Agricultural Agents, Syngenta, and the National Pesticide PPE Training Solutions Committee provided inputs to this brochure. Photos Courtesy of Virginia Tech Pesticide Programs/PesticidePics.org
This publication can be downloaded at nacaa.com, pesticidestewardship.org, and syngentacroprotection.com/Env_Stewardship.

