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Pesticide Applicator Update: Choosing Suitable Personal Protective Equipment ¹

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For a variety of reasons (cost, comfort, durability, etc.), personal protective equipment (PPE) for pesticide handlers is constructed from one of eight materials:

- butyl rubber
- nitrile rubber
- natural rubber
- neoprene
- polyethylene
- polyvinyl chloride
- viton
- barrier laminate.

No single material is “absolutely best” for protecting a pesticide handler from pesticides. Instead, each PPE material is satisfactory under some circumstance – and may be less satisfactory under some other circumstance. Pesticide product formulation greatly influences PPE suitability.

Scientific tests of PPE materials indicate that every material’s ability to protect a handler from a pesticide product is mainly determined by two things:

- 1) the *type of solvent used in the pesticide product*, and
- 2) the *amount of time the PPE article is exposed to the solvent* in the formulated pesticide.

This means, **when** the solvent in the pesticide formulation gets through the PPE barrier, the wearer is no longer protected.

Every EPA-registered pesticide product label contains statements identifying the PPE necessary for safe handling of the product. On **some** pesticide labels, the label mentions an EPA-developed code letter (A-H) for PPE. Each code letter indicates a chemical resistance category. These code letters can help a user choose suitable PPE for a particular product.

To help make sense of their PPE codes, the EPA organized the codes in a chart. Their chart, with some clarifying comments, is on the other side of this page.

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1. This document is PI-28, one of a series of the Pesticide Information Office, Food Science and Human Nutrition Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. For additional information, contact the Pesticide Information Office, University of Florida, P. O. Box 110710, Gainesville, FL 32611-0710, (352) 392-4721. Published January 2003. Please visit the EDIS Web site at <http://edis.ifas.ufl.edu>.
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EPA Chemical Resistance Category Selection Chart

For use when the Personal Protective Equipment (PPE) description section on a pesticide label mentions a chemical resistance category code letter.

Chemical Resistance Category Code Letter (Mentioned on the pesticide label)	Type of material used to construct the PPE article							
	Barrier Laminate	Butyl Rubber 14 mils	Nitrile Rubber 14 mils	Neoprene Rubber 14 mils	Natural Rubber 14 mils	Polyethylene	Polyvinyl Chloride (PVC) 14 mils	Viton 14 mils
A	high	high	high	high	high	high	high	high
B	high	high	low	low	none	low	low	low
C	high	high	high	high	medium	medium	high	high
D	high	high	medium	medium	none	none	none	low
E	high	low	high	high	low	none	medium	high
F	high	high	high	medium	low	none	low	high
G	high	low	low	low	none	none	none	high
H	high	low	low	low	none	none	none	high

Definitions

- High:** PPE made of this material can be expected to withstand **one or more days** of contact with that particular pesticide product if the PPE article is properly maintained. Throughout the workday, rinse off pesticide accumulations at rest breaks and inspect for holes, tears, or punctures. Thoroughly clean or replace the PPE article at end of each day's work.
- Medium:** PPE made of this material can be expected to withstand **one or two hours** of contact with that particular pesticide product if the PPE article is regularly rinsed with clean water and kept free of holes, tears or punctures.
- Low:** PPE made of this material can be expected to withstand **approximately ten minutes** of contact with that particular pesticide product. The wearer should rinse, remove and discard such PPE articles after this amount of use.
- None:** This material has **no resistance** to chemical penetration by pesticide products whose labels mention this resistance category code letter. **Do not wear** PPE made of this material when handling pesticides whose labels mention this resistance category code letter.