



Controlling Exposures to prevent occupational lung disease in the construction industry

Floor/Wall Tiler

HAZARDS AND RISKS

The biggest risks to a tiler's respiratory health are likely to be from hazardous dusts generated by tasks such as cutting and grinding wall and floor tiles, mixing granite, terrazzo, synthetic resin or other composition mixtures, and cleaning floor surfaces.

Construction dust

Construction dust is a general term and includes dust from soil and building materials. Breathing in any dust can (over time) cause serious lung disease such as chronic obstructive pulmonary disease (COPD) which includes chronic bronchitis and emphysema. There are also dusts, such as silica dust or wood dust, that can cause specific serious lung diseases.

Silica Dust/ Respirable crystalline silica (RCS)

Silica is present in large amounts in most rocks, sand and clay, and in products such as granite and concrete. Some silica dust is fine enough to be breathed deeply into the lungs; this is called respirable crystalline silica (RCS). Exposure to RCS over many years, or in high doses, can lead to serious lung diseases, including fibrosis, silicosis, COPD and lung cancer. These diseases cause permanent disability and early death every year from over-exposure to silica dust.

Tiles are typically set in mortar and the gaps between tiles filled with grout. These are silica containing materials.

Resins, solvents and adhesives

Tiling workers can be exposed to these substances which may cause ill-health effects such as headaches, dizziness, irritation to the skin, eyes, lungs and throat, and asthma (depending on the specific substance handled). The safety data sheet (SDS) for the product(s) in use should be reviewed.

CONTROL OPTIONS

Elimination/prevention

- Eliminate tile cutting by using pre-cut tiles delivered to site wherever possible.

Safe working methods

- Choose work methods that avoid or limit cutting, grinding, drilling, chiseling or abrasion of silica containing materials wherever practicable.
- Eliminate or minimize dust creation through wet working (e.g. use water suppression for cutting or drilling stone and concrete products, damp down the work area beforehand and damp down dust during cleaning). Where tile resizing is needed, use water to stop the release of dust into the air.
- Keep workers away from dust sources unless they are directly involved in the task.
- Ensure good general ventilation wherever possible.

PPE

- Respiratory protective equipment (RPE) should be selected in accordance with CSA Z94.4-11 *Selection, Use and Care of Respirators*.

MANAGING THE RISK

Training & communication, supervision, maintenance & testing of controls and air monitoring* are all vital aspects of managing the risk, in addition to health surveillance which can be a requirement in certain circumstances.

See our introductory [Respiratory Health Hazards in Construction Fact Sheet Series: Overview](#) for more information about what things to consider and implement.

Air monitoring*

Air monitoring is a specialist activity. It may be needed as part of an exposure risk assessment, as a periodic check on control effectiveness and to assess compliance with relevant occupational exposure limits, or where there has been a failure in a control (for example if a worker reports respiratory symptoms).

A qualified occupational hygienist or occupational hygiene technologist can ensure exposure monitoring is carried out in a way that provides meaningful and helpful results.