Intro to Silica Hazards



Key Takeaways:

– Learning about silica and its most common source materials.
– Understanding the potential chronic health effects of chronic silica exposure.
– Acknowledging workplace activities that may generate airborne respirable silica.
– Learning basic methods to mitigate airborne silica dust.
– Learning actions which minimize the risk of exposure to crystalline silica.
– Comprehending the basics of combined protections that can be implemented to prevent exposure to silica-containing compounds.

Course Description

This lesson will improve the safety of workers in environments containing silica exposure hazards by increasing individual employee awareness of silica and exploring how silica can be recognized and addressed in the workplace.

OSHA has issued a rule to reduce lung cancer, silicosis, chronic obstructive pulmonary disease and kidney disease in America’s workers by minimizing their exposure to respirable crystalline silica. This rule contains two standards, one for Construction and one for General Industry and Maritime.

OSHA projects the rule, once its effects are fully realized, will annually save more than 600 lives and prevent over 900 new cases of silicosis, in addition to providing net benefits of about $7.7 billion.

approximately 2.3 million workers are exposed to respirable crystalline silica at their worksites, including around 2 million construction workers who drill, cut, crush, or grind silica-containing materials like concrete and stone, in addition to 300,000 workers in general industry operations such as brick manufacturing, foundries, and hydraulic fracturing (fracking). Responsible employers protect and have been protecting workers from harmful exposure to respirable crystalline silica for years, utilizing widely-available equipment that controls dust with water or a vacuum system.

Key Provisions
– Minimizes the permissible exposure limit (PEL) for respirable crystalline silica to 50 micrograms per cubic meter of air, averaged over an 8-hour shift.
– Guarantees employers: use engineering controls (such as water or ventilation) to limit worker exposure to the PEL; provide respirators when engineering controls cannot adequately limit exposure; limit worker access to high exposure areas; develop

a written exposure control plan; offer medical exams to highly exposed workers; and train workers on silica risks and how to limit exposures.
– Supplies medical exams to monitor highly exposed workers and offers them information about their lung health.
– Offers flexibility to help employers – especially those of small businesses – protect workers from silica exposure.

Compliance Schedule
The standards within the OSHA rule took effect on June 23, 2016, after which industries have one to five years to comply with most requirements, based on the following schedule:
– Construction – June 23, 2017, one year afterwards.
– General Industry and Maritime – June 23, 2018, two years afterwards.
– Hydraulic Fracturing – June 23, 2018, two years afterwards for all provisions except Engineering Controls, which have a compliance date of June 23, 2021.

Source: https://www.osha.gov/silica/index.html