Fact Sheet, August 2014

IRTA

Institute for Research and Technical Assistance

Graffiti Removal: Safer Alternative Graffiti Removers

Graffiti management and control is a resource intensive and costly problem for public agencies and private companies. Taggers use various materials like spray paint, marker, stickers and acid or diamond tipped tools to deface surfaces like sidewalks, masonry walls, fences, lamp posts, traffic signs, billboards, glass and plexiglass. Some of the methods used today for mitigating graffiti pose risks to workers and community members, lead to emissions of volatile organic compounds (VOCs) or cause other environmental damage. Alternative methods that are safer for workers and the environment are needed.

What Graffiti Removers Are Used Today?

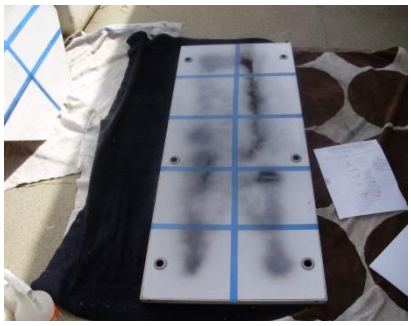
There is no one graffiti remover that can handle all tasks so most agencies and private companies use a few different graffiti removers routinely. In California, the California Air Resources Board (CARB) regulates the VOC content of graffiti removers and bans the use of methylene chloride, a carcinogen, in graffiti removers. The VOC limits established by CARB are 30% and 50% for non-aerosol and aerosol graffiti removers respectively. Many of the graffiti removers on the market today do not comply with these VOC limits and some also contain toxic components like methylene chloride or N-methyl pyrrolidone (NMP), a reproductive and developmental toxin. These solvents can expose workers and community members to toxic risks.

What Alternative Graffiti Removers are Available?

As part of a project to investigate and test alternative graffiti management methods, EPA, the Bay Area Air Quality Management District and the San Francisco Department of the Environment (DE) sponsored a project which was conducted by the Institute for Research and Technical Assistance (IRTA), a nonprofit technical environmental organization. As part of the project, IRTA worked with several different agencies responsible for graffiti management in Northern and Southern California. One of the project tasks was to evaluate several graffiti removers listed by the San Francisco DE and those used by the agencies participating in the project. Some of the graffiti removers used by the agencies contained toxic components and many of them did not meet the California VOC limits. Several of the graffiti removers listed by the DE and used by the agencies contained unidentified components which could be toxic or VOCs. Because of this uncertainty, IRTA developed five different graffiti removers with low toxicity components which met the California VOC standards. These included three general graffiti removers, one remover designed specifically for sticker removal and one sensitive surface graffiti remover. IRTA tested the DE listed graffiti removers and the graffiti removers formulated by IRTA to determine their effectiveness. IRTA also asked the agencies participating in the project to test the graffiti removers IRTA formulated.

How Were the Graffiti Removers Tested?

IRTA designed tests on four different substrates to see where the graffiti removers performed best. Five commercial graffiti removers and two of IRTA's graffiti removers were tested to see if they could remove spray paint from a concrete wall. Two of the commercial graffiti removers and two of IRTA's graffiti removers performed effectively. Seven commercial graffiti removers and two of IRTA's graffiti removers were tested on a hard nonporous fiberglass panel for removing spray paint, marker and stickers. The same graffiti removers were tested on a metal substrate for removing spray paint and marker. All seven of the commercial graffiti removers could remove light spray paint on fiberglass and all could remove light spray paint and marker from the metal. None of the commercial removers could effectively soak the postal stickers so they could be removed in one piece. Two of IRTA's graffiti removers could remove heavy spray paint, marker and stickers. Six of the commercial graffiti removers and one of IRTA's graffiti removers were tested on a street sign for removing light spray paint. Four of the commercial graffiti removers and IRTA's gentle graffiti remover effectively removed the spray paint without removing the screen printing on the sign.

The IRTA formulated graffiti removers were tested by the agencies participating in the project. They were used for their routine purposes in removing spray paint, marker, stickers and adhesive residue. The agencies reported that the graffiti removers worked well for the intended purposes.

Where Can I Find Out More About the Alternative Graffiti Removers?

The description of the graffiti removers and the testing and the results of the graffiti project are available in a report entitled "Safer Alternative Graffiti Management Methods for California." The report can be accessed on the IRTA website at www.irta.us. For more information, contact Katy Wolf at IRTA at (323) 656-1121 or kwolf.irta@earthlink.net.