

## LEAD EXPOSURE

Both federal and provincial health administrations identify lead as a hazardous substance that through exposure, may cause a worker harm.

Harmful exposure to lead can cause illness including kidney and brain damage.

Lead enters the body in one of two ways – inhalation or ingestion. Inorganic lead is not significantly absorbed through intact skin.

Lead may be ingested by putting contaminated items from the work area into one's mouth (pens, pencils, biting nails, eating or drinking food/drinks stored in work area).

Special attention to the disposal/safe storage of lead contaminated clothing and objects is especially important when taking into consideration the possibility of lead exposure to children/pregnant women after leaving the workplace. Children have a tendency to put foreign objects in their mouths thus it is important to keep lead contaminated objects away from them.

**Where respiratory protection is required please refer to the Respiratory Protection Guidelines.**

Exposure to lead in construction can occur through these types of operations:

- ❖ Demolition.
- ❖ Alteration, renovation or repair of structures that contain lead.
- ❖ Removal of paint by mechanical or chemical stripping.
- ❖ Removal or repair of piping; lead pipe, solder, etc.
- ❖ A Hazard Assessment must be conducted to determine if the work has the potential to expose workers to lead. Employers must ensure that a worker's exposure to lead is kept as low as reasonably achievable and not to exceed 0.05 mg/cubic metres over an 8 hour time period. Atmospheric testing should be assessed before a worker is exposed and workers must be informed of the testing results.
- ❖ Installation and application of lead containing products, including sheet lead.
- ❖ In the event of an uncontrolled release of lead in the workplace, a code of practice (Alberta) will document the measures to be taken specifying the PPE to be used by workers who may be exposed, decontamination procedures, emergency procedures including contact names and phone numbers, waste handling, and follow-up monitoring requirements.

The lead exposure program covers elements such as Exposure Limits and Assessment of Exposure.

The appropriate bulk samples and airborne samples must be taken to evaluate the worker exposure and also to ensure that the appropriate respiratory protective devices are used by the workers if engineering practices or a similar alternative is not available. When obtaining bulk samples of lead paint, samples of the building material the lead paint is covering should also be taken, as the lead will leach into the material. This may occur in plaster, wood, etc.

Contact with lead in quantities sufficient to pose a hazard to a worker is not common in construction unless extensive renovation of an older building or bridge is undertaken.

In the event that lead quantities exceed the permissible exposure limit (PEL), then a series of procedures must be implemented:

- ❖ The employer will maintain a work practice to reduce employee exposure to or below the PEL. This may include engineering practices or respirators.
- ❖ There must be a written compliance program.



## Best Personnel Safe Work Practices & Procedures Manual

- ❖ Workers must be fully trained in the safe work procedure.
- ❖ Workers receive or have access to the written procedure at all times.
- ❖ Where respirators are used that workers are medically fit to use them for prolonged periods and that they receive training as to the care and fit of the respirators.
- ❖ Where the skin or eyes are exposed that appropriate protective clothing be provided to the worker for their protection.
- ❖ That disposal or cleaning of the protective clothing is in accordance with local legislative requirements.
- ❖ That housekeeping is done in accordance with the code.
- ❖ That workers do not smoke or eat in the contaminated work area.
- ❖ That change areas are provided for the storage of protective clothing.
- ❖ That hand washing or shower facilities are provided to ensure workers do not contaminate non-work clothes.
- ❖ That a medical surveillance program be initiated and monitored as required. Blood testing will be offered to the worker at the employer's expense. Worker has a right to refuse blood test and must submit refusal in writing (Alberta Reg. 43(4)).
- ❖ That appropriate records be maintained of worker exposure, medical surveillance, respiratory devices used, dates of exposures, etc. as required.
- ❖ That workers have access to the applicable lead standard.