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| **Title** | **Description of Task, Plant or Equipment** |
| Silica Dust Control Management | Management of silica dust ensuring the safety of workers |

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| Personal Protective Equipment (PPE) & Hazards | | | | | | | | |
| **slip tripchemical toxic**man02man22man05man08man06HHATTTTA | | | | | | | | |
| **Licence Required** | Y  N | | **Licence / Qualification Type** | Not Applicable | | | **Competency Verification** | Y  N |
| Workers are to be instructed in the requirements to ensure silica dust is removed from the breathable atmosphere in the work area and infirmed of the associated hazards and risks prior to starting work. | | | | | | | | |
| Potential risks include | | * Ill health leading to death * Silicosis | | | * Lung cancer * Kidney disease | * Autoimmune disease | | |

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| What is Crystalline Silica? | | | |
| Crystalline silica (quartz) is a natural mineral found in stone products such as reconstituted stone, granite, and sandstone. It can also be found in other building materials such as concrete, bricks and mortar. How much crystalline silica is present depends on the material and can vary, see below. | | | |
| * Reconstituted stone can have very high crystalline silica content – up to 95% * Ceramic tiles – 5% to 45% * Concrete – less than 30% | | | * Bricks – 5% to 15% * Marble – less than 5% * Autoclaved aerated concrete or ACC (used in pre-cast concrete products) – 20% to 40% |
| Exposure to crystalline silica dust | * When you cut, grind, drill or polish products that contain crystalline silica, it releases very fine dust - some of the dust is so small you may not be able to see it * Workers in industries like stonemasonry, construction and the extractives industry may be exposed to crystalline silica dust - benchtop fabrication workers are at higher risk, working with reconstituted stone | | |
| Potential health risks | * Silica dust can be harmful if inhaled into your lungs. Exposure can lead to the below diseases: | | |
| * Silicosis * lung cancer | * kidney disease * autoimmune disease | |
| * Silicosis occurs when crystalline silica dust scars the lungs | | |

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| Step | Requirement |
| Understand Programmed’s  Safe Work Essentials  for working around Silica | * Treat suspicious material as hazardous if it cannot be determined as asbestos or silica * Consider risk prior to commencing works such as grinding, cutting or break in work * Wear the minimum protective and respiratory equipment when working with silica dusts * Ensure that any silica dust generating works are minimised through approved means * Ensure any residual silica dusts are thoroughly vacuumed (using a Dust Class M or H vacuum) and removed and not swept |
| General precautions to minimise silica exposure | * **Management approval required for work to cut, grind, or break reconstituted bench tops** * On-tool water suppression or dust extraction to be used where possible * External extraction must control dust emissions to ensure external exposure is managed * **All work performed where the above controls are not in place must include the below:** * Respiratory protective equipment (RPE) must be used, a P2 mask is fitted correctly for each worker * RPE that requires a facial seal and cannot be used by people with beards or facial stubble. * Powered air purifying respirator (PAPR) that does not rely on a facial seal to be used. * Use disposable PPE where possible, if not possible all PPE should be cleaned after each use to ensure dust does not accumulate by using wet rags to spray or wipe down hard hats and boots. * Don't take dusty work clothes home to wash, if silica dust has settled on clothing, remove dust by using a Dust Class M or H vacuum. |
| Pre-start site check | * Clear work area of all hazards and obstacles * All specified equipment and PPE is available * Establish the location, condition of potential silica containing surface before commencing task |
| Set up | * Establish exclusion zone with appropriate barricades and signage to prevent unauthorised entry to area |
| Precautions to be taken when cutting, grinding, drilling or polishing stone, concrete, bitumen, ceramic, brick or marble surfaces during interior work | * Remove all soft furnishings (including curtains and carpets where practicable) from rooms to be treated * Covering furnishings that cannot be removed with polyethylene sheeting and sealing * Removing all food and medicines that cannot be stored in sealed cupboards or containers * 2 layers of 200um plastic must be laid beneath the work area is a minimum requirement * Several more layers may be placed down and picked up at the end of each day or stage of work * Seal windows, doors, ventilators, air ducts for the heating and cooling systems and other openings, as necessary, to ensure that dust generated does not leave the room * Seal off the work area with a suitable containment system preferably with 2 separate plastic curtains * Ventilation provided to work area should not conflict with the containment setup * Tools used with on-tool water suppression, on-tool dust extraction or in conjunction with another extraction system such as captor hood or shroud and Dust Class M or H vacuum * Coveralls, gloves, safety goggles and respirators to be used * Ensure workers are trained and competent to use tools for task |
| Precautions to be taken when cutting, grinding, drilling or polishing stone, concrete, bitumen, ceramic, brick, or marble surfaces during exterior work | * Ensure work is performed in a well-ventilated area * Where required seal windows, doors, air conditioners, ventilation fans & other openings including eaves of the building * Where required isolate from nearby buildings, to prevent the discharge of dust onto neighbouring areas * Tools need to be used with on-tool water suppression, on-tool dust extraction or in conjunction with another extraction system such as captor hood or shroud and Dust Class M or H vacuum * Coveralls, gloves, safety goggles and respirators to be used * Ensure workers are trained and competent to use tools for task |
| Precautions to be taken when mixing small amounts of concrete, mortar, or any similar building product | * Refer to product Safety Data Sheet (SDS) and wear PPE as per SDS * Handle product as per SDS requirements * Mix product outside or in a well-ventilated area * Minimise dust release * Do not prepare in areas with high wind * Wet product as soon as possible |
| Clean up of Work Areas and equipment | * Remove accumulated debris daily to prevent it spreading from the immediate work area * Wet down work area to assist in the removal of waste * All dust and residue must be cleaned using Class H or M vacuum cleaner for hazardous dusts. * **DO not sweep up dry dust** * Complete a final wet wipe folding the rag between each stroke * Ensure waste is correctly disposed of as per State Environmental requirements * All vacuuming must be done using a HEPA class vacuum machine |
| Remove PPE | * Mist all PPE prior to removal, peel overalls off turning inside out as removed * Remove respirator, take out filters from respirator and place with waste, wet wipe respirator * ALL PPE is disposed of as contaminated waste * All non-disposable PPE should be cleaned or laundered as per above |
| Personal Hygiene | * No eating, drinking, smoking or the application of cosmetics or sunblock in the work area * No disposable PPE is to be removed from site for reuse * Boots must be non-lace up type and wet wiped before leaving the work area * Wash all exposed skin including face with soap and water then rinse again in fresh water |
| Waste Disposal | * Use a Dust Class M or H vacuum cleaner or wet methods to clean dusty floors or surfaces. * Never use compressed air, dry sweeping, or high-pressure water to clean up |