

# LEAD IN BUILDING MATERIALS



UW personnel and contractors working with building materials or working in areas where building materials are disturbed should take precautions to avoid exposure to lead.

## LEAD HAZARDS

Lead is a cumulative and persistent toxic substance that poses a serious health risk. When inhaled or ingested in excessive quantities lead may affect the nervous system, reproductive system, blood, kidneys and cause digestive problems, memory and concentration problems, and muscle and joint pain.

## LEAD IN BUILDING MATERIALS

Lead-based paint is the most prevalent lead-containing building material. Many buildings on the UW campus were built before lead in paint was banned for residential and public buildings in the United States in 1978. Lead-containing building materials (LCM) may include:

- Paint and surface coatings on interior and exterior surfaces in buildings built before 1978
- Roofing and pipework
- Solder in plumbing and electrical
- Mortar in brick and stonework in older buildings
- Additive in brass/alloys (faucets, old galvanized pipe)
- Cable and wire casing
- Cast iron pipes, gaskets and connections
- Flashings
- Glazing
- Lead glass, stained glass
- Structural steel primer

The Washington Administrative Code (WAC) defines lead-based paint and surface coatings as:

### LEAD-BASED PAINT DEFINITION

Paint or other surface coatings that contain lead equal to or exceeding 1.0 milligram per square centimeter (mg/cm<sup>2</sup>) or 0.5% by weight or 5000 parts per million (ppm) by weight.

Intact lead-based paint or other LCM under normal conditions does not pose a health hazard. However, if the material is in poor condition or cracked, drilled, sanded or otherwise disturbed, it could result in lead-containing dust being released into the air and/or onto surfaces that could present a health risk.



Any work involving disturbance of lead-based paint or other LCM must only be performed by personnel who have received lead worker training and use proper work practices, containment equipment, and personal protective equipment.

## RESPONSIBILITIES

**UW EH&S** assists departments with the development of lead safety work plans; keeps departments apprised of changes in relevant regulations; and develops resources that strengthen local safety policies. EH&S performs lead worker and lead awareness training, including annual refreshers. EH&S performs air monitoring for exposure to lead during representative activities where airborne lead may be at or above the action level of 30 micrograms/cubic meter (µg/m<sup>3</sup>).

**University facilities and maintenance departments** are responsible for properly managing lead in their buildings and related spaces. The UW has a [Lead Safety Program](#) that outlines functions that EH&S, the department and/or their contractor will perform with regard to training, notification, monitoring, jobsite controls, safe work practices, and recordkeeping for maintaining LCM and for instances when lead may be disturbed.

**Supervisors** are responsible for implementing their department's safety programs. They must ensure work plans for LCM are complete prior to projects involving disturbance of lead.

**Employees, students and other personnel** are required to follow their department's lead safety practices and policies; and notify their supervisors of unsafe conditions or work as soon as possible.

## PREVENT LEAD EXPOSURE

Limit lead exposure to the lowest possible level by using **engineering controls, safe work procedures** and **personal protective equipment**, including respirators, if needed. In addition, take the following precautions:

- **Ask to see the Hazardous Material Survey** before the start of a project that may involve disturbing LCM. Hazardous Material Surveys are kept with the [Facilities Regulated Material Management Office](#) (206.685.3357 or [asbestos@u.washington.edu](mailto:asbestos@u.washington.edu)).
- If there has not been a survey conducted and the **building was built before 1978** then all paints are considered lead-containing.
- **Be careful not to damage painted building materials** or materials that may contain lead unless you have a work plan to limit your exposure.
- **Do not enter construction areas** when lead projects are being performed. A sign will be posted that reads *"Danger Lead Work Area - May Damage Fertility or the Unborn Child - Causes Damage to the Central Nervous System - Do Not Eat, Drink, or Smoke in this Area."*
- **Practice proper workplace hygiene** to avoid getting lead on clothing that may be taken home accidentally and expose family members. Wash your face and hands with soap and water if you feel you may have contacted lead-containing dust.
- **Do not use compressed air or shake clothing** to remove dust. Use wet wiping or a HEPA vacuum dedicated to lead work when lead dust may be present.
- Guidelines for developing procedures for **cleanup and disposal of lead-contaminated debris** are given in the [EH&S Lead Design Guide for Projects](#).

## PREVENT "TAKE-HOME" LEAD

Clean lead dust from surfaces with damp wipes. Do not contaminate clothes, shoes, and skin that can carry lead into your car and home, and accidentally expose family members. Children are especially susceptible.

The University is involved in a variety of activities to control lead hazards on campus. The University has conducted surveys to identify areas where LCM is present and manages LCM in place. If you suspect a material in your work area may be LCM and it appears damaged or in poor condition, contact UW [Facilities Regulated Material Management Office](#) at 206.685.3357 or [EH&S](#) at 206.543.0465.

Other controls are required by the Department of Labor & Industry Division of Occupational Safety and Health (DOSH) to protect workers when working with LCM. For more information refer to the [Washington state lead standard](#) and the [EH&S Training page](#).

## REFERENCES

- [UW Administrative Policy Statement 56.6: Alterations to UW Seattle Campus Buildings and Grounds](#)
- WAC [296-155-176](#), Lead in Construction
- WAC [296-62-07521](#), Lead in General Industry
- Environmental Protection Agency (EPA) [Residential Lead-Based Paint Hazard Reduction Act of 1992](#) (Title X)
- U.S. Department of Housing and Urban Development [Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing](#) (2012 edition)
- EPA [40 CFR Part 745 - Lead-Based Paint Poisoning Prevention in Certain Residential Structures](#)
- EPA [Lead Renovation, Repair and Painting Program \(RRP\) Rule](#): This requires that those engaged in RRP activities in homes or child-occupied facilities (such as day care centers and kindergartens) built prior to 1978 be trained and certified in lead-safe work practices, and use these work practices to guard against lead contamination. It also requires that contractors provide information on lead safety prior to beginning work.

**Please contact EH&S at 206.543.7388 for more information about lead safety.**