

## LEAD STANDARD

The "lead standard," developed by the Occupational Safety and Health Administration, outlines practices for reducing lead exposure and for protecting the health of workers. No employee should be exposed to lead at or above concentrations of 50 micrograms per cubic meter of air (mcg/m<sup>3</sup>), OSHA's permissible exposure limit (PEL).

If concentrations are higher, appropriate respirators must be worn by employees to keep their exposure below 50 mcg/m<sup>3</sup> of air. Employers also must provide clean showers, change rooms and lunchrooms for their employees. The standard also specifies monitoring requirements, methods for reducing lead exposure, medical surveillance of employees to evaluate whether they are absorbing excessive lead, and medical removal protection in cases of over exposure.



Lead standard requirements are based on airborne concentrations of lead in the workplace. It should be remembered, however, that ingested lead dust can cause problems, even in work areas where airborne lead is below the PEL.

If lead exposure in the workplace is a possibility, than employer must

- Train workers about the health effects of lead and the requirements of the lead standard.
- Monitor for airborne lead concentrations during each shift, in each work area, and job classification.

If monitoring shows lead levels above 30 mcg/m<sup>3</sup> of air, but below 50 mcg/m<sup>3</sup> of air (PEL), an employer must

- Repeat monitoring every six months.
- Repeat training annually.
- Provide medical surveillance, including blood sampling for lead, zinc and protoporphyrin, medical exams and consultation.
- Provide medical removal protection for employees with excessively elevated Blood lead levels.

If monitoring shows lead above mcg/m<sup>3</sup>, an employer must

- Repeat monitoring every three months.
- Post warning signs in work areas where lead exposure exceeds the PEL.
- Install local exhaust ventilation or institute other engineering or work practice measures to limit employee exposure so that it does not exceed the PEL.
- Provide effective respiratory protection for employees and training in its use, until the PEL can be reached through engineering or work practice controls.

- Provide protective clothing and equipment, including overalls, gloves, goggles, and shoes, and make sure employees use them.
- Provide clean showers, changing rooms and separate storage for street clothes and soiled work clothes and make certain employees shower and change before leaving the work site.
- Install a lunchroom with air conditioning and positive pressure and make sure employees wash before eating, drinking or smoking (Do not allow these activities in work areas).
- Provide medical surveillance and medical removal protection.

### **PROTECTIVE PRACTICES**

Employers should provide employees with adequate training, facilities, and equipment so that, whenever possible, they are able to avoid breathing or eating lead fumes or dust. All employers should be required to follow these safety practices to protect themselves:

- Use the ventilation systems. Be aware of how these systems work and make sure they are working correctly.
- Keep work areas clean. Do not use compressed air to remove lead dust. Instead, use a high efficiency particulate air (HEPA) vacuum.
- Do not eat, drink or smoke in work areas. Use a properly constructed lunchroom or other separate area free of lead dust or fumes.
- Thoroughly wash hands and face before eating.
- Use the correct respirator. Make sure it is clean, in good repair and fits properly.
- Store street clothes in separate locker from where work clothes are stored.
- Shower, wash hair and change into clean clothes and shoes before leaving the workplace. Lead dust on work clothes can contaminate an employee's home and affect his or her children. (If an employee exhibits elevated blood lead levels, his or her children also should be tested).
- Eat a well-balanced diet; proper nutrition can reduce lead absorption. Fasting can increase the body's rate of absorption.