

DISPOSABLE PROTECTIVE CLOTHING

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Protective clothing is essential to prevent the spray, mist, or dust of pesticides from contacting your skin during an application, and also to protect your body from concentrated pesticides during mixing or handling. Typical protective clothing includes long-sleeved shirts and pants made from a tightly woven cloth fabric (the minimum protection for any type of pesticide handling or application), cloth coveralls, and, for more toxic materials, waterproof rainsuits. The type of protective clothing used depends on the requirements prescribed by the pesticide label and the type of work being performed.

Disposable protective clothing is a suitable alternative to clothing made from woven fabrics or rubber-coated rain suits. Disposables have many advantages and, in most cases, provide adequate protection while mixing, loading, or applying pesticides. They are available in a coverall style which may include an attached hood. Disposables are generally light weight and loose fitting, making them comfortable to wear and easy to put on or take off. Disposables are worn over conventional work clothing. Disposability eliminates the need for laundering which can be a problem when dealing with pesticide contamination. Disposable protective clothing is less expensive than non-disposable types of protective clothing.

Disposable fabrics, manufactured by several companies, are made from non-woven fibers, giving the fabric great strength and resistant to tearing. Some fabrics are laminated to plastic materials to provide protection against moisture, certain types of these coated fabrics protect against pesticide penetration. Various styles and grades of protective clothing made from non-woven fabrics are available. Quality, cost, and the degree of protection

vary according to the fabric type, style of the garment, and the manner in which seams and closures are sealed. For use with toxic liquids, the garment must have well-sealed seams and an attached hood.

When selecting disposable protective clothing, choose the right fabric type for protection against the pesticide you will be applying. Disposable protective coveralls suitable for pesticide handling and application are available in three types of fabric.

UNCOATED FABRIC

The most common example of an uncoated disposable fabric is Tyvek, manufactured by the DuPont Chemical company. Coveralls made from this fabric are light weight (about 5 ounces) and zip up the front. A pair of coveralls cost between \$4.50 and \$7 depending on whether it has an attached hood. An uncoated Tyvek suit of this type provides approximately the same degree protection as a pair of coveralls made from tightly woven cotton fabric. This means that it can be used when handling the kinds of pesticides for which cloth coveralls or long-sleeved shirts and pants would provide adequate protection. It protects against most particulate contamination (dusts), but will not prevent skin contact with liquids.

Coveralls made from uncoated Tyvek or similar fabrics should not be used for handling liquid pesticides that are moderately or highly toxic.

POLYETHYLENE LAMINATED FABRICS

Non-woven fabrics coated with polyethylene provide a greater degree of protection against pesticides, since they are waterproof. Examples of this fabric are the DuPont Company's P.E. or Poly laminated Tyvek. This type of fabric is not suitable for extended exposure to liquid organophosphates, however, because solvents in these pesticides damage the polyethylene coating. Examples of organophosphates include parathion, terbufos, diazinon, chlorpyrifos, fonofos, and dimethoate. Polyethylene-coated coveralls range in price from \$8 to \$20 depending on the style and method in which seams are sealed prices may also vary by manufacturer. The polyethylene-coating make the coveralls slightly heavier and stiffer than an uncoated fabric. Also, coveralls made of coated fabric

may be more uncomfortable to wear since the fabric does not breathe (see the daytime and nighttime temperature restrictions below.)

SARAN-COATED FABRICS

Saran is another material used as a moisture barrier for non-woven fabrics from which protective clothing is made.

Saranex is the trademark for DuPont's saran-coated Tyvek, and is an example of this type of fabric. Saran-laminated coveralls provide the best protection against pesticides and they can be used effectively with organophosphate liquids. In most instances, coveralls made of saran-coated fabric proved the same amount of protection as rubber or vinyl-coated waterproof rain suits. These coveralls range in price between \$20 and \$30, depending on the style, type of seam sealing and manufacturer. This coated fabric is equivalent in stiffness and weight to polyethylene-coated fabrics, and may be uncomfortable in hot weather since it does not breathe. For this reason, California law restricts the use of all types of waterproof protective clothing during pesticide application to daytime periods when the air temperature is 80 degrees F or below and to nighttime periods when the air temperature is 85 degrees F or below.

It's very important to note that neither the P.E. or Poly laminated Tyvek or the Saranex coveralls (or coveralls made from similar fabrics) are suitable for use with chlorinated hydrocarbon pesticides such as methoxychlor.

REUSING DISPOSABLE CLOTHING

Coveralls and other garments made from non-woven fabrics can be reuse, however they must be laundered between wearing. Follow the guidelines for laundering other pesticide-contaminated clothing or consult the manufacturer for instructions. This protective clothing should be disposed of if the laminated coating is torn or begins to separate from the fabric or if seams or closures are not properly sealed. Never launder or reuse disposable coveralls or any other type of protective clothing that has been heavily contaminated with an undiluted pesticide. With heavy contamination, it may not be possible to remove all traces of pesticide through any type of laundering.