Tool Box Talk

Lead (Pb)

Lead is a chemical element with the symbol Pb and an atomic number of 82. Lead is a soft and malleable heavy metal that is denser than most common materials.

Lead is silvery with a hint of blue. However, it tarnishes to a dull gray colour when exposed to air.

Lead as a Hazard

Lead poisoning symptoms may occur slowly and can be overlooked. Exposure to high levels of lead may cause anemia, weakness, kidney damage and brain damage. Very high lead exposure can cause death. With the symptoms of lead exposure occurring slowly, it is important to ensure workers receive periodic medical examinations if they work at removing lead to ensure they are not suffering from lead exposure. This will also help determine if control measures are effective.

Health effects are similar if a person inhales, swallows, or absorbs lead particles. However, the body absorbs higher levels of lead when it is inhaled.

Where Lead is Found

Lead can be found in the following materials, among many other sources:

- Acoustic dampening baffles
- Additive in brass and other alloys
- Batteries
- Cable and wire casing
- Cast iron pipes, gaskets and connections
- Solder (plumbing and electrical)
- Indoor firing ranges
- Decorative pieces
- Flashing
- Glazing
- Lead glass, stained glass
- Late 19th and early 20th century tinted mortar for stone cladding
- Paint and surface coatings
- Radiation shielding (bricks or sheeting)
- Structural steel primer

Prevent Contamination

Recommended PPE to prevent contamination includes, but is not limited to:

- Coveralls or full-body work clothing,
- Gloves (ensure proper rating for application)
- Hard hats
- Protective footwear
- Safety glasses, face shields or goggles
- Air purifying or supplied air respiratory protection
  - Ensure N100, R100 or P100 filters are used
  - Fit testing must be conducted on these tight-seal respirators

If demolition is in your scope of work, it is always best to test. An assessment of the building done by a competent person is the best way to ensure the safety of the workers and the surrounding community.

Sources:

https://www.ccohs.ca/oshanswers/chemicals/lead_construction.html

https://www.ccohs.ca/oshanswers/chemicals/chem_profiles/lead.html