

Worker Fatality Alert

January 2012

Methylene chloride linked to worker death in tank

Prevention Points

- Use safer methods and less toxic chemicals to remove paint
- Follow confined space regulations when working with toxic chemicals in enclosed spaces

The **California Fatality Assessment and Control Evaluation (CA/FACE)** program tracks and investigates cases of fatal injuries at work, and makes prevention recommendations for employers and workers. The CA/FACE program is investigating the preventable death of a worker who was using a paint stripper inside a tank at a paint manufacturing company. A second worker was also nearly killed after attempting a rescue.

Opening of paint tank



What happened? The victim was working by himself using a paint stripper to remove dried paint from the inside of a tank. The product contained methylene chloride (at least 60%), methanol and mineral spirits. The tank was 7'x 7' x 9' with a 2' x 7' opening at the top, and was a permit-required confined space under California OSHA regulations. The space was not adequately ventilated and the victim was not trained in confined space entry. The company had not stationed an attendant at the tank entrance to monitor the victim while he worked in the tank. A co-worker was overcome when he attempted a rescue after seeing the victim unconscious at the bottom of the tank. The victim could not be resuscitated. The cause of death according to the local coroner was asphyxia due to inhalation of dichloromethane (methylene chloride). The co-worker was hospitalized and treated for methylene chloride poisoning.

Bottom of tank where workers were found



What was the cause? Both of the workers were overcome by dangerous levels of solvent vapors inside the paint tank. The paint tank was a permit-required confined space, but proper testing, entry and rescue procedures were not in place to prevent both workers from being overcome by toxic vapors. The victim was wearing a cartridge respirator that did not adequately protect against inhaling methylene chloride vapors.

What should be done to prevent this from happening again? Methylene chloride has been linked by Federal OSHA to over 50 worker deaths nationwide since the mid-1980s, primarily from use in poorly ventilated spaces. Methylene chloride is also considered by many regulatory agencies in the U.S. to cause cancer, and is banned from many uses in Europe.

Employers should establish procedures to clean paint tanks more frequently with water-based materials, before the paint is cured. If this is not possible, the cured paint should be stripped with abrasive removal methods. If toxic chemicals must be used inside a tank, employers must provide worker training in confined space entry and must follow OSHA regulations during an entry. This includes providing proper ventilation, supplied air respiratory protection, air monitoring, communications, and means of rescue and retrieval.

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[Read more about safety in confined spaces.](http://www.dir.ca.gov/dosh/dosh_publications/ConfSpa.pdf)
(www.dir.ca.gov/dosh/dosh_publications/ConfSpa.pdf)