

MC paint stripper results in OSHA citations

In a 2005 Washington-OSHA inspection, Bathcrest of Seattle was assessed over \$10,000 for 15 violations related to the use of Klean-Strip Aircraft Remover (containing up to 85% MC) during bathtub stripping.

Bathcrest of Seattle's owner, Lorelei, realized the health hazards and costs of working with MC required them to find an alternative product free of MC. Finding a safe but *effective* stripper for use on residential bathtubs has not been easy. After trying several different paint strippers, Bathcrest's 3 full-time technicians now use water-based **Smart Strip with benzyl alcohol (30-50%) by Dumond Chemicals**.

Benzyl alcohol-based paint stripper works

Since Bathcrest of Seattle began using Smart Strip, they have successfully and competitively stripped over 1,000 tubs in the past 2 years. Half-face air purifying respirators are worn when working with Smart Strip. Bathcrest's tried-and-true success with benzyl alcohol-based strippers is supported by research that tested MC-free paint strippers and concluded that benzyl alcohol based products are the best choice (IRTA 2006)¹.

Lorelei admits that Smart Strip requires more surface contact time in comparison to MC-based products. During the hour that Smart Strip is left to penetrate the surface, portable ventilation is setup and the room is prepped for work. In unoccupied homes, the stripper may be applied the night before and left overnight. Stripper may also be applied early in the morning, errands run, and then stripped hours later.

Alternatives that did not work

Bathcrest used Turco 6776-LO with success for over a year. With the active ingredients benzyl alcohol and formic acid, this stripper has a sharp odor and is highly corrosive with a pH of 2.0, requiring a portable eye wash. Because of its high corrosion, Turco 6776-LO is marketed and distributed for industrial use only. It was difficult to purchase and required shipping through a private carrier. While strong odor was a disadvantage, the large packaging quantity (5 gallons) and high shipping cost eventually forced Bathcrest to look for an alternative paint stripper that was more readily available.

Bathcrest also tried Ready-Strip Plus Safer Paint & Varnish Remover by Sunnyside Corporation, sold through a local hardware store. It contains the solvents dimethyl glutarate and N-Methylpyrrolidone (NMP), a reproductive hazard. However, it did not perform well as it dried quickly and was difficult to scrape off. In a follow-up with Sunnyside Corporation, they did not recommend the product as a bathtub stripper stating the formulation would not be effective for this use. From a health perspective, products with NMP should be avoided.

Smart Strip is a better choice than either of these alternatives because it does not contain formic acid or NMP.

Exhaust ventilation essential in bathtub refinishing

Lorelei holds the view that "money spent on ventilation is affordable to save lives". Bathcrest of Seattle has been using the Coppus® Portable Ventilator (Cadet model by Dresser-Rand; ¼ HP and 1300 CFM) for the last 9 years. Too big to sit in a windowsill, the ventilator is set in the bathroom doorway and used with 25 foot lengths of flexible exhaust duct to route contaminated air outside the home. In a windowless bathroom, plastic is hung from the top of the doorframe to about 6 inches above the ventilator to create a source of make-up airflow. The flexible exhaust ducts fit into customized five gallon buckets for easy storage and handling into client's homes. The system has proven very durable and requires almost no maintenance. The ventilator effectively controls solvents and dust and keeps the home clean. The combined noise generated from sanding plus the ventilator requires that technicians use earplugs.

Quick Facts

- MC-based strippers are severely toxic and have caused the death of 13 bathtub refinishers in the U.S. in the last 12 years².
- Cartridge respirators (all types) **DO NOT** protect against MC. You need a supplied air respirator.
- MC is heavier than air and will accumulate in the tub where you are breathing.

Get Help: Free assistance is available from WA State Department & Industries' SHARP Program, 1-888-66-SHARP or L&I's Division of Occupational Safety and Health (DOSH) Consultation at 1-800-423-7233.

¹Institute for Research and Technical Assistance. Methylene Chloride Consumer Product Paint Strippers: Low-VOC, Low Toxicity Alternatives, May 2006. Available at <http://www.irta.us>. Accessed August 21, 2012.

²CDC, Fatal Exposure to Methylene Chloride Among Bathtub Refinishers – United States, 2000-2011. MMWR 2012; vol 61(7): pp119-122. Search for it at <http://www.cdc.gov/mmwr>. Accessed August 21, 2012