Toolbox Talk Training: Hazardous Substance Awareness – Beryllium

Beryllium is used as a metal, an oxide, and in alloys. OSHA identifies applications in aerospace, electronics, telecommunications, and other industries. Copper-beryllium alloys are used in bushings, bearings, and springs. Some abrasive-blasting materials may contain trace beryllium. For construction, the employer must determine whether 1926.1124 applies, including its exclusions for unprocessed articles and specified low-beryllium materials supported by objective exposure data.

OSHA explains that inhalation or skin exposure to beryllium dust, fume, mist, or solutions can cause beryllium sensitization, an activation of the immune response. A sensitized worker is at risk of chronic beryllium disease (CBD) when inhalation exposure has occurred. CBD is a chronic lung disease that can cause shortness of breath, coughing, and fatigue. It can occur at exposures below the current OSHA permissible exposure limit. Symptoms may appear months or years after initial exposure and can worsen even after exposure has ended.

OSHA explains that workplace exposure may occur by inhaling beryllium or contacting it in the air or on surfaces. Family members may also be exposed from contaminated work clothing and vehicles. Do not judge airborne exposure from a material's appearance. For construction operations covered by 1926.1124, the employer must assess exposure and establish the applicable controls.

For covered construction work, 1926.1124(f) requires a written exposure-control plan and engineering and work-practice controls, subject to the standard's feasibility provisions. Respiratory protection is required in the circumstances in paragraph (g). Paragraph (h) specifies protective clothing and equipment, including removal and cleaning methods that do not disperse beryllium into the air. Paragraph (j) governs housekeeping for the operations and exposure conditions it covers. Use the employer's established procedures and required equipment; do not improvise dust removal. Under paragraph (h)(2)(iii), employees with reasonably expected exposure above the TWA PEL or STEL must not remove required protective clothing or equipment from the workplace unless it has been cleaned as specified.

For construction work covered by 1926.1124, the employer must assess airborne exposure under paragraph (d), using the performance option or scheduled monitoring option. The assessment must address the 8-hour time-weighted average and 15-minute short-term exposure. Use the exposure assessment and required controls rather than assuming that a warning label or distance from a material shows whether limits are met. OSHA notes that chronic beryllium disease can occur at exposures below the current permissible exposure limit; being below that limit does not mean there is no health risk.

If you have any questions or concerns regarding beryllium hazards or exposure, contact your supervisor, safety manager, or another designated workplace representative. Thank you for participating in today’s toolbox talk, and please remember to sign the sign-in form to receive attendance credit.

General safety information only. This material does not replace required training, a site-specific hazard assessment, or professional safety advice. Before using it, verify current requirements with OSHA (osha.gov) and your employer. Follow applicable regulations, equipment manufacturers’ instructions, and your employer’s safety procedures.

Sources: OSHA beryllium overview and health effects: osha.gov/beryllium; osha.gov/beryllium/health-effects; 1926.1124(a),(d),(f),(g),(h),(j).

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TOOLBOX TALK TRAINING SIGN-IN FORM

Topic discussed: Hazardous Substance Awareness - Beryllium

Company Name:_____ Date:_____

Discussion led by:_____

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Signatures record attendance only, not certification or completion of required training.

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