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Qc Inventors

Davenport native's chemical neutralizer earns honor

By Deirdre Cox Baker

QUAD-CITY BUSINESS JOURNAL

A discovery by a Davenport native has made it easier to fight chemical warfare in places such as the Middle East, as well as clean up after more common industrial chemical spills at home.

Kenneth Klabunde, 62, a chemistry professor at Kansas State University in Manhattan, has developed a method to use natural materials to neutralize synthetic chemicals such as mustard gas and sarin, or run-of-the-mill industrial chemicals such as those used to produce paint and household products.

Users diffuse the invention in a type of fire extinguisher to attack spills or escaped gases. Called FAST-ACT, or First Applied Sorbent Treatment Against Chemical Threats, it is produced by NanoScale Materials Inc. of Manhattan, a firm the professor founded.

Klabunde is a graduate of Davenport Central High School and Augustana College in Rock Island, and has worked on the nanotechnology behind his discovery since the 1980s.

"I got research money from the U.S. Department of Defense and found some of the materials I was working with could neutralize the other compounds," he explains.

While it took almost a decade to get his invention into production, earlier this year Klabunde received a Breakthrough Award from Popular Mechanics magazine. He also has received honors from the University of Iowa, where he earned a post-graduate degree, and part of his research funding came from the National Science Foundation.



Product in use

"Everyone who's used it so far has been pleased with it," he says of FAST-ACT. Workers at a Chicago-area firm accidentally spilled a chemical of unknown origin and sprayed FAST-ACT in response. "It did the job, knocked down the fumes and made them powder," he says.

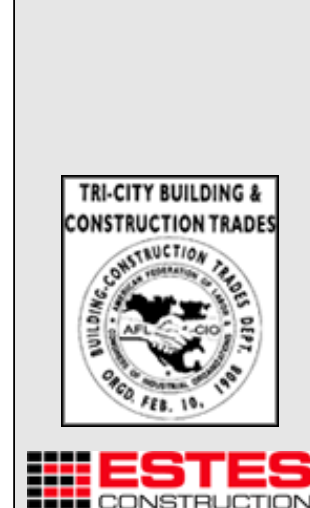
Klabunde says FAST-ACT has no direct competitors; other products are foam-based and are not designed to remove dangerous fumes from the air. "We can clear ammonia gases, for instance, but the foam can't because it has slightly different properties," he says.

FAST-ACT can be used on all chemicals, and the harmless waste is simply

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vacuumed up, Klabunde says, noting that the remains actually are tiny particles — or “nano cotton balls.”

Klabunde grew up on 53rd Street and Lorton Avenue when that area was considered to be a rural part of Davenport. The son of Vernon and Anita Klabunde, he was an active student and a stand-out wrestler.

“He was very energetic and devoted to education,” says his father, a retiree from Oscar Mayer Foods Corp. who currently lives with his wife in Davenport’s Ridgecrest Village.

“We’re very proud of Ken and think he has accomplished quite a bit while at Kansas State,” he adds. “I suggested he list the company on the stock market.”

While Klabunde launched and worked part-time for NanoScale Materials, he never cut his ties with the university, returning to his role as professor last year. He currently is a consultant with the firm.

“We always hoped the work we did would be useful to someone, but it all took a long time,” Klabunde says. “It’s just a bonus if you find some things that are useful to people.”

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