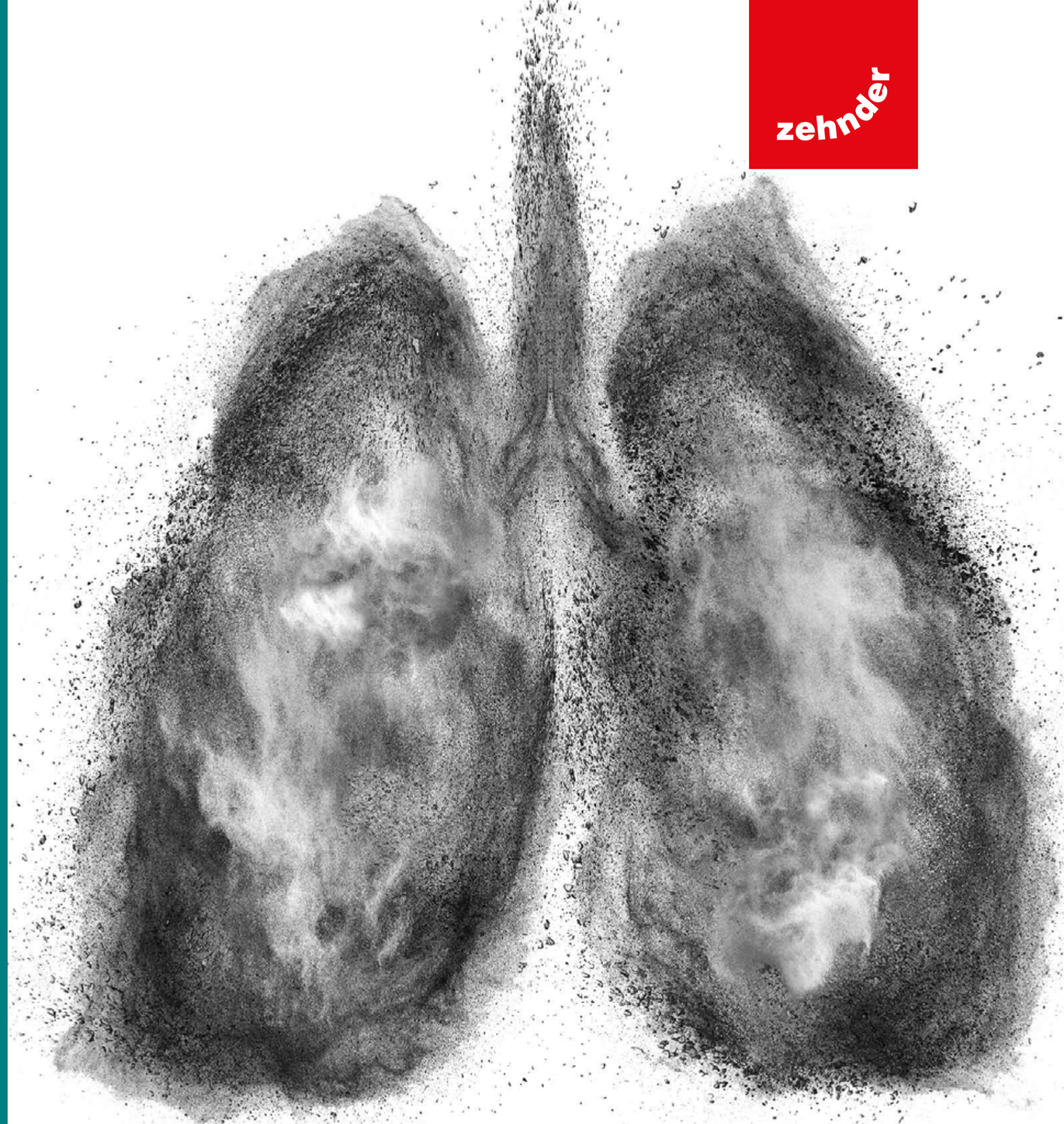
Silica dust: how to assess your risk level for lung cancer

Silica dust is unavoidable in many industries, but it doesn't mean that employees need to be at risk. Learn what you can do to keep your employees safe today.



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What it is all about

Why is silica such a big risk?

Silica is the most abundant material on earth. It can be found in glass, beach sand, silicone, and granite. As a result, many workers in a variety of industries cut, grind, drill, mix, and polish materials which contain silica. This produces respirable crystalline silica dust, an extremely fine particulate. Exposure to silica dust is one of the most significant causes of work-related diseases worldwide. However, there are simple measures that businesses can take to protect employees.

What is crystalline silica?

When we talk about silica dust exposure, we're referring to crystalline silica or quartz. Respirable crystalline silica (RCS) is the extremely fine portion of the dust created by cutting, drilling or otherwise breaking silica-containing materials.

Breathing silica is a serious workplace hazard and significant exposure can cause silicosis, lung cancer, and a higher risk of developing tuberculosis. Large particles, such as beach sand, are not a significant concern, as they are large enough for the body's natural defenses to out.

Once silica dust has settled, it is extremely difficult to get rid of. Even basic cleaning tasks such as dry sweeping cause the particles to become airborne, which makes them easier to inhale.

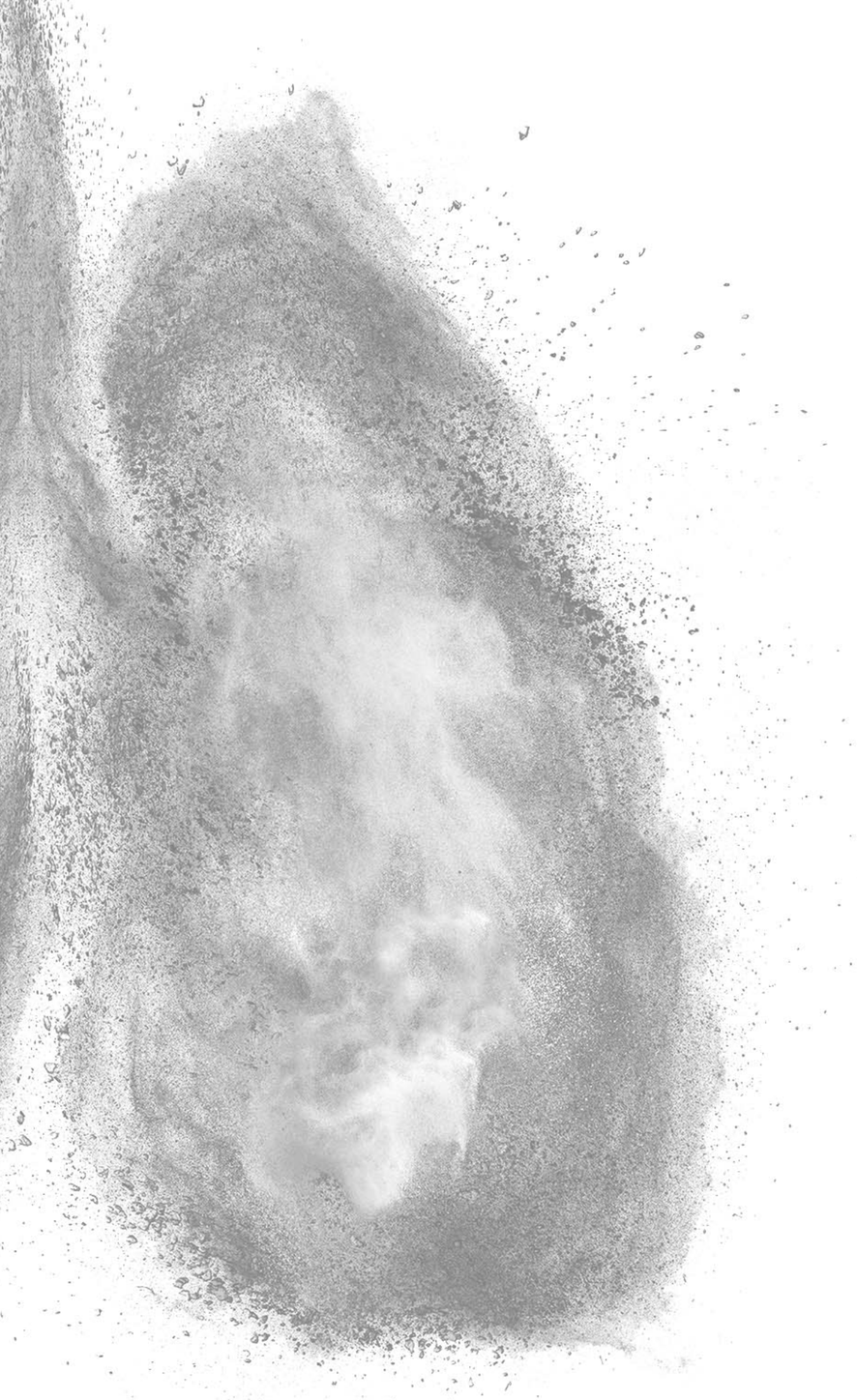
Legal limits

Different countries have their own respirable silica dust exposure standards and recommended limits. However, they all determine their “safe” levels based on a standard eight-hour shift. Here’s a list of some countries’ exposure limits:

Country	Legal limit
Austria	0.15 mg/m^3
Belgium	0.1 mg/m^3
Denmark	0.1 mg/m^3
Finland	0.05 mg/m^3
France	0.1 mg/m^3
Germany	0.05 mg/m^3
Italy	0.05 mg/m^3
Netherlands	0.075 mg/m^3
Norway	0.1 mg/m^3
Poland	0.3 mg/m^3
Sweden	0.1 mg/m^3
Switzerland	0.15 mg/m^3
United Kingdom	0.1 mg/m^3
United States	0.05 mg/m^3

These “safe” levels are constantly reviewed, and many governmental regulators are already tightening restrictions on silica exposure by lowering the “safe” amount. They are also issuing fines against companies that fail to protect their workers adequately.

There is good reason to believe that there is no safe level of silica to inhale, and government standards will trend toward zero.



Lung cancer risk

Chances of lung cancer increase if you are exposed to more than one risk factor. For instance, if someone is or has been a smoker and has worked around silica dust, he or she may be at elevated risk. It's therefore important to know the potential symptoms:

- Persistent coughing for an extended period or a change in a cough you've had for a while
- Shortness of breath
- Coughing up blood or phlegm with a rusty color
- Constant chest or shoulder pain
- Unexplained or sudden weight loss
- Feeling fatigued or weak
- Loss of appetite

Unfortunately, lung cancer has a low survival rate because most patients are only diagnosed at an advanced stage when treatment shows limited success. Therefore, catching the early warning signs of silica dust exposure is key in preventing further complications.

It is the responsibility of every business to do their best to protect their employees' health, and in industries where silica is present, this means reducing workers' exposure to silica dust. A fundamental part of an effective solution is industrial air cleaning, which we specialize in at Zehnder Clean Air Solutions.

If your workers are exposed to silica, now is the time to take action and protect them. Get in touch with us today.

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