Silica Site Checklist

BREATHE FREELY

arco Experts in Safety

BOHS The Chartered Society for Worker Health Protection

Controlling exposures to prevent occupational lung disease in **CONSTRUCTION**

Construction Managers Toolkit **Checklist**

Health Speak

COSHH	Control of Substances Hazardous to Health Regulations
PPE	Personal Protective Equipment
RPE	Respiratory Protective Equipment
HSDS	Health and Safety Data Sheet
LEV	Local Extract Ventilation
HEPA	High-Efficiency Particulate Air

Contractor:	
Inspected by:	
Date:	

Question	Help!	Yes / No / N.A.	Comments / positive observations	Actions required	L/M/H	Responsible person / company	Completion date
Do you have a process to check if any site materials contain silica?	HSDSs are useful to determine if crystalline silica is present. Include work done by subcontractors. Brick and cement products will normally contain some crystalline silica. If possible try to switch to materials that contain less or no silica. **COSHH; Health and Safety Datasheets.**						
Do you have a hazardous substances "champion"?	It's helpful to have one or two people who have the specific responsibility of looking after all aspects of hazardous substances. They may need some additional training such as a COSHH assessors course. They should also have an understanding of the harm that breathing in silica dust can cause, and how to reduce this. **Silicosis - Lung disease.**						

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Is silica containing dust being generated?	Silica is naturally present in large amounts in sand, sandstone and granite. It is often found in many construction materials such as concrete and mortar. The silica is broken into very fine dust (also known as Respirable Crystalline Silica or RCS) during many common tasks such as cutting, drilling and grinding. Also consider refractory materials that may contain Silica. **Construction - Dust.**						
Have all tasks been identified that have the potential to expose workers to silica dust?	Consider any work where silica containing material is distrurbed, handled or abraded resulting in dust. This may include demolition activities, concrete scabbling and chasing, tunneling work, grit blasting, or cutting silica filled composites.. **Construction silica.**						

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Is there a COSHH assessment for each task involving potential exposure to silica?	COSHH assesments need to focus on the task to ensure each one is done without exposing workers to harmful levels of crystalline silica. You need to make sure workers know what the assessement says and that they know how to use the controls specified properly. **Step by Step to COSHH Assessement.**						
Has consideration been given at the design stage to eliminating or reducing dust creating activities.	Try and influence projects at the design stage as far as possible.Talk to designers, achitects and engineers about avoiding the need to cut. Consider flat conduit instead of chasing walls, cast in channels for services, poured surfaces rather than blockwork. Or design to allow use of block cutter rather than saw. **Design team responsibilities).** **Safety by Design.** **Rag list.**						

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Has the potential for dust generating activites to impact on others been considered and controlled?	Others close by might be exposed to dust. Always try to reduce dust at source by LEV or water. Otherwise move other workers away, erect screens or provide additional protection (RPE as a last resort). **Frequently asked questions – Dust.** **Intelligent Safety; Dust Control.**						
Do workers follow the controls recorded in the COSHH assessments?	Controls to reduce dust must be practical or they will not be followed. It is the role of supervisors to understand what controls are required and enforce them. If it's not being used listen to the reasons why and try and fix them. **Construction dust; How to control exposure.**						

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Are silica materials ever used where natural ventilation is reduced such as an enclosed space, in a pit or a sheeted in area?	Take extra care in this situation, it's likely to be where people get exposed to harmful levels. Can you avoid doing the job in this way? Try to increase the level of ventilation or draw away harmful materials eg on tool extraction. A special type of Respirator might be required. These tasks might be worth seeking further advice. **Silica dust in confined space.**						
Is dust being controlled during cleaning up and housekeeping activities?	Dry sweeping must not be used with silica dust. Consider use of a vacuum cleaner with HEPA filter or wet sweeping. Take care not to generate extra dust from handling used packaging. Frequent removal of settled dust will prevent it from being disturbed by people and vehicle movement and a source of exposure. **Dry sweeping - Managing occupational health risks in construction.**						

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Are water supression measures to reduce exposure being used?	Water supression can be a very effective way of reducing dust levels. Make sure you have enough water for the whole job. If water is stored then think about Legionella. Too much water can be slippy. Don't alow slurry to dry out and become dusty. **Water supression on cut off saws.** **Water suppression on cut off saw video.** **Construction dust; How to control exposure.**						
Is on-tool extraction being used to reduce exposure?	On tool extraction must be well designed and maintained. COSHH requires a recorded check and maintenance once every 14 months. Besides reducing exposure it will also increase the life of the tool. Take care when handling dust bags and filters not to exposure people to collected dust. **Controlling construction dust with on-tool extraction.** **Chasing concrete dust video.**						

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Has somebody checked that the right type of respirators are being used?	RPE is complicated. There are different types of masks and filters. If you get the wrong one it could be no use at all. You need someone who understands this subject to check that the COSHH assessments state the right RPE and workers are wearing it correctly. If filters are used they must be changed regularly or they will become useless. **Respiratory protective equipment (RPE) - HSE.** **Respiratory protective equipment (RPE) - HWL.**						
Have all workers who need to wear a respirator had a face fit test?	For all respirators that seal against the face wearers need to have a face fit test. They also need to be clean shaven every time they wear the respirator. **Fit testing basics - Respiratory protective equipment (RPE).**						

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Have workers been trained on how to fit respirators and test the fit at each use?	Close fitting respirators rely entirely on a good face seal. This must be checked at each use by the wearer. They can only do this if they have been trained to do so. Otherwise they may be getting no protection at all. **Is your mask protecting you?** **Clean Air Take Care campaign.**						
Has somebody checked that the right type of other types of PPE are being used?	Gloves or body protection also need to be chosen carefully. You need someone who understands this subject to check that the COSHH assessments are correct and workers are wearing the right types. Cement in particular can cause burns or other skin issues. **Cement - Control of exposure.**						

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Can PPE be easily cleaned and stored in a clean area?	Re-usable PPE may need to be cleaned. If dust gets inside respirators, or protective clothing gets dirty on the inside workers may be exposed to harmful materials.						
Do workers receive any specific training on the hazards and control of silica dust?	If workers understand the risks to their own health then they are much more likely to use control measures properly. They may also have some good ideas of their own on how to control exposure. **Intelligent Safety Dust Page.** **Risks to breathing | Healthy Working Lives.**						

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Do workers eat and drink in a clean area?	To avoid accidental ingestion of harmful materials workers should be able to wash before eating and take meals in an area free from harmful materials. Eating and drinking should not be allowed in areas where contamination is possible. **Construction welfare: Changing, eating and rest areas.**						
Have any measurements been taken of how much silica dust workers are breathing in?	Personal exposure monitoring of silica dust requires some specialist help. It could be money well spent however as it will indicate where an improvement in control could make a big difference in protecting health. The amounts of silica dust harmful to health may be too small to see so only measurement will tell you if there is a problem. **Exposure monitoring in construction.** **Exposure Monitoring.** **What Can an Occupational Hygienist help with.**						

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Do your workers have health checks that might detect early signs of ill health caused by silica?	For example lung function tests or x-rays may detect the early stages of Silicosis. Preventing ill health in the first place is obviously better than detecting it by Health checks. **Health Surveillance; Silica.**						
Are records kept of all tests and maintenance of control measures (including LEV and respirators)?	If you use extraction systems (LEV) to reduce exposure to silica dust then you must maintain the LEV in efficient working order so it continues to provide the necessary protection. You should have a thorough examination and test (at least every 14 months) and must keep this record for at least 5 years. **Local exhaust ventilation - Frequently asked questions.**						

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Are records kept of air monitoring results?	Keeping clear records of what levels of silica workers are exposed to for specific tasks will help you to check your control measures are working and keep track of improvements. **Monitoring the control of exposure to hazardous substances.**						
Are records kept of health checks?	A health record must be kept for all employees under health surveillance. Records are important because they allow links to be made between exposure and any health effects. **HSE: Record keeping.**						

Any other comments

The checklist items cannot be entirely comprehensive. Write down any other important points below.