

OSHA 1926.1153 Respirable Crystalline Silica Standard

Silica is found in many materials common on construction sites, including sand, concrete, rock, mortar and brick. When workers cut, grind, abrasive blast, jackhammer or perform other tasks that disturb these materials, dust containing crystalline silica can be released into the air. Workers who inhale this dust are at risk. Silica can cause serious, sometimes fatal illnesses including a lung disease call silicosis, lung cancer, and chronic obstructive pulmonary disease (COPD). It has also been linked to other illnesses such as kidney disease.

Construction site tasks that have the potential for creating silica dust include:

Chipping, chopping, cutting, grinding and drilling material that contains respirable crystalline silica.

New OSHA Requirements
Establish and implement a written exposure control plan when workers are expected to be exposed to an action level at 25 µg/m³, averaged over an 8-hour day.
PEL=50 µg/m³, averaged over an 8-hour day.
Designate a competent person to implement the written exposure control plan.
Restrict housekeeping practices that expose workers to silica where feasible alternatives are available.
Offer medical exams – including chest X-rays and lung function tests every (3) years for workers required to wear a respirator for (30) or more days per year.
Train workers on work operations that result in silica exposure and ways to limit exposure.
Keep records on workers silica exposure and medical exams.
Old OSHA Requirements
PEL=250 µg/m³, averaged over an 8-hour day.

Exposure Controls:

The one task we perform on our projects on an occasional basis is the use of hand-held drills including impact hammers and rotary hammer drills. This specific work task is found within the OSHA Compliance option # 7 of Table 1 within the Standard.

So as to be within compliance with the Standard, Island Acoustics, LLC will only use:

Handheld Rotary Hammer Drills with integrated vacuum dust collection systems, (VDC) in accordance with the equipment manufacturer’s requirements and task # 7 of table 1. In addition, half mask N95 dust control masks will be worn while performing any concrete drilling.

Use vacuums or water to reduce or eliminate the dust at the source, before it becomes airborne. If these controls are not enough, use respiratory protection. Routinely maintain dust control systems to keep them in good working order.

Wet down surfaces before clean-up.

Use vacuums with high-efficiency particulate air (HEPA) filters or wet-sweeping for clean-up.

Never dry sweep or blow dust with compressed air.

Wear dust masks, if necessary, to avoid breathing dusts.

Avoid eating, drinking and smoking in areas where silica dust is present. Wash your hands and face outside of dusty areas before performing any of these activities.

Vacuum the dust from your clothes and change into clean clothing before leaving the work site. Do not brush or blow the dust off! Do not bring dust home!

