Toolbox Talk Training: Hazardous Substance Awareness – Arsenic

Arsenic occurs naturally and can also be present in manufactured materials. EPA identifies chromated copper arsenate (CCA) and related chromated arsenicals as wood-preservative pesticides. Older residential structures may contain treated wood; current permitted uses include specified commercial wood products. Do not assume that the presence of arsenic makes every operation subject to the same OSHA standard.

NIOSH lists inhalation, ingestion, skin absorption, and skin or eye contact as exposure routes for inorganic arsenic. Its 2017 Skin Notation Profile describes measurable but limited potential for skin absorption and says the available data are insufficient to evaluate systemic effects from dermal exposure adequately. Chronic or high-dose skin exposure can cause irritant contact dermatitis. The NIOSH Pocket Guide identifies inorganic arsenic as a potential occupational carcinogen and lists the liver, kidneys, skin, lungs, and lymphatic system as target organs. Avoid skin contact as well as breathing or swallowing arsenic-containing dust; skin absorption is not the same as skin irritation.

OSHA's inorganic arsenic standard, 1910.1018, applies to construction through 1926.1118. Its scope excludes agriculture, pesticide application, wood treatment with preservatives, and use of arsenically preserved wood. OSHA's May 3, 2023 interpretation explains that workers exposed to CCA-treated wood dust remain covered by Hazard Communication requirements, and that hexavalent-chromium protections may also apply in some circumstances. The employer must determine which requirements apply to the work.

For operations covered by 1910.1018, paragraph (g) requires engineering and work-practice controls, with respiratory protection as required by paragraph (h). Paragraph (j) requires appropriate clean protective clothing and equipment where skin or eye irritation is possible and for workers in regulated areas. Required contaminated clothing must go into closed containers; arsenic must not be removed from clothing or equipment by blowing or shaking. Paragraph (m) specifies change rooms, showers, and washing requirements for the employees and conditions it covers. Follow those applicable procedures, not an improvised cleanup method.

For workplaces and operations covered by OSHA's inorganic arsenic standard, exposure must be determined through the monitoring required by 1910.1018(e), not inferred from a warning label or distance from a material. The standard requires initial monitoring and representative employee air samples. Its requirements apply to construction through 1926.1118, subject to the standard's scope and exclusions. Use the employer's exposure results and the controls required for the work; a label alone does not establish whether an exposure limit is met.

If you have questions or concerns about arsenic hazards or safe handling procedures, 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 1910.1018(a),(e),(g),(h),(j),(m); 1926.1118; OSHA arsenic interpretation, May 3, 2023; NIOSH Pocket Guide: inorganic arsenic; NIOSH Skin Notation Profile 2017-184; EPA Chromated Arsenicals (CCA).

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TOOLBOX TALK TRAINING SIGN-IN FORM

Topic discussed: Hazardous Substance Awareness - Arsenic

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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