



Summer '17 / Issue TSL004

HELLO & WELCOME...

Is Abrasive Wheel training still required?

Question: As an engineering company, we have always given specific safety training for anyone who needs to change a grinding wheel or disc. We've done this because it was a specific legal requirement under the abrasive wheels regulations. But note these have been abolished, is this training something we still need to provide?

Answer: Yes, this training is still required. You are correct that in the past it was done to comply with a specific provision of the Abrasive Wheels Regulations 1970. These have now been superseded by the Provision and Use of Work Equipment Regulations 1998 (PUWER) but although broader in scope, PUWER contains its own training requirements. Specifically, Reg 7. Requires employers to ensure that work equipment repair, modification, maintenance or servicing is only carried out by those designated to do this work: they in turn must have been adequately trained.

In fact, training is required for users as well as for anyone who changes a disc. Para 224 of the HSE guidance sets out the key things users need to know: grinders should always be run within the set maximum speed, so information on this must be readily available (e.g. by being marked on the tool) and discs/wheels should be stored and fitted with care so as to avoid damage which could lead to failure in use.

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Which Silica illnesses are RIDDOR-reportable?

Question: We have recently had a team member diagnosed with Silicosis and I recollect that it is a reportable industrial illness. Do we need to tell the HSE to comply with the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR)?

Answer: Even though Silicosis is well recognised as an industrial illness, it is not RIDDOR-reportable. Nor is Chronic Obstructive Pulmonary Disease (COPD), another serious respiratory illness Silica can cause.

The one Silica related illness that is reportable is lung cancer. Where exposure to respirable crystalline silica (RCS) has caused it, the responsible person (for instance, yourself as the employer) must report it so as to meet RIDDOR Reg. 9.9 You wouldn't though need to do anything unless and until you receive a written diagnosis from a doctor, e.g. the individual's GP. If you ever have to make such a report, the easiest way to do so is online at www.hse.gov.uk/riddor/report.htm.

Check out our Silica and HAV blogs attached.



What is Silica?

Crystalline silica is a basic component of soil, clay, sand, shale, slate, granite and many other minerals including components used to make concrete and mortar. Quartz is the most common form. Many materials in the construction industry contain crystalline silica, including bricks and concrete blocks. When workers chip, cut, drill, grind, grit blast, scabble or tunnel through objects that contain crystalline silica the particles can become small enough to breathe in. the use of power tools can lead to high exposure if exhaust systems or wet-cutting processes are not used or maintained. The fine dust is called respirable crystalline silica (RCS) and is too fine to see with normal lighting.



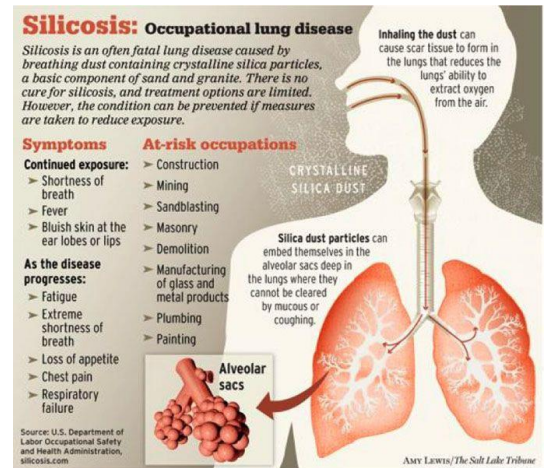
The quantity of silica contained in stone and other materials varies considerably between different types of stone:

Approximate crystalline silica content of different materials	
Sandstone	70–90%
Concrete, mortar	25–70%
Tile	30–45%
Granite	20–45%, typically 30%
Slate	20–40%
Brick	Up to 30%
Limestone	2%
Marble	2%

How can RCS harm your health?

By breathing in RCS, you could develop the following lung diseases:

Silicosis: Silicosis makes breathing more difficult and increases the risk of lung infections. Silicosis usually follows exposure to RCS over many years, but extremely high exposures can lead rapidly to ill health.



Chronic obstructive pulmonary disease (COPD): COPD is a group of lung diseases, including bronchitis and emphysema, resulting in severe breathlessness, prolonged coughing and chronic disability. It may be caused by breathing in any fine dusts, including RCS. It can be very disabling and is a leading cause of death. Cigarette smoking can make it worse.

Lung cancer: Heavy and prolonged exposure to RCS can cause lung cancer. When someone already has silicosis, there is an increased risk of lung cancer.



The health risks from RCS are insignificant when exposure to dust is adequately controlled you do not need to become ill through work activities.

The Law – The Control of Substances Hazardous to Health Regulations 2002 (COSHH)

The law The Control of Substances Hazardous to Health Regulations 2002 (COSHH) cover activities which may expose workers to construction dust. There are three key things you need to do:

- Assess (the risks)
- Control (the risks)
- Review (the controls)

Assess (the risks) Assess the risks linked to the work and materials. High dust levels are caused by one or more of the following:

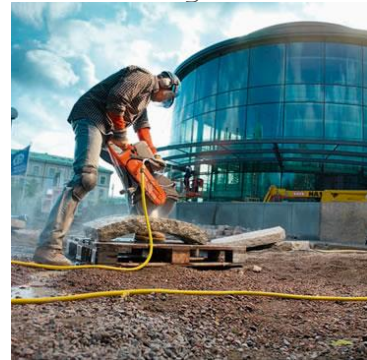
- task – the more energy the work involves, the bigger the risk. High-energy tools like cut-off saws, grinders and grit blasters produce a lot of dust in a very short time;
- work area – the more enclosed a space, the more the dust will build up. However, do not assume that dust levels will be low when working outside with high-energy tools;
- time – the longer the work takes the more dust there will be;
- frequency – regularly doing the same work day after day increases the risks.

Control (the risks) Use the following measures to control the risk. Stop or reduce the dust Before work starts, look at ways of stopping or reducing the amount of dust you might make. Use different materials, less powerful tools or other work methods. For example you could use:

- the right size of building materials so less cutting or preparation is needed;
- silica-free abrasives to reduce the risks when blasting;
- a less powerful tool – eg a block splitter instead of a cut-off saw;
- a different method of work altogether – eg a direct fastening system.

Control the dust even if you stop some dust this way, you may do other work that could still produce high dust levels. In these cases the most important action is to stop the dust getting into the air. There are two main ways of doing this:

- Water – water damps down dust clouds. However, it needs to be used correctly. This means enough water supplied at the right levels for the whole time that the work is being done. Just wetting the material beforehand does not work



- On-tool extraction – removes dust as it is being produced. It is a type of local exhaust ventilation (LEV) system that fits directly onto the tool. This ‘system’ consists of several individual parts – the tool, capturing hood, extraction unit and tubing. Use an extraction unit to the correct specification (ie H (High) M (Medium) or L (Low) Class filter unit). Don’t just use a general commercial vacuum.



Respiratory Protective Equipment (RPE)

You will need to make sure that the RPE is:

- Adequate for the amount and type of dust – RPE has an assigned protection factor (APF) which shows how much protection it gives the wearer. The general level for construction dust is an APF of 20. This means the wearer only breathes one twentieth of the amount of dust in the air;
- Suitable for the work – disposable masks or half masks can become uncomfortable to wear for long periods. Powered RPE helps minimise this. Consider it when people are working for more than an hour without a break;
- Compatible with other items of protective equipment;
- Fits the user. Face fit testing is needed for tightfitting masks;
- Worn correctly. Anyone using tight-fitting masks also needs to be clean shaven.

Remember: RPE is the last line of protection. If you are just relying on RPE you need to be able to justify your reasons for this.

Find out more on the dust control measures for cut off saws on HSE

<http://www.hse.gov.uk/pubns/cis54.pdf>

Time to clear the air!

Check this video out on HSE

<http://www.hse.gov.uk/construction/cleartheair/>

Find out more on Silicosis on HSE

<http://www.hse.gov.uk/lung-disease/silicosis.htm>

Check out the Toolbox Talk for Silica

Silica Dust TBT & Record Sheet

Hand Arm Vibration (HAV)

Exposure to vibration can have serious health effects. Vibration from hand held tools can cause Hand-Arm Vibration Syndrome (HAVS), which affects many workers in the construction industry. Whole-Body Vibration (WBV) also occurs in construction industry and may, for example, affects drivers of construction vehicles, often resulting in back injury.

Hand-arm vibration comes from the use of hand-held power tools and is the cause of significant ill health (painful and disabling disorders of the blood vessels, nerves and joints).



The information on this page is aimed mainly at workers

- You could be risking damage to nerves, blood vessels and joints of the hand, wrist and arm if you work regularly with hand-held or hand-guided power tools for more than a few hours each day.
- Hand Arm Vibration Syndrome (HAVS) caused by exposure to vibration at work is preventable, but once the damage is done it is permanent.
- The Control of Vibration at Work Regulations 2005 were introduced to better protect workers from vibration at work and came into force in July 2005.

Am I at risk?

You are at risk if you regularly use hand-held or hand guided power tools and machines such as:

- Concrete breakers, concrete pokers;
- Sanders, grinders, disc cutters;
- Hammer drills;
- Chipping hammers;
- Chainsaws, brush cutters, hedge trimmers,

Maximum Usage Time		
Vibration in m/s ²	Maximum daily usage time in hours	
below 5	 8 hours maximum daily use	8 hours
5 to 10	 2 hours max daily use without further assessment	2 hours
over 10	 Consult your supervisor	assess risk
*Refer to HAE label and leaflet		

- Powered mowers;
- Scabblers or needle guns.

You are also at risk if you hold workpieces, which vibrate while being processed by powered machinery such as pedestal grinders.

You are particularly at risk if you regularly operate:

- Hammer action tools for more than about 15 minutes per day; or
- Some rotary and other action tools for more than about one hour per day.

As you are likely to be above the exposure action value set out in the regulations.

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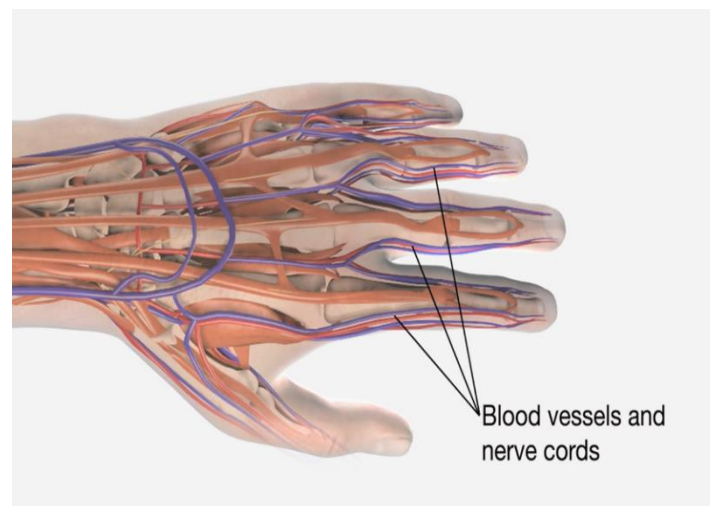
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What are the early signs and symptoms to look out for?

- Tingling and numbness in the fingers (which can cause sleep disturbance).
- Not being able to feel things with your fingers.
- Loss of strength in your hands (you may be less able to pick up or hold heavy objects).
- In the cold and wet, the tips of your fingers going white then red and being painful on recovery (vibration white finger).



If you continue to use high-vibration tools these symptoms will probably get worse, for example:

- The numbness in your hands could become permanent and you won't be able to feel things at all;

- You will have difficulty picking up small objects such as screws or nails;
- The vibration white finger could happen more frequently and affect more of your fingers

By law, as an employer, you must assess and identify measures to eliminate or reduce risks from exposure to hand-arm vibration so that you can protect your employees from risks to their health.

Where the risks are low, the actions you take may be simple and inexpensive, but where the risks are high, you should manage them using a prioritized action plan to control exposure to hand-arm vibration.

Where required, ensure that:

- Control measures to reduce vibration are properly applied; and
- You provide information, training and health surveillance.

Review what you are doing if anything changes that may affect exposures to vibration where you work.

Check out our Toolbox Talk

[HAV Toolbox Talk & Record Sheet](#)

[HAV ready Reckoner](#)

To find out more about signs and symptoms of HAVS please check the HSE website

<http://www.hse.gov.uk/vibration/hav/yourhands.htm>

Find out more on advice for employers check the HSE website

<http://www.hse.gov.uk/vibration/hav/advicetoemployers/index.htm>

