

TOOL TYPE **HANDOUT**
GEOGRAPHY **ALL**

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SOURCE: **WORKSAFEBC**

COMBUSTIBLE DUST SAFETY TALK HANDOUT

BENEFITS

If a so-called “combustible dust,” such as dust from wood, coal, rubber, grain, sugar, flour, cardboard and aluminum, is suspended in air at a high enough concentration, a source of ignition such as a spark, static, an open flame or a hot surface can trigger a fire or explosion. Thus, combustible dust poses a serious safety hazard. For example, coal dust was one of the causes of the Westray mine explosions. And in 2008, a huge explosion and fire at a sugar refinery in Georgia killed 14 and seriously injured 38. That explosion was fueled by massive accumulations of combustible sugar dust throughout the packaging building. As a result, Canadian OHS laws require employers to take steps to address the hazards posed by combustible dust.

HOW TO USE THE TOOL

If combustible dust is a safety hazard in your workplace, adapt this handout for the requirements in the OHS laws in your jurisdiction as to combustible dust and the right to refuse unsafe work, and for your operations and equipment. Give the handout to workers in conjunction with a safety talk on combustible dust.

OTHER RESOURCES:

WorkSafeBC

HAZARDOUS SUBSTANCES: What the Laws Require You to Do about Combustible Dust

Video: Combustible Dust Hazards

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EXPLAIN THE DANGERS

In 2012, two BC sawmills suffered devastating explosions, killing four workers and seriously injuring many others. To prevent similar incidents from happening again, we must all do our part to minimize the risk of combustible dust fires or explosions.

It's important to remember that it's not only wood dust that's combustible. Fire and explosion hazards can also exist in production and processing facilities for grain, sugar, pharmaceuticals, metals, plastics, rubber and many other materials.

Dust is considered an undue hazard if it creates the potential for an explosion. Some of the conditions that may indicate the potential for an explosion include:

- A dust cloud in the air;
- Dust buildup on floors and other surfaces; and
- A dust collector located indoors.

Remember, *all* fine dust is potentially explosive.

All it takes is a handful of fine dust, a contained area and an ignition source to create a potentially deadly environment. If a high concentration of dust becomes airborne and contacts an ignition source in a contained area, an explosion will likely occur.

IDENTIFY CONTROLS

Regular monitoring and removal of dust must be performed not only in primary areas where dust accumulates, such as on production floors, but also in secondary areas that include cable trays, duct work, and false ceilings, as well as behind equipment and in other hidden areas.

Remember that manual cleaning, such as the use of compressed air, can disperse combustible dust into the air if done incorrectly. If dispersal occurs near an ignition source in an enclosed area, an explosion can occur.

You must also observe proper hot work policies and procedures to ensure that activities such as cutting, welding and grinding won't ignite combustible material.

Work areas must be kept clear of dust accumulations.

Even a handful of fine dust can be enough to fuel an explosion. Depending on the type of material, all it takes is as little as 0.8 mm (1/32 in.) of dust, covering just 5% of a room's surface area.

If dust contacts a heat source in a contained area, there's a high risk of explosion. Report this hazard to your supervisor immediately.

RIGHT TO REFUSE UNSAFE WORK

As a worker, you play a key role in your own safety—as well as the safety of your fellow workers. That's

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why, under the OHS laws, you have the right and the duty to refuse work that presents an undue hazard.

If your workplace produces large quantities of dust, it's considered an undue hazard to allow that dust to accumulate in a contained area near a source of heat or ignition.

Should you see an accumulation of dust you believe could lead to a fire or explosion, you must refuse to continue working and must immediately report the undue hazard to your supervisor or employer.

If you refuse to work under conditions that could lead to a combustible dust explosion, you're doing the right thing. Remember, you can't be disciplined or fired from your job for putting safety first.

ROLE OF YOUR SUPERVISOR

Once you've reported the hazard, your supervisor or employer must investigate it immediately. They will need to ensure the hazard is removed or addressed—without delay.

In most cases, your supervisor or employer will be able to fix the problem. But in instances where they decide no undue hazard exists, they're obligated to let you know. At that point, they're required to investigate the issue with you and one of the following other people:

- A worker who's a member of your JHSC;
- A worker selected by your union; or
- If you don't have a JHSC or a union, any other worker that you select.

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