

SILICOSIS IN SOUTH AFRICA



WHAT IS SILICOSIS

Silicosis is a form of occupational lung disease (OLD) caused by inhalation of crystalline silica dust, and is marked by inflammation and scarring of the lungs. It is a type of pneumoconiosis.

Patients with silicosis are particularly susceptible to tuberculosis (TB) infection known as silico-tuberculosis.

There are many types of silicosis depending on clinical manifestations and the level of exposure. The most common is chronic simple silicosis, usually resulting from long-term exposure to relatively low concentrations of silica dust and usually appearing between 10 and 30 years after first exposure. Chronic cough and difficulties breathing are common findings.

PROGRAMMES TO MITIGATE SILICA DUST EXPOSURE

Various methods are available to reduce the presence of dust in air and dust exposure:

- Watering down of dusty areas or processes, often with chilled water.
- The wetting of foot and sidewalls with water and surfactants, to consolidate the dust to prevent it from becoming airborne.
- Effective ventilation management.
- Appropriate blasting schedules, including differentiated re-entry periods.
- Installation of filtration units that filters respirable dust from air to an acceptable level before it enters the fresh air system.
- The provision of personal protective equipment

The Chamber of Mines established the Mining Industry Occupational Safety and Health (MOSH) Dust Team in 2008 to promote the adoption of leading practices on dust control and achieve significant progress through the adoption by many mines of foggers as a form of watering system and foot and sidewall treatment.

In addition, a real time monitoring device has been developed as a leading practice. This will assist mines to monitor continuously the effectiveness of dust engineering controls and activate the required controls (such as enhancing dust suppression techniques and/or withdraw workers from affected areas) when dust exposure levels exceed standards.

FACT SHEET 2015

CONTRACTING SILICOSIS

Silica is the second most common mineral in the earth's crust. It is a major component of sand, rock and mineral ores like quartz. In mining it is most prevalent in gold ore bodies in SA and elsewhere.

People who work in occupations where they can inhale tiny crystallised silica particles—like sandblasting, underground mining, construction and many others are at risk of contracting silicosis. This silica dust can cause fluid buildup and scar tissue in the lungs that affects an individual's ability to breathe.



OCCUPATIONAL HEALTH IN THE SOUTH AFRICAN MINING INDUSTRY

“Miners who suffer from silicosis are compensable where there is impairment of lung function.”

Percentage compliance to respirable crustaline silica targets (<math><0.10 \text{ mg/m}^3</math>)



MINING INDUSTRY AGREED ASPIRATIONAL TARGET TO ELIMINATE SILICOSIS

In 2003, the tripartite mining stakeholders agreed on the milestone targets that will ensure elimination of silicosis cases amongst the mining employees. It was then agreed that “By December 2008, 95% of all exposure measurement results will be below the occupational exposure limit for respirable crystalline silica of 0.1 mg/m^3 (these results are individual readings and not average results)”. The goal was that there would then be “no new cases of silicosis among individuals unexposed prior to 2008”.

In 2014, in line with international best practice trends, the tripartite mining stakeholders revised the milestone targets that will ensure elimination of silicosis cases amongst the mining employees. It was then agreed that “By December 2024, 95% of all exposure measurement results will be below the milestone level for respirable crystalline silica of 0.05 mg/m^3 (these results are individual readings and not average results)”.

PERFORMANCE AGAINST THE MILESTONE TARGET

Good progress has been towards achieving the MHSC targets. The Chief Inspector of Mines published a progress report at the Mine Health and Safety Summit, in November 2014 showing that targets were very nearly met on average across the industry.

COMPENSATION FOR SILICOSIS

Compensation for silicosis is regulated by the Department of Health under the Occupational Diseases in Mines and Works Act (ODMWA). Miners who suffer from silicosis are compensable where there is impairment of lung function. In all instances cases of silicosis should be submitted to the Medical Bureau for Occupational Diseases (MBOD).

Under ODMWA, a person who works or has worked on a mine has a lifelong right to 2-yearly medical examinations to determine whether they have an occupational lung disease. This service is provided by the Department of Health.

Gold mining companies affiliated to the Chamber of Mines are currently involved in discussions with government over the transfer of current and future employees to the more comprehensive COIDA compensation fund that covers employees in other sectors. They are also working with the Compensation Commissioner to improve the administrative functioning of the ODMWA fund to ensure past employees receive compensation expeditiously.

More information on their initiative can be found at www.oldcollab.co.za