



Element Fact Sheet – Lead

Lead (/led/) is a chemical element in the carbon group with symbol **Pb** (from Latin: *plumbum*) and atomic number 82. Lead is a soft and malleable metal, which is regarded as a heavy metal and a post-transition metal. Metallic lead has a bluish-white colour after being freshly cut, but it soon tarnishes to a dull greyish colour when exposed to air. Lead has a shiny chrome-silver lustre when it is melted into a liquid. It is also the heaviest non-radioactive element.

Lead is used in building construction, lead-acid batteries, bullets and shot, weights, as part of solders, pewters, fusible alloys, and as a radiation shield. Lead has the highest atomic number of all of the stable elements, although the next higher element, bismuth, has a half-life that is so long (over one billion times the estimated age of the universe) that it can be considered stable. Its four stable isotopes have 82 protons, a magic number in the nuclear shell model of atomic nuclei. The isotope ^{208}Pb is double magic.

If ingested, lead is poisonous to animals, including humans. It damages the nervous system and causes brain disorders. Excessive lead also causes blood disorders in mammals. Like the element mercury, another heavy metal, lead is a neurotoxin that accumulates both in soft tissues and the bones. Lead poisoning has been documented from ancient Rome, ancient Greece, and ancient China.