

DuPont Personal Protection

CLOTHING FOR RICIN RESPONSE

The threatened or actual use of a bioterrorism weapon is a federal crime. If you believe you are involved in a bioterrorism incident, contact your local emergency response department immediately (911 where applicable).

Recent ricin incidents in the U.S. have attracted global attention and heightened the awareness of the need for chemical/biological personal protective apparel (PPE). To better prepare you to respond to bioterrorism incidents, this document provides information on ricin and suggests DuPont™ protective apparel to consider for ricin response.

DuPont™ garments have not been tested against ricin nor are we aware of any other commercial protective apparel that has been directly tested against ricin. Actual pathogens are seldom used to evaluate barrier performance of protective equipment.

Ricin is a large, globular protein isolated from the castor oil bean. Ricin is a powder but can be dissolved in slightly acidic water. The CDC has issued an "Emergency Response Card" for ricin which is available at <http://www.bt.cdc.gov/agent/ricin/erc9009-86-3.asp>. The Emergency Response Card warns that skin contact with ricin has the "potential for allergic skin reaction; redness, blisters, pain. [Ricin] may be absorbed [through the skin]!" Inhalation of ricin "may cause severe lung damage in humans (based on reports of exposure in animals.) Repeated exposure in humans is known to cause allergic/asthma-like symptoms including congestion of the nose and throat, itchiness of the eyes, hives, tightness of the chest, and in severe cases, wheezing". And with ingestion of ricin, "Symptoms are rapid in onset (generally less than a few hours) following ingestion; nausea, vomiting, abdominal pain and cramping; diarrhea; gastrointestinal bleeding; low or no urinary output; dilation of the pupils; fever; thirst; sore throat; headache; vascular collapse and shock.

Respirators, protective clothing, face and eye protection, gloves and protective footwear are needed during incidents involving biologic materials to minimize inhalation, limit skin contact and avoid contamination of clothing worn under the protective garment. Personal protective equipment must be the correct size, be worn properly, changed if damaged, and taken off in a way that does not contaminate the wearer or others. PPE must be discarded in a way that does not spread the potential contamination. The various PPE should work together – one item should not interfere with the fit and function of another.

TECHNICAL BULLETIN

Based on the information provided by the CDC Emergency Response Card, sealed seam garments made from DuPont™ Tychem® should be considered for incidents involving ricin. This selection of Tychem® fabrics offers a wide range in garment styles and durability. The selection of the garment style should take into consideration amount and method of contamination and the eventual method of decontamination (see <http://www.cdc.gov/niosh/unp-intrecppe.htm>). These garments should be worn with appropriate respirators, gloves, face, eye, head, and foot protection and other items of PPE selected after consideration of the hazards that are present.

DuPont does not recommend protective equipment for individuals who do not have the training to assess the hazards, correctly select and properly use the equipment. No one should attempt to respond to a bioterrorism incident without adequate training and without contacting local emergency response agencies. Local emergency responders are trained to deal with potential terrorism incidents.

Please note, this information is pertinent to the United States. Regulations and procedures in other countries may vary.

CAUTION: Tychem® has not been tested against ricin. This information is based upon technical data that DuPont believes to be reliable. It is subject to revision as additional knowledge and experience are gained. DuPont makes no guarantee of completeness or of results and assumes no obligation or liability in connection with this information.

It is the user's responsibility to determine the level of toxicity and the proper personal protective equipment needed for the user's application. This information is intended for informational use by experienced persons having technical skill for evaluation under their specific end-use conditions, at their own discretion and risk.

Anyone intending to use this information should first verify that the garment selected is suitable for the intended use. If fabric becomes torn, abraded or punctured, end user should discontinue use of garment to avoid potential exposure to chemical. **SINCE CONDITIONS OF USE ARE OUTSIDE OUR CONTROL, WE MAKE NO WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR USE AND ASSUME NO LIABILITY IN CONNECTION WITH ANY USE OF THIS INFORMATION.** This information is not intended as a license to operate under or a recommendation to infringe any patent or technical information of DuPont or others covering any material or its use.

