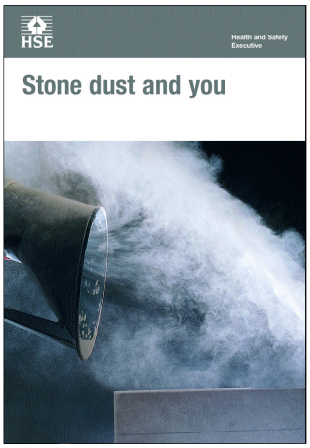
Stone dust and you



This is a web-friendly version of leaflet INDG315(rev1), revised 10/06

This leaflet explains what you should do to protect yourself and your employees from health problems caused by stone dust.

Crystalline silica is in most rocks, sands, clays and also products such as bricks, tiles and concrete. When these materials are worked, eg cut, sanded, carved, ground etc, dust is created. This dust may be fine enough to be breathed deep into the lungs. The fine dust is called Respirable Crystalline Silica (RCS).

How can RCS affect your health?

If you are exposed to RCS then you are at risk of developing silicosis. This disease makes breathing more difficult and increases the risk of lung infections. Silicosis usually follows many years of exposure to RCS, however, exceptionally high exposures over a few months or years can cause acute silicosis, which can cause death within months of exposure. Heavy and prolonged exposure to RCS under the conditions that produce silicosis can cause lung cancer.

You may also develop Chronic Obstructive Pulmonary Disease (COPD), which prevents you from breathing properly. COPD is a term that includes chronic bronchitis and emphysema.

Risks to health can be greatly reduced where exposure to RCS is controlled.

What must employers do?

Employers must comply with the Control of Substances Hazardous to Health Regulations 2002 (as amended) (COSHH).

How could you and your employees be exposed?	*What you need to do*
When no risk assessments are carried out on work processes or material.	Assess the risks to health. If you have more than five employees, make sure the significant findings are written down.
Where stone with a high silica content is used.	Think about using a stone with a lower silica content and using different work processes to reduce exposure.
Where fine dust is produced by processes such as dry grinding, polishing, drilling, cutting or chiselling etc, and proper controls of dust exposure are not in place.	Control dust exposure by following good practice advice (such as COSHH Essentials). Make sure exposure to RCS is below the current Workplace Exposure Limit (WEL) of 0.1 mg/m^3.
Where suitable dust extraction equipment is not provided or maintained properly, and when employees do not know how and when to use it.	Make sure all dust extraction equipment is in good working order. Make sure all employees know how and when to use all the equipment – training and supervision is essential. Make sure all your dust extraction systems are thoroughly tested by a competent person at least every 14 months. Some processes may need to be checked more often. Keep the report.
Where suitable PPE/RPE is not provided or maintained properly and when employees do not know how and when to use it.	Make sure all employees use the correct PPE/RPE, that it is in good working order and that employees check their RPE every time before they use it. Make sure all employees know how and when to use all the equipment – training and supervision is essential. Make sure all your PPE is thoroughly tested by a competent person every three months. Keep the report. Make sure all your RPE is thoroughly tested by a competent person at least every three months, and that your employees check it every time before use.
Where employees and others are not fully aware of the risks of stone dust/RCS and how to protect themselves.	Consult and work with trade union and other employee health and safety representatives. Make sure that all employees are aware of the health risks of RCS. Allow employees to see all risk assessments, exposure monitoring reports and any general health surveillance reports. Provide health surveillance where necessary.
When dry dust is cleared by hand brushes and brooms, or material is dry shovelled. Where dust is allowed to build up. Where dry dust is removed from clothing by brushing down, blowing, or blasting with compressed air.	Remove dust by vacuum – if by a mobile cleaning unit, this must have a HEPA filter. Dampen materials before shovelling, and wash down floors and walls to remove residues. Launder all protective clothing.

Approximate quartz content of stones	
Granite	20-45% - typically 30%
Limestone	Less than 2%
Sandstone	70-90%
Slate	20-40%
Marble	Less than 2%

Stop, think!

Stone dust can damage your health!

- Could you use a different type of stone?
- Could you use water suppression?
- Are your dust extraction systems working properly?
- Do you use the right type of respiratory protection? Is it clean? Does it fit properly?
- Do you vacuum up the dust or wash it down after work?

Remember – keep the dust down, don't breathe it in!

Further reading

HSE has produced simple guidance on how to control RCS exposure and health surveillance. These COSHH Essential guidance sheets are at: www.hse.gov.uk/pubns/guidance/index.htm

Further information

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This leaflet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

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