TOOLBOX TALK AWARENESS PACKAGES

HAZ-SIL · Crystalline Silica Awareness

Product Overview

Audience: Workers who cut, drill, grind or crush stone, concrete, brick or tiles · Duration: 20–30 minutes

Version 1.0 · 8 November 2026

For workers who create dust from stone, concrete, brick or tiles: why respirable silica is so harmful, and the controls that stop it reaching the lungs.

Respirable crystalline silica is released when materials such as concrete, brick, tiles, sandstone, granite and some composite products are cut, drilled, ground, polished or crushed. The particles are too fine to see. Breathing them in can cause silicosis, lung cancer, kidney disease and chronic obstructive pulmonary disease, and silicosis cannot be cured.

This talk covers where silica comes from at work, the workplace exposure standard, the prohibition on engineered stone, and the controls that work: eliminating the dust, wet methods and on-tool extraction first, and properly fitted respiratory protection on top.

Learning outcomes

By the end of the session participants will be able to:

- Explain what respirable crystalline silica is and which materials and tasks release it
- Describe the health effects of breathing in silica dust, including silicosis, and why they are permanent
- State that there is a workplace exposure standard for respirable crystalline silica and that exposure must be kept as low as reasonably practicable
- Explain that the manufacture, supply, processing and installation of engineered stone benchtops, panels and slabs is prohibited in Australia from 1 July 2024
- Apply the hierarchy of control to dusty tasks: wet cutting, on-tool dust extraction, enclosed cabs, and no dry sweeping or compressed air
- Wear and check respiratory protective equipment correctly, including fit testing and being clean-shaven where the mask seals
- Describe health monitoring and why workers exposed to silica may be required to take part

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What it covers

Module	Covers
Silica at work	What it is and where it comes from; Tasks that release it; Why you cannot see the dangerous dust
Health effects	Silicosis, lung cancer, kidney disease and COPD; Acute and accelerated silicosis; The workplace exposure standard and air monitoring
Controls that work	Engineered stone prohibition; Water suppression and on-tool extraction; Vacuums with the right filter, not brooms or compressed air; Respiratory protection, fit testing and maintenance
Your part	Using controls every time; Health monitoring; Reporting controls that are missing or not working

Activities

- Dust or no dust: workers sort six tasks by the dust they create and choose the controls for each
- Seal check: a demonstration of putting on a half-face respirator, a user seal check, and the things that break the seal

What is in the package

Item	File
Editable PowerPoint presentation with speaker notes, plus PDF	02_TRAINING_PRESENTATION/Training Presentation.pptx and .pdf
Facilitator guide with a running sheet, discussion prompts and model answers	03_FACILITATOR_GUIDE/Facilitator Guide.docx and .pdf
Participant handout with the key points to take away	04_PARTICIPANT_HANDOUT/Participant Handout.docx and .pdf
Attendance record form, to capture who attended, when, and who facilitated	06_RECORDS/Attendance Record.docx and .pdf
Excel attendance register	06_RECORDS/Attendance Register.xlsx
Multiple-choice theory assessment, to record understanding if your business wants to	05_ASSESSMENT/Theory Assessment.docx and .pdf
Answer key for the assessment	05_ASSESSMENT/Assessment Answer Key.docx and .pdf
Certificate template	06_RECORDS/Certificate Template.docx
Start here: Read Me First, Product Overview, Permitted Use Terms, Version Information	01_START_HERE/ (four PDFs)

What you need to deliver it

- A facilitator such as a supervisor, leading hand or WHS adviser who has read the facilitator guide and knows your site's arrangements for the topic
- A screen or projector, or printed slides or handouts: it works in a crib room, site office or on a video call
- Your own site procedures for the topic, to point to during the session

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Questions

Does this cover high risk crystalline silica work rules in my state? It explains the general duties and controls, and points to the extra requirements some WHS and OHS laws now place on high risk silica work. The facilitator guide shows where to add your own state's requirements and your site's silica control plan.

Can we add our own site procedures and photos? Yes. The slides, handout and guide are editable, and the facilitator guide marks the places to add your own procedures, contacts and photos of your workplace.

Do we have to use the assessment? No. It is there if your business wants a record that each worker understood the key points. The attendance record on its own shows who attended and when.

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TOOLBOX TALK

Crystalline Silica Awareness

Why respirable silica is so harmful, and the controls that stop it reaching the lungs

20–30 minutes · Workers who cut, drill, grind or crush stone, concrete, brick or tiles

[Company name] · [Date] · [Facilitator name]

SIL

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What this talk is, and is not

This talk covers

- ✓ What silica dust is and where it comes from
- ✓ How it harms you, and the exposure standard
- ✓ Controls that work, and respirators
- ✓ Your part: controls, health checks, reporting

This talk is not

- ✕ Respirator fit testing
- ✕ Work with engineered stone, which is prohibited
- ✕ Air monitoring or health monitoring itself
- ✕ Our plan: **[Our silica control plan]**

Awareness only. Fit testing is done by a competent fit tester. Work on installed engineered stone needs strict controls this talk does not provide.

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Why silica matters

Respirable crystalline silica is dust fine enough to reach deep into the lungs. It does not come back out.

- Silicosis: scarring of the lungs that cannot be cured and can keep getting worse
- Lung cancer, kidney disease and chronic obstructive pulmonary disease (COPD)
- Chronic silicosis usually takes ten years or more; accelerated silicosis can appear within five to ten years of heavy exposure
- Acute silicosis can follow very high exposure within weeks to a few years

A composite example

- A worker dry-cuts concrete pavers with a hand-held saw for a morning because the water supply is not connected yet. A grey cloud hangs around the job.
- It feels like a one-off. Done most weeks, it adds up to years of exposure.

Silicosis cannot be cured. The only answer is not to breathe the dust.

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Where silica comes from

Silica is in most stone, sand and building materials. The hazard is the fine dust released when they are worked.

Materials

- Concrete, cement, mortar and render
- Bricks, pavers, blocks and roof tiles
- Ceramic and porcelain tiles, and some composite products
- Sandstone, granite and other natural stone
- Sand, gravel and abrasive blasting media

Tasks that release it

- Cutting, drilling, chasing and coring
- Grinding, polishing and scabbling
- Crushing, demolition and jackhammering
- Abrasive blasting
- Dry sweeping and blowing dust with compressed air

You cannot see the dangerous dust. Control the task, not the cloud.

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How much is too much

THE LEGAL CEILING

Exposure standard

The most respirable silica a worker may breathe, averaged over an eight-hour day. Exposure must not exceed it.

NOT JUST UNDER THE LINE

As low as possible

Exposure must also be kept as low as reasonably practicable. Under the standard is not the same as safe.

MEASURING IT

Air monitoring

Where there is doubt about exposure, it is measured by a competent person, often with a small pump worn on the collar for a shift.

The exposure standard is a ceiling, not a target.

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Crystalline Silica Awareness

Participant handout · keep this

Cutting, drilling, grinding or crushing stone, concrete, brick or tiles releases respirable crystalline silica: dust too fine to see that can cause silicosis, which cannot be cured. Keep this page.

The order of controls for silica dust

1. Avoid the dusty task: order to size, pre-cut parts
2. A lower-silica material, or a less dusty method
3. Enclosed cabs; keep others away from the dust
4. Water at the blade; on-tool extraction
5. Plans, wet cleaning, air and health monitoring
6. A fit-tested respirator, on top of the controls

Know the rules

- There is a workplace exposure standard: keep exposure below it and as low as reasonably practicable
- Engineered stone benchtops, panels and slabs are prohibited from 1 July 2024
- Extra rules apply to high risk silica work: they differ between states

Never

- Dry sweep or use compressed air on dust
- Cut without the water or extraction working
- Eat, drink or smoke in the dust area

Health monitoring

- You may be required to take part if you are exposed to silica. It finds changes early, and shows whether controls work

Respirator seal check

- ☐ Clean-shaven where the mask seals: no stubble, beard or long sideburns
- ☐ The right model and size: the one you were fit tested on
- ☐ Straps, valves and face seal intact; filters in date and not clogged
- ☐ Mask on the face, then the top strap high on the head, then the bottom strap
- ☐ Positive check: cover the exhalation valve, breathe out gently: the mask should bulge, with no leaks
- ☐ Negative check: cover the filters, breathe in gently: the mask should pull in and stay in
- ☐ Leak? Readjust and check again. Still leaking? Do not enter the dust
- ☐ Nothing under the seal: no glasses arms, hood edges or hair

Stop and report when

- The water or extraction is not working
- Your respirator will not seal
- You are not sure what a material is
- Report to: **[Who to report to here]**

Stop the dust at the source. A respirator goes on top, not instead.

This is awareness training. It is not a licence, a ticket, a permit or a competency. It is not a respirator fit test, and it does not train you to work on engineered stone.

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