

## **OSHA Training Toolbox Talk: Hazardous Substance Awareness – Cadmium**

*[Reference: Parts 1910, 1915, and 1926, subpart Z; 1926 subpart Z]*

Cadmium is a toxic metal that may be present in certain batteries, protective coatings, plating processes, and some pigments and alloys. It may also be found in certain metal components and industrial materials, including fasteners, fittings, electrical components, and other parts that have been plated, coated, or manufactured using cadmium-containing processes for corrosion resistance or performance. Exposure to cadmium can occur during activities such as welding, cutting, grinding, sanding, or handling cadmium-containing materials, particularly when those materials are heated or disturbed.

The primary concern with cadmium exposure is inhalation of airborne dusts or fumes. When cadmium-containing materials are welded or heated, fumes can be generated that are easily inhaled. Once inside the body, cadmium can damage lung tissue and accumulate in the kidneys. Prolonged or repeated exposure above permissible limits has been associated with serious health effects, including kidney damage, respiratory disease, and long-term lung impairment.

Cadmium can also enter the body through skin contact or ingestion if proper hygiene practices are not followed. Touching surfaces contaminated with cadmium dust, as well as other contaminated tools or materials, and then eating, drinking, or smoking can increase exposure. Because cadmium particles can settle on clothing and equipment, there is also a concern for take-home exposure if contaminated items are not handled properly.

Precautions to reduce cadmium exposure include identifying cadmium-containing materials before work begins and using engineering controls such as local exhaust ventilation and process isolation to limit airborne dusts and fumes. Safe work practices that reduce disturbance of cadmium-containing materials are essential. Appropriate personal protective equipment, including gloves, protective clothing, and respiratory protection, must be worn when required. Good housekeeping practices and personal hygiene, such as washing hands and face before breaks and at the end of the workday, also play an important role. Contaminated clothing should be handled and managed according to established procedures to prevent carrying cadmium particles home.

If you are working with or around cadmium, or if you see a label or warning sign indicating its presence, remember that merely being near cadmium does not necessarily mean you are overexposed or at imminent risk. Following proper controls, procedures, and safety measures helps ensure exposure remains below OSHA's permissible limits.

If you have any questions or concerns about cadmium hazards or exposure, please direct them to your safety manager, supervisor, or other workplace representative. And please be sure to sign the training certification form to ensure you get credit for attending today's OSHA toolbox talk.

**OSHA Training Toolbox Talk: Hazardous Substance Awareness – Cadmium**

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Date: \_\_\_\_\_

Training led by: \_\_\_\_\_

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