

Investigation links deaths to paint-stripping chemical

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Workers and consumers who refinish bathtubs are being warned about using products containing the chemicals containing methylene chloride. Credit: G.L. Kohuth

The deaths of at least 13 workers who were refinishing bathtubs have been linked to a chemical used in products to strip surfaces of paint and other finishes.

An investigation started by researchers at Michigan State University in 2011 has found that 13 deaths since 2000 – including three in Michigan – involved the use of paint-stripping products containing methylene chloride, a highly volatile, colorless and toxic chemical that is widely used as a degreaser and [paint](#) stripper. The chemical, in addition to being used in industrial settings, is available in many over-the-counter products sold at home improvement stores.

"To use products containing methylene chloride safely, work areas must be well-ventilated, and when levels of methylene chloride exceed recommended exposure limits, workers must use protective equipment," said Kenneth Rosenman, chief of MSU's Division of Occupational and Environmental Medicine in the College of Human Medicine. "In a small bathroom, it is unlikely these products can be used safely."

While it previously was identified as a potentially fatal occupational hazard in furniture strippers and factory workers, a report released today in the Centers of Disease Control and Prevention's Morbidity and Mortality Weekly Report is the first time methylene chloride has been identified as a hazard to bathtub refinishers.

Since its vapors are heavier than air, they likely remain in bathtubs after application, causing increased danger to workers applying a paint-stripping product.

"The extreme hazards of using products with this chemical in bathtub refinishing need to be clearly communicated to employers, workers and the general public," Rosenman said. "Safer methods using alternative products should be recommended."

Rosenman and MSU colleague Debra Chester, who co-wrote the CDC alert released today, notified bathtub refinishers throughout the state of their findings and alerted manufacturers of the product. Efforts also are being made to warn the general public.

Beginning in 2001, MSU's Division of Occupational and Environmental Medicine has received federal funding for the Michigan Fatality Assessment and Control Evaluation program. Each year, the program investigates work-related deaths and identifies ways to prevent them.

As part of that program last year, Chester, an industrial hygienist,

identified the 2010 [death](#) of a worker using a bathtub refinisher. In that case, the 52-year-old co-owner of a Michigan-based bathtub refinishing company was found unresponsive after using a product marketed for the aircraft industry containing methylene chloride. He later died at a local hospital.

Chester identified a similar Michigan death using the same product earlier in 2010 and another death from several years before. After notifying the National Institute for Occupational Safety and Health, a total of 13 deaths in nine states were identified since April 2000. Another death of an Iowan woman two weeks ago while refinishing a bathtub currently is being investigated as possible exposure to methylene chloride.

As part of the MSU investigation, it is recommended that manufacturers note on products with methylene chloride that they should not be used in applications such as bathtub refinishing. The report also recommends manufacturers consider restricting access to such [products](#).

The report also notes the number of deaths identified likely is an underestimate because national databases do not include self-employed workers or consumers and additional deaths among bathtub refinishers might have been ascribed to heart disease when they were actually caused by methylene chloride.

Provided by Michigan State University

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