

Regulatory Change: A Primer on Protecting Workers from Silica and Rock Dust Exposure

Changes to the Occupational Health and Safety Regulation

On May 1 2017, sections 6.110–6.115 of the Occupational Health Safety (OHS) Regulation and related OHS Guidelines will be updated to clarify employer requirements to protect workers from the harmful effects of silica dust.

Changes to the Regulation expand the sections on rock dust to include specific regulations for protecting workers from the risks of exposure to respirable crystalline silica (RCS) dust.

Dangers of silica

Occupational exposures to silica dust occur primarily in the construction and manufacturing sectors. Particularly, it is a risk when conducting work activities that generate silica dust, such as when cutting or grinding stone or concrete, cutting bricks or tiles, or hauling gravel. Over 50,000 workers are occupationally exposed to RCS dust.

RCS dust is dangerous when inhaled. Occupational exposure is associated with the development of silicosis, lung cancer, pulmonary tuberculosis, and other airways diseases. Exposure may also lead to the development of autoimmune disorders, chronic renal diseases, and other adverse health effects.

Changes to the Regulation

Sections of the OHS Regulation pertaining to rock dust have been expanded to add new provisions that apply to RCS and rock dust. Many of the new sections are not entirely new requirements, but were previously

not specific to silica dust. The new regulations have created new sections in the OHS Regulation for silica dust that outline the required elements and considerations such as a risk assessment, exposure control plans, air monitoring, recordkeeping, housekeeping practices, and worker instruction and training.

A risk assessment must be completed for every work task and will take into account the amount of silica in the material, the nature of the work and potential level and duration of worker exposure to airborne silica dust. Because silica is a designated substance requiring employers to keep exposures as low as reasonably achievable, an exposure control plan must be developed based on the risk assessment.

As part of the risk assessment, the new Regulation will allow qualified persons to estimate worker exposures to silica dust by using resources like industry surveys and peer-reviewed research data. A person is qualified if he or she is familiar with the work, the hazards of silica exposure and the means to control those hazards, through education, training and experience. The employer can then develop exposure control plans for protecting workers from the harmful effects of RCS dust and rock dust based on the anticipated exposures.

As part of regular inspection and enforcement activities, WorkSafeBC Officers will continue to ensure appropriate controls are in place, and that workers are aware of the hazards and risks.

Benefits of the changes for employers

The changes to the OHS Regulation are expected to clarify the requirements related to protecting workers from silica dust. The short duration of many work activities that generate silica dust can make getting reliable air monitoring data difficult. Instead of collecting their own air samples, the new section of the Regulation will allow employers to rely on objective monitoring data, such as data from industry surveys or peer-reviewed scientific literature.

One example of a resource that uses objective monitoring data is the new Silica Control Tool developed by the [BC Construction Safety Alliance](#).

The Silica Control Tool includes common work activities in construction that generate RSC dust. The Silica Control Tool provides estimates of exposure monitoring so that effective engineering and administrative controls can be implemented to reduce or eliminate RCS exposure. Also, the Tool provides information on PPE, if it is necessary to further reduce worker exposures.

For more information

To learn more about other silica resources, [go to the information page about silica](#) on [worksafebc.com](#).