PROTECTING AMERICA

What Others Are Doing•How You Can Help

Creating A Secure Nation Through Chemistry

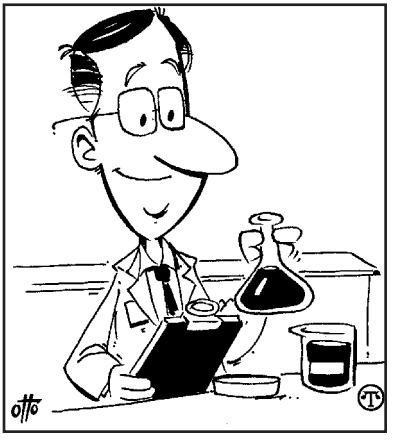
(NAPSA)—America's war on terrorism involves many industries on many fronts. One of the least recognized but most important is the work of the chemical industry, which is a vital part of America's infrastructure. Chemical resources and high-tech chemistry are on the front lines of America's war against terrorism every day.

Consider anthrax. Without chlorine dioxide, the Senate and House office buildings, along with other public buildings, might forever be too dangerous to occupy.

Moreover, chemical companies and academic researchers have recently introduced innovative ways to use chemistry to improve security documentation and detect biological weapons. For example, it is the chemistry of combining polymers and dyes with other technologies that prevents fraud and tampering with ID cards.

Recently, PPG Industries debuted a substitute for paper ID cards that can be used along with technology from Fargo Electronics and Hewlett-Packard. This paper card substitute, commonly known as Teslin, can hold photo-quality images and is highly durable. Teslin cards are sheets of a silica-based compound with a plastic PVC backing, requiring no lamination. Magnetic strips can be added to the cards to store additional information.

Furthermore, DuPont Authentication Systems can incorporate its photopolymer film and image recording technology into improving holograms on ID cards. The embossed hologram that has become standard on ID cards is becoming easier to counterfeit, but the reflective hologram within DuPont's photopolymer film makes the hologram much harder to duplicate fraudulently.



A number of chemical innovations are contributing to increased national security.

Another innovation was introduced by researchers at the University of Rochester. Assistant professor of chemistry Benjamin L. Miller and co-workers published discovery of a porous silicon sensor capable of distinguishing between gram-negative and gram-positive bacteria. Designed to detect certain kinds of bacteria in wounds and food, the sensor could also be used to detect biological weapons.

Everyday chemical innovations help make this nation more secure. A valuable resource for persons looking for more ways that chemicals and the chemical industry serve America is the Chemical Educational Foundation, a non-profit organization which provides an in-depth resource for students, researchers or anyone seeking additional information about the role of chemicals. For more information, visit www.chemed.org/security.