



Department of
Health and Safety

Lead Based Paints, Lead Solder, and Heavy Metals

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LEAD BASED PAINTS (LBP)

Lead compounds were a major ingredient in many types of paint for years. In the early 1950's other pigments became more popular, but lead was still used in some pigments and as a drying agent. In 1973 the consumer products Safety Commission established a maximum lead content in paint of 0.5%, by weight; in 1978 it was lowered to 0.06%. Most scientific literature assumes buildings painted prior to 1978 contain lead based paint. Many campus buildings would fall into this category.

LEAD SOLDER, PIPING, SHEETING, ETC.

Lead is used extensively throughout the University primarily in building construction as pipe joint solder, flashing, shielding, etc. The inhalation of lead dust or fumes is the most common health hazard along with ingestion and skin absorption. It should be noted that lead poisoning is extremely rare if reasonable safety precautions and personal hygiene practices are followed.

HEAVY METALS

Heavy metals such as magnesium, cadmium, chromium, etc. are also present on campus but normally used under strict control conditions. These materials normally present very little hazard if appropriate Safety, Health, and Environmental Procedures are followed.

1.0 OBJECTIVE

- 1.1 To promote an awareness of hazards associated with lead, lead based products, and heavy metals and associated safe work and environmental procedures.
- 1.2 To ensure compliance with appropriate safety, health, and environmental standards and regulations.

2.0 SCOPE

- 2.1 This procedure shall apply to all University employees as well as contractors retained to perform work on behalf of the University.

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3.0 RESPONSIBILITY

- 3.1 Department heads, managers, and supervisory personnel shall ensure compliance with this procedure within their respective units.
- 3.2 Persons co-ordinating work with outside contractors shall ensure that contractors are aware and follow this procedure.
- 3.3 All employees having occasion to work with lead, lead based products, or heavy metals shall follow this procedure.

4.0 PROCEDURE

4.1 Lead Based Paints Abatement (stripping)

The following procedures shall be initiated prior to undertaking projects involving removal of lead based paints in any University facility.

- (a) The project co-ordinator/supervisor shall first determine whether the paint may be lead based through appropriate testing. Building surfaces painted prior to 1978 most likely contain lead based paint. The Department of Health & Safety can assist with such testing.
- (b) If lead based paint is indicated, it is recommended that a contractor certified in lead based paint abatement be retained to perform abatement work. In any event, persons undertaking such work must be appropriately trained and certified in lead based paint abatement and follow procedures outlined in Appendix A "Lead Based Paint Removal Procedure."
- (c) Non lead based paint removal will be treated as a minimal hazard project. Isolation of the project area, advising of building occupants, plus the use of standard protective equipment and clothing would be required.

4.2 Soldering/Brazing

- (a) Lead free solder shall be used for all soldering operations; for example, pipe, equipment installation, repairs, maintenance, as well as fine arts and/or research projects.
- (b) Projects/repairs where reheating of lead solder is unavoidable must be undertaken with due consideration for personal safety. Use adequate ventilation and approved protective equipment where necessary.

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4.3 Heavy Metals

- (a) Persons using heavy metals in work processes shall become familiar with hazards associated with the use, handling, storage, and disposal of such materials. Health, safety, and environmental precautions appropriate to the situation shall be taken.

5.0 MATERIAL SAFETY DATA SHEETS (MSDS)

- 5.1 Lead and heavy metals are regulated as controlled products under the “Workplace Hazardous Materials Information System” (WHMIS) and Environmental Protection Regulations. Persons using such products must be trained in safety procedures, and a MSDS must be kept in the workplace for ready reference. Contact The Department of Health & Safety for more information.

6.0 DISPOSAL

- 6.1 Lead, lead based paint residue, and heavy metals shall be disposed of according to environmental guidelines. Consult the MSDS or contact The Department of Health & Safety for further information.

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APPENDIX A : LEAD BASED PAINT REMOVAL PROCEDURES

1. Removal of lead based paint shall only be undertaken by persons trained and certified in "Lead Based Paint Abatement" or under direct supervision of a person trained and certified in such abatement. A certified abatement contractor is recommended for such projects.
2. Before commencing paint removal, the project co-ordinator/supervisor shall assess the site and determine the extent of isolation and the potential impact on building occupants.
3. If there is a possibility of dust migration or the project impacting building occupants, appropriate isolation of the project area shall be undertaken. Notify building occupants and post signage as appropriate.
4. Persons undertaking abatement work shall be instructed in safety procedures and in the use and care of protective equipment and clothing.
5. Adequate ventilation is to be provided by opening windows and/or utilization of exhaust fans.
6. No food, beverages, or smoking shall be permitted in the work area.
7. Every effort shall be made to minimize the use of solvent stripper and the generation of dust from sanding operations. All exposed surfaces shall be wet, mopped, and vacuumed with a HEPA vac during the work process. This process is to be repeated until all lead containing residue has been removed.
8. Upon leaving the site, workers must remove disposable clothing and wash thoroughly. Disposable clothing shall be placed with paint residue for disposal. Respirators shall be cleaned and disinfected.
9. On the completion of the stripping project, all paint residues shall be thoroughly cleaned up, double bagged, and labelled as "Hazardous Lead Based Paint Material". Disposal shall be in compliance with local environmental regulations. Contact The Department of Health & Safety for disposal information.

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