

## BE IN THE DRIVER'S SEAT OF RESPIRATORY SAFETY

### ADEQUATE RESPIRATORY PROTECTION

#### Silica Dust - RCS Dust - Chemical Fumes - Organic Vapour

Workers in the construction industry are commonly exposed to compounds that put them at risk of developing respiratory injury, dysfunction and occupational disease. These conditions can have drastic consequences, including incurable chronic disease or terminal conditions such as cancer or respiratory failure.

#### How can workers protect themselves?

Combining the use of a Respirator, with exposure control and engineering methods, place the worker in the driver's seat of respiratory safety. Read the following table for a simple example of how combining PPE and control methods increases the level of worker protection.

<b>RESPIRATORY PROTECTION</b>	<b>EXPOSURE CONTROL</b>	<b>ENGINEERING CONTROL</b>
Use a full or half mask respirator, <b>with valid fit test</b>	Use Tyvek suit while grinding or chipping concrete, spraying/mixing ceiling texture	Use a vacuum attachment while grinding concrete
<b>Paper dust mask (inadequate respiratory protection)</b>	Wash hands and face during breaks and before leaving work	Use water to dampen dust while cutting chipping, grinding or sweeping concrete
Understand the exposure risk and practice the appropriate controls prior to working	Have a change of clothes available at end of shift to eliminate secondary exposure	Discuss additional exposure control methods with site CSO if required.
	Work outdoors or in ventilated workspaces	
	If practicable, limit exposure tasks to 4 hours out of every 8 hours worked	

## SILICA EXPOSURE GUIDELINES

The Arkay guidelines outlined in this document are to be used as an information and training resource for Arkay workers who may be exposed to RCS dust through the course of regular duties. *This document is to be used in addition to, and in conjunction with, the client's site specific SECP.*

### 1. EXPOSURE HEALTH RISKS

Silica exposure without appropriate dust controls generates high concentrations of RCS dust. Inhaling RCS dust or silica can lead to serious lung diseases such as cancer, silicosis, and tuberculosis. Exposures can also lead to the development of chronic renal disease, autoimmune disease, and other adverse health impacts.

### 2. PURPOSE

Arkay worker guidelines regarding silica exposure are to protect the worker from hazardous exposure to RCS dust by:

- Identifying hazardous work tasks,
- Outlining effective control methods, and
- Identifying worker exposure limits.

### 3. RESPONSIBILITIES

The client site, identified supervisors and Arkay workers must work together to ensure that appropriate steps are followed to reduce or eliminate RCS dust exposure when the site SECP is implemented.

#### 3.1 CLIENT RESPONSIBILITY – to ensure:

- A site specific SECP is available to Arkay workers for work processes that generate levels of RCS dust exceeding the exposure limit.
- Materials and resources to fully implement the SECP are available.
- Written records are maintained.
- Coordination of a safe work environment for workers.

#### 3.2 SUPERVISOR RESPONSIBILITY – to ensure:

- Worker guidelines and site specific SECP are available at the jobsite.
- Worker guidelines are distributed and reviewed with workers.
- Workers are provided with instruction on hazardous work activities and safe work procedures.
- Work is directed to minimize and control exposure risk.

#### 3.3 WORKER RESPONSIBILITY – to ensure:

- Awareness of RCS dust hazards and control methods are followed as outlined in the site SECP and Arkay worker guidelines concerning silica exposure.
- PPE is used effectively and safely.
- Safe work procedures are followed as per supervisor instruction.
- Unsafe acts or conditions and silica exposure are reported.

**4. EXPOSURE** The followed noted tasks create a level of RCS dust exposure to the worker that exceeds the exposure limit of 0.025mg/m<sup>3</sup> by an estimated 2000%. This level of exposure needs to be controlled:

Chipping concrete with hammer drill	Grinding concrete with angle grinder
Sweeping RCS dust indoors	Cutting masonry block without controls

**5. CONTROLLING EXPOSURE**

**ALL ARKAY WORKERS ARE REQUIRED TO:**

- Be aware of silica exposure tasks, safe work procedures, site SECP and Arkay worker guidelines.
- Inspect silica removal tools prior to use and understand how to use them, e.g., grinder with vacuum attachment, water abatement system, dustbane.
- Inspect work area prior to starting work and establish a control zone with caution tape if practicable.
- Have a change of clothes at the jobsite; workers should avoid wearing dusty clothing home as this creates prolonged secondary exposure.
- Use Tyvek suits if a change of clothes is not available.
- Wash hands and face during breaktimes and at the end of shift.
- Use dust abatement or removal systems such as vacuums, material wetting (hosing) and dustbane while completing the exposure task to reduce exposure.
- Wear a respirator while completing the exposure task to reduce exposure.
- Try to limit exposure time to 4 hours out of every 8 hours worked, if practicable, to limit RCS dust exposure.

**COMBINED METHODS OF CONTROL: HOW TO REDUCE RCS DUST EXPOSURE**

- Be aware of hazards and controls and follow safe work procedures.
- Inspect work area and establish a control zone.
- Follow hygiene practices to limit secondary exposure.
- Use dust abatement systems while completing a silica exposure task.
- Use of a respirator with appropriate cartridge is mandatory.
- Report unsafe acts, conditions or concerns prior to completing the task.

Using only a respiratory is not an appropriate exposure control. Other combined methods of exposure control are available to the worker.

NAME	PROJECT	DATE	