



MARYLAND

Department of Labor, Licensing, & Regulation

OCCUPATIONAL HEALTH HAZARDS

Lead in Radiator Repair Facilities

WARNING.....Radiator repair workers may be exposed to harmful levels of lead.

Many radiator repair workers have significant levels of lead in their blood. The source of this lead is solder and soldered parts such as tanks and cores.

HOW DOES LEAD GET INTO THE BODY?

Lead gets into the body when employees breathe lead fumes or dust. It can also be swallowed if employees fail to wash lead dust off their hands before eating or smoking.

Some very high exposures result when workers breathe the dust produced by wire wheels used to clean the edges of tanks. If an inadequately ventilated or leaking abrasive blasting cabinet is used, or no cabinet is used, employees may be exposed to escaping lead dust. They may also be exposed to very fine lead particles when they clean out the cabinet. Other significant sources of exposure include removing tanks from cores, soldering tanks and repairing core tubes.

WHAT ARE THE SYMPTOMS?

Exposure to lead may affect each person differently. Even before severe symptoms appear, lead may cause unseen injury to the body. Mild symptoms during early stages of lead poisoning, may be overlooked as everyday medical complaints, such as:

<i>Joint and muscle aches</i>	<i>Lack of concentration</i>	<i>Irritability</i>	<i>Headache</i>
<i>Trouble sleeping</i>	<i>Decreased sex drive</i>	<i>Fatigue</i>	<i>Moodiness</i>
<i>Metallic taste</i>	<i>Loss of appetite</i>		

Brief intense exposure or prolonged overexposure may result in severe damage to blood-forming, nervous, urinary and reproductive systems. Some noticeable medical problems include:

<i>High blood pressure</i>	<i>Constipation or diarrhea</i>	<i>Convulsions or seizures</i>
<i>Wrist or foot drop</i>	<i>Stomach pains</i>	<i>Tremors</i>
<i>Anemia</i>	<i>Nausea</i>	

WHAT CAN BE DONE?

- Place an exhaust system suction duct as close as possible to the source of lead generation.
- Prohibit the use of compressed air or sweeping methods for cleaning.
- Use a vacuum cleaner with a High Efficiency Particulate Aerosol (HEPA) filter.
- Prohibit eating and smoking in the work area.
- Require hand washing before eating or smoking.
- Do not let employees take contaminated clothes home.

Maryland's standard for lead explains the things employers in Radiator Repair Facilities must do to protect their employees. The first thing an employer must do is conduct air sampling to see how much lead exposure is present. The sampling results are then used to determine what level of employee protection is necessary. A summary of these requirements is provided below:

- **ANY level of lead**
 - Institute a housekeeping program
 - Provide washing and lavatory facilities
 - Inform employees of the requirements of this standard
- **Levels BELOW the permissible exposure level (50 micrograms per cubic meter) But ABOVE the action level (30 micrograms per cubic meter)**
 - Conduct periodic air sampling
 - Institute a housekeeping program
 - Provide washing and lavatory facilities
 - Provide a medical surveillance program
 - Conduct employee training
 - Maintain records
- **Levels ABOVE the permissible exposure level (50 micrograms per cubic meter)**
 - Conduct periodic air sampling
 - Use feasible engineering and work practice controls
 - Provide appropriate respirators, protective clothing and personal protective equipment
 - Institute a housekeeping and personal hygiene program
 - Provide lunchrooms
 - Provide shower and lavatory facilities
 - Institute a medical surveillance program
 - Conduct employee training
 - Post warning signs
 - Maintain records

This fact sheet is intended to summarize the Maryland Standard for Occupational Exposure to Lead in General Industry and is not to be interpreted as the complete requirements under the standard. For a complete copy of the standard contact MOSH Training and Education at (410) 880-4970 or (301) 483-8406.