



Guidance for the Identification and Control of Safety and Health Hazards in Metal Scrap Recycling, by OSHA USA 2008 – extracts re: lead

The following extracts re: lead come from pages 21-24 in the 48 page booklet at <https://www.osha.gov/Publications/OSHA3348-metal-scrap-recycling.pdf> by Occupational Safety and Health Administration (OSHA), U.S. Department of Labor, 2008

What You Need to Know about Lead Exposure

The United States is the world's third-largest primary producer of lead. Eighty percent of the lead ore mined domestically comes from Missouri. In 1993, the lead industry employed 600 employees in primary smelting and 1,700 employees in secondary smelting and refining.

Lead is used primarily in batteries. Other uses include ammunition, sheathing on electrical cables, and for corrosion resistance and color characteristics (as pigments) in paints.

Lead is the most recycled metal, when compared to percentage output (ISRI NDC) with the U.S. as the world's largest recycler of lead scrap. Most recycled lead comes from batteries where the primary process involves breaking and smelting used batteries. (EPA 1995)...

Recyclers may also encounter lead when working with scraps coated with paints containing lead (especially scraps originating from bridge dismantling and rehabilitation and shipyards). Lead dust can be created by grinding, cutting, drilling, sanding, scraping or blasting surfaces coated with lead paints. Lead fumes can be created by using heat guns or other heating techniques to remove paint from surfaces or by using heated cutting tools to cut through painted metal. (NYSDOH 2001)...

Overexposure to lead is one of the most commonplace overexposures in industry. OSHA has established the reduction of lead exposure as a high strategic priority. Lead is a systemic poison and overexposure to lead can damage blood-forming, nervous, urinary, cardiovascular and reproductive systems and may cause cancer (ATSDR 1999b, Navas-Acien 2007). Lead accumulates in the body over time and remains in the blood for a month, in organs for several months, and in bones for years (NYSDOH 2001)....

OSHA has a substance-specific standard regarding exposure to lead in general industry, 29 CFR 1910.1025. This standard establishes a PEL of 50 µg/m³ and includes additional employee protection provisions such as preferred methods of control, protective work clothing and equipment, housekeeping, hygiene facilities and practices, medical surveillance and employee training.

Lead poisoning is a topic of extreme concern in the medical community. Employees that encounter lead at work must take precautions so that they do not accidentally take lead dust into their homes through contaminated workplace shoes or clothes. For example, employees must not



be allowed to leave the facility wearing the clothes that they wore during their work shift, which may be contaminated with lead dust.

Applicable Standards

- 29 CFR 1910.1025, *Lead*
- 29 CFR 1910.19, *Special provisions for air contaminants*

Sources of Additional Information

- OSHA, Lead: Secondary Smelter eTool,
<http://www.osha.gov/SLTC/etools/leadsmelter/index.html>
 - OSHA Safety and Health Topics: Toxic Metals,
<http://www.osha.gov/SLTC/metalsheavy/index.html>
-