

DuPont crafts protective wear for emergency responders

Company says material must guard against multiple hazards

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DuPont, which created bodysuits to shield first responders from chemicals and fire, is developing new gear to protect the wearer against multiple threats.

First responders -- the firefighters, police and medical personnel who handle emergencies -- are used to donning bodysuits to handle chemical spills and commercial fires, said DuPont research associate James Zeigler. But since the 1990s and especially since Sept. 11, researchers have learned that responders need protection from combined hazards, he said.

"If we lose the first responders, we lose the response," said Zeigler, a leading chemist with DuPont Personal Protection at the Spruance plant in Chesterfield County.

Zeigler has worked for more than two decades with the company's Tyvek, Kevlar, Nomex and similar fabrics to create chemical and thermal protective suits.

Now DuPont is studying how to create suits to cope with the multiple hazards posed when first responders handle raids at in-home drug labs, burning petrochemical plants, exploding bombs and the unknowns of terrorism.

"When the police officer goes into a drug lab . . . and they get shot, or blown up by chemicals or exposed to chemicals," they need extra protection from the different kinds of hazards, he said.

The suits are critical to the safety of people in the surrounding areas as well, he said during a talk yesterday at the Science Museum of Virginia.

"A first responder is going to touch anywhere from 10 to 100 victims," Zeigler said. "If we lose that responder, basically we lose the care" of those victims.

First responders have a range of bodysuits aimed at providing specific kinds of protection while balancing safety with issues such as municipal budgets, weight, comfort and dexterity, he said.

DuPont and other companies have developed bodysuits constructed from ultra-thin layers of thermoplastic film just .003 inch thick. These multiple layers can protect the wearer from 300 chemicals, Zeigler said.

The multiple layers of films can be combined with other protective fabrics to protect the wearer from vapors, liquid splashes and nonrespiratory hazards, he said.

DuPont is expanding its Kevlar business with a \$500 million investment in a new plant in South Carolina, the company said Tuesday. In September, DuPont announced a \$50 million investment in its Spruance plant, part of the company's plans to ramp up Kevlar production 25 percent by 2010 to meet growing demand.

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