

Painting in Schools

Depending on Assistance Needed, Call:	
DGS Environmental Health and Safety	202-576-8962
Agency Contact	
Other	

Situation Description

Painting activity occurs in DC schools year-round. Two significant health hazards from oil-based paint come from Volatile Organic Compounds (VOCs) and lead. Schools should use latex, water-based paints for all large painting projects. Use of paints that contain mercury or lead is prohibited. Painting and drying should only occur when the area of the building is unoccupied and properly ventilated.

Paint is composed of four basic types of materials: solvents, binders, pigments, and additives. Solvents (the liquid material that regulates consistency) are either water or organic based. Paints that are oil-based contain VOCs (linseed oil, alcohols, ketones, glycol ethers, etc.). Latex water-based paints contain significantly lower VOC content.

Volatile Organic Compounds (VOCs) are defined by the EPA as any volatile compound of carbon unless specifically exempted. The approved method to test a compound is called Test Method 24. VOCs contribute to the production of smog. Particular VOCs may have adverse health effects such as headaches, nausea, eye, nose, and throat irritation, loss of coordination, allergic skin reaction, fatigue, and dizziness.

Lead is a naturally occurring element which can be highly toxic. It is most commonly found in paint but is present in the soil, air, and water. Lead-based paints were banned from use in housing but still exist in buildings built prior to 1978. Exposure to high levels of lead can lead to a variety of short-term problems such as nausea, vomiting, stomach cramps, fatigue, headache, and long-term problems such as learning disabilities, growth problems, anemia, reproductive problems, nerve disorders, memory problems, and behavioral problems.

Legal Requirements

In May of 2010, the Council of the District of Columbia unanimously passed the Healthy Schools Act of 2010, which includes the reduction of exposure to environmental factors that impact asthma among children and adults in the DC Public Schools, under Title V, Sec. 501 (a)(8), complying with the EPA's Lead: Renovation, Repair, and Painting Program, established by 40 CFR Part 745 (Title V., Sec. 501 (a)(6), and amending Sec. 504 of The Green Building Act of 2006 with the addition that schools shall aspire to meet LEED for Schools certification at the Gold level or higher.

Lead-based paint is regulated under the Toxic Substances Control (TSCA), and gives the EPA authority to inspect, assess, and enforce cleanup and penalties for violations. This regulation targets housing, schools, and daycares built before 1978. There are several federal regulations as well DC lead laws. Most notable are DC's Lead Hazard Prevention and Elimination Act of 2008, as amended in 2010, which makes lead-based paint that is not intact illegal in all residential dwelling units, in common areas in multifamily property, and in child-occupied facilities such as daycares, built before 1978.

Procedures

Any maintenance, restoration, modernization, or installation work that disturbs paint in any DCPS school facility requires a hazardous materials assessment by the Environmental Health and Safety. An inspector is sent out to perform X-ray fluorescence analysis of the impacted area. If the lead results exceed action levels, then a written abatement plan is developed, and remediation is performed by trained, licensed contractors.

For all Phase I projects, Modernization projects, or any painting project over 1,000 square feet, paints must be latex, water-based paints which contain low or zero VOCs. To be considered low or zero VOC, the paint should consist of less than 50 grams per liter (g/l) and less than 5 g/l of VOC respectively. Paint shall also meet testing and product requirements of the California Department of Health Services *Standard Practice for the Testing of Volatile Organic Emissions from Various Sources using Small-Scale Environment Chambers*, including 2004 Addenda or qualify for LEED-NC 2.2 EA Credit 4 VOC limits.

Additional measures to reduce environmental exposure include accurate estimating of paint quantity, increasing ventilation during application and drying, applying paint according to manufacturer's directions, and storing or disposing of properly.

All questions or concerns regarding paint should be directed to the DGS Environmental Health and Safety, 202-576-8962.