

PESTICIDE FACTS

Fact Sheet No. 1

Laundering Pesticide Contaminated Clothing

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The problem of how to launder pesticide contaminated clothing has puzzled many as pesticide use has become widespread. What is the best method? What water temperature should be used? Is there a difference in detergent performance? Must you be careful about washing contaminated clothes with other clothing?

Use the pesticide label as a guide for knowing which chemicals are more toxic. Key words on all pesticide labels identify the toxicity of the product (Figure 1).

Key Word	Toxicity	Examples*
DANGER POISON	Highly toxic/ concentrated	Counter Disyston Parathion Furadan Dyfonate Lasso
WARNING	Moderately toxic	Diazinon Glyphosate Phosmet Dicamba
CAUTION	Slightly toxic	Ammate Sevin Atrarine Malathion

*Toxicity of the pesticide may vary depending upon the formulated product. Use the key word as an indication of the toxicity level.

Figure 1

Clothing contaminated with highly toxic and concentrated pesticides must be handled most carefully, as these pesticides are easily absorbed through the skin. If the

clothes have been completely saturated with concentrated pesticides, discard them. Clothing contaminated by moderately toxic pesticides do not warrant such drastic measures. Hazards are less pronounced in handling clothing exposed to low toxicity pesticides. But...the ease of pesticide removal through laundering does not depend on toxicity level-it depends on the formulation of the pesticide. For example, 2,4-D amine is easily removed through laundering because it is soluble in water; 2,4-D ester is much more difficult to remove through laundering.

Disposable clothing helps limit contamination of clothes because the disposable garments add an extra layer of protection. This is especially important when you are in direct contact with pesticides, such as when mixing and loading pesticides for application.

Laundering Recommendations

Wash contaminated clothing separately from the family wash. Research has shown that pesticide residues are transferred from contaminated clothing to other clothing when they are laundered together. Know when pesticides have been used so all clothing can be properly laundered.

Prerinsing contaminated clothing before washing will help remove pesticide particles from the fabric.

Prerinsing can be done by:

1. presoaking in a suitable container prior to washing;
2. prerinsing with agitation in an automatic washing machine;
3. spraying/hosing garment(s) outdoors.

Prerinsing is especially effective in dislodging 'the particles from clothing when a wettable powder pesticide formulation has been used.

Clothing worn while using slightly toxic pesticides may, be effectively laundered in one to three machine washings. It is strongly recommended that multiple washings be used on clothing contaminated with more toxic or more concentrated pesticides to draw out excess residues. Burn or bury clothing contaminated with concentrated, highly toxic pesticides. Always wear rubber gloves when handling highly contaminated clothing to prevent pesticide absorption into the body.

Washing in hot water removes more pesticide from the clothing than washing in other water temperatures. Remember...the hotter, the better. Avoid cold water washing! Although cold water washing might save energy, cold water temperatures are relatively ineffective in removing pesticides from clothing.

Laundry detergents, whether phosphate, carbonate, or heavy duty liquids, are similarly effective in removing pesticides from fabric. However, research has shown that

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heavy duty liquid detergents are more effective than other detergents in removing emulsifiable concentrate pesticide formulations. Emulsifiable concentrate formulations are oil-based and heavy duty liquid detergents are known for oil-removing ability.

Laundry additives, such as bleach or ammonia, do not contribute to removing pesticide residues. Either of these additives may be used, if desired, but caution must be used.

Bleach should never be added to or mixed with ammonia, because they react together to form a fatal chlorine gas. Be careful-don't mix ammonia and bleach!

If several garments have become

contaminated, wash only one or two garments in a single load. Wash garments contaminated by the same pesticide(s) together. Launder, using a full water level to allow the water to thoroughly flush the fabric.

During seasons when pesticides are being used daily, clothing exposed to pesticides should be laundered daily. This is especially true with highly toxic or concentrated Pesticides. It is much easier to remove pesticides from clothing by daily laundering than attempting to remove residues that have accumulated over a period of time.

Pesticide carry-over to subsequent laundry loads is possible because

the washing machine is likely to retain residues which are then released in following laundry loads. It is important to rinse the washing machine with an *empty load*, using hot water and the same detergent, machine settings and cycles used for laundering the contaminated clothing.

Line drying is recommended for these items. Although heat from an automatic dryer might create additional chemical breakdown of pesticide residues, many pesticides break down when exposed to Sunlight. This also eliminates the possibility of residues collecting in the dryer.

**When Laundering
Pesticide Contaminated
Clothing...REMEMBER**

READ the pesticide *LABEL* for information.

DISPOSABLE PESTICIDE CLOTHING provides extra protection.

PRERINSE clothing by:

- *presoaking in a suitable container;
- *agitating in an automatic washing machine;
- *spraying/hosing the garment(s) **outdoors**.

WASHING machine settings:

Hot water temperature (140° F/60° C), Full water level, **Normal** (12 minutes) wash cycle.

REWASH the contaminated clothing two or three times, if necessary.

Wash *A FEW* contaminated garments at a time using lots of water.

Wash *SEPARATELY* from *FAMILY* laundry.

DISCARD (burn or bury) clothing if thoroughly sat-

urated or contaminated with highly toxic pesticides.

LAUNDER CLOTHING DAILY when applying pesticide daily.

RINSE MACHINE thoroughly after laundering contaminated clothing.

LINE DRY to avoid contaminating the automatic dryer.

BE AWARE of when pesticides are being used so that clothing can be appropriately laundered.