Jim Persons
jimpersons@safetypride.com
707-889-0881

Dust Control Safety

There are many potential hazards present on construction sites, and dust is one of the most common.

Dust can cause a variety of issues and health concerns for workers who are exposed to it. It is important to understand the risks of dust on a construction site and learn what safety steps you can take to control dust exposure.

What is construction dust?
Construction dust is a general term used to describe different types of dust that you may find on a construction site.

Construction dust is not just a nuisance, it can also seriously damage your health. Some types can even kill you.

Regularly breathing these specks of dust over a long period of time can cause lung issues and lead to serious diseases.

The three main types of construction dust are:
Silica dust- This is created when working on silica-containing materials like concrete, mortar, and sandstone.

Wood dust- This is created when working on softwood, hardwood, and wood-based products such as MDF and plywood.

Lower toxicity dust- This is created when working on materials containing very little or no silica. The most common include gypsum, limestone, marble, and dolomite.

Dust health hazards:
Everyone working on a jobsite should know the damage construction dust can do to the lungs and airways. The main dust-related diseases affecting construction workers are:

- Lung cancer
- Silicosis
- Chronic obstructive pulmonary disease COPD
- Asthma

Some of these diseases, such as asthma and advanced silicosis, can develop quickly. However, most of these diseases take a long time to fully develop.

Dust builds up in the lungs gradually over time. The effects are not often noticed immediately, and unfortunately by the time symptoms do appear, significant damage may already have been done. Dust-related diseases can be serious and life-threatening.

Construction workers are at a greater risk of developing health issues associated with dust because many common construction tasks create high dust levels.

Dust safety best practices:
Use the following safety measures to control the risks involved with working around construction dust.

Stop or reduce dust
Before you start on a new job, look at ways to stop or reduce the amount of dust you might make. You can use different materials or less powerful tools.

For example:
Use the right size of building materials so less cutting or preparation is needed
Use silica-free abrasives to reduce dust when cutting
Use less powerful tools, like a block splitter instead of a cut off saw
Try different methods of work, like a direct fastening system to reduce dust

Control the dust
If you are unable to completely stop dust from being produced, there are ways to reduce the dust that is in the air.

There are two main methods for dust control:
Water - The use of water to wet materials can cut down on dust clouds. However, water needs to be used correctly.

You need to make sure enough water is supplied and distributed at the right levels for the entire duration of the work being done. Just wetting your materials once will not help reduce dust exposure.

On-tool extraction- On-tool extraction systems remove dust from the air as soon as it is produced by a tool. One type of on-tool extraction is a local exhaust ventilation (LEV) system that fits directly onto the tool itself. These systems consist of several parts including the tool, extraction unit, and tubing.

Wear respiratory protective equipment (RPE)
In addition to your normal personal protective equipment (PPE), RPE equipment can also help with dust when water or on-tool extraction cannot reduce exposure significantly. If you are using RPE, you need to make sure it is adequate for the amount and type of dust you are exposed to.
RPE has an assigned protection factor, also called an ADF, which shows how much protection it provides the person wearing it.

The general level for construction dust is an ADF of 20. This means the person who is wearing the mask only breaths one-twentieth of the amount of dust in the air. With some wood, you can also use an APF of 10 if the dust risk is lower.

When wearing respiratory protective equipment, it is important for RPE to be:
Suitable for work- Disposable masks or half masks can become uncomfortable to wear for long periods of time. RPE can help minimize the discomfort when worn for extended periods.

Compatible - RPE should be compatible with other item types of PPE being worn.

Fits the user- Make sure the masks are tight-fitting on the face.

Worn correctly- Follow the manufacturer's instructions to ensure proper usage.
It is also important to remember that, for RPE to work appropriately, it is important to also know what type (species) of wood you are working with.