

Respirable Silica Dust Monitoring **Guide**



MONITORING MADE EASY

Australia's leading provider
of workplace monitoring
solutions and equipment

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RESPIRABLE SILICA DUST MONITORING GUIDE

Silica dust is generated in workplace from mechanical processes including crushing, cutting, drilling, grinding, sawing and polishing of natural stone or man-made products that contain silica.

Inhaling crystalline silica particles, which are sometimes so small you cannot see them, can lead to serious illnesses such as silicosis, lung cancer, tuberculosis, and chronic obstructive pulmonary disease (COPD).

Workplace Exposure Standards

Under the model WHS Regulations, PCBU's (person conducting a business or undertaking) have specific duties to manage the risks to health and safety when using, handling, generating and storing hazardous chemicals, including silica. PCBU's also have a duty to ensure the workplace exposure standard for crystalline silica is not exceeded and to provide health monitoring to workers.

The workplace exposure standard for respirable crystalline silica (silica dust) that must not be exceeded is 0.05 mg/m³ (8hr time weighted average).

Solutions

AES provide a range of personal air sampling monitors and dust monitoring for larger or remote areas.

You may need personal air sampling monitors as well as area monitors to ensure the hazard is being monitored adequately, your solution will depend on your specific requirements. This guide outlines what is available.

PERSONAL AIR SAMPLING PUMPS

Inhalation of dust particles is usually the most significant route of entry into the body, it is important that the air workers breathe is monitored. Air sampling pumps draw in a known volume of air through a suitable sampling medium in order to achieve accurate results.

Key features of our personal air sampling pump range:

- Large range of flow rates available from low to high
- Wirelessly enabled
- Long battery life and run times
- Touch screen options
- Rugged and durable for harsh environments
- Multiple unit charging dock
- Lightweight and ultra-quiet options available
- Market leading technology



PORTABLE RESPIRABLE REAL-TIME DUST MONITORS



Nanozen

PDM 3700

AM520

Hazdust IV

TM Data II

Measurement Principle	Optical Particle Counter	TEOM	Light Scattering	Light Scattering	Light Scattering
Concurrent Gravimetric Sampling	✓	✓	✗	✓	✗
Wireless	✓	✗	✗	✓	✓
Intrinsically Safe	✓	✗	✓	✗	✗
Software Model	ⓘ	ⓘ	ⓘ	ⓘ	ⓘ

FIXED MONITORING SOLUTIONS

A fixed monitoring solution can be used to understand levels of dust at all times of day to identify the activities which create the greatest hazard. For particulate monitoring in remote locations or where power is not available, we have options to power up your dust monitor 24-hours a day, without interruption.

AIR XD from Trolex

AES can support long and short-term dust monitoring operations with a fixed set-up of the AIR XD. This unit will simultaneously monitor different PM sizes including, $PM_{1.0}$, $PM_{2.5}$, $PM_{4.25}$ and PM_{10} providing results in real-time.

Fixed and remote options available:

- Battery back-up
- Solar Power
- Telemetry



Dustroid from Oizom

Dustroid is an Online Dust Monitoring System for accurate and simultaneous measurement of PM_{10} and $PM_{2.5}$ in ambient air. It is capable of monitoring various particulate size ranging from 1 micron to 100 microns.

It can measure different kinds of dust pollution like Suspended Particulate Matters (SPM), Respiratory Particulate Matters (RPM) and Total Suspended Particulates (TSP).

Dustroid can be used for dust monitoring in areas with dust-laden activities like construction, mining, quarrying, ports, metallurgical processes, and many more.





HIRE SERVICE

A large selection of our air quality monitors are available to hire, including remote and telemetry set-up options for our AirXD dust monitor.

All our equipment is properly maintained, serviced and calibrated by qualified and knowledgeable technicians, ready to be delivered and deployed on site.

Our technicians are all officially SKC Certified.



For more information, or to book a demo please contact AES on sales@aesolutions.com.au or our offices below:



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