

OBLIGATIONS

Exposure standards for substances are prescribed in the Work Health and Safety Regulation 2017 (WHS Regulation).

Mine operators have a duty to ensure that the exposure standards for respirable and inhalable dust is not exceeded in their workplace.

ELIMINATING RISK

If you are concerned about dust control at your workplace, talk to your supervisor or operations manager about dust controls.

If you are at significant risk of exposure to high levels of dust, your employer must ensure that dust controls are implemented and health monitoring is provided to you.



RPE

Respiratory protective equipment (RPE) is the last line of defence in the control of airborne dust inhalation.

Site RPE programs should include:

- regular training of workers in the correct selection, use and maintenance of RPE
- identification of high risk tasks and areas which may require compulsory use of RPE
- regular audits, if RPE is used during identified high risk tasks
- regular fit testing and consideration of clean shaven policies for high risk activities.



LET'S
TALK
ABOUT

DUST



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LET'S TALK ABOUT DUST

Anyone exposed to harmful levels of dust is at risk of developing a dust-related lung disease.

Your risk is directly linked to your total level of exposure to dust.

Airborne contaminants are produced during mining activities such as extraction, drilling, crushing, hauling and stockpiling of coal and other rock containing minerals.

Any task that requires the cutting or drilling of stone has the potential to expose workers to unacceptable levels of quartz (crystalline silica).

In underground and open cut coal mining, coal dust and crystalline silica dust are present at both an inhalable and respirable fraction.



INHALABLE DUST

- has particles that are <100 microns in diameter and easily seen
- is usually breathed in, but is trapped in the mouth, nose and upper respiratory tract
- is considered an irritant
- can also include respirable dust particles.

HEALTH IMPACTS

- reduced visibility in the work place
- can cause irritation of the eyes and nose
- affects pre-existing conditions such as asthma
- can cause bronchitis.

RESPIRABLE DUST

- has particles that are <5 microns in diameter, too small to be seen with the naked eye
- can be retained in the lungs
- poses a serious health risk

HEALTH IMPACTS

- fibrosis and scarring of the lungs (Pneumoconiosis/silicosis)
- coughing, sputum and shortness of breath
- respiratory failure.

Pneumoconiosis and silicosis are both debilitating and often fatal lung diseases.

DUST PARTICLE SIZE COMPARISON



THE HUMAN BODY'S DEFENSE AGAINST DUST

The human body has three lines of defence against foreign particles such as dust entering the lungs:

- particles may be trapped in mucus in the upper airways
- receptors can initiate sneezing and/or coughing to expel particles
- airways can constrict as a response to chemical or mechanical irritation.