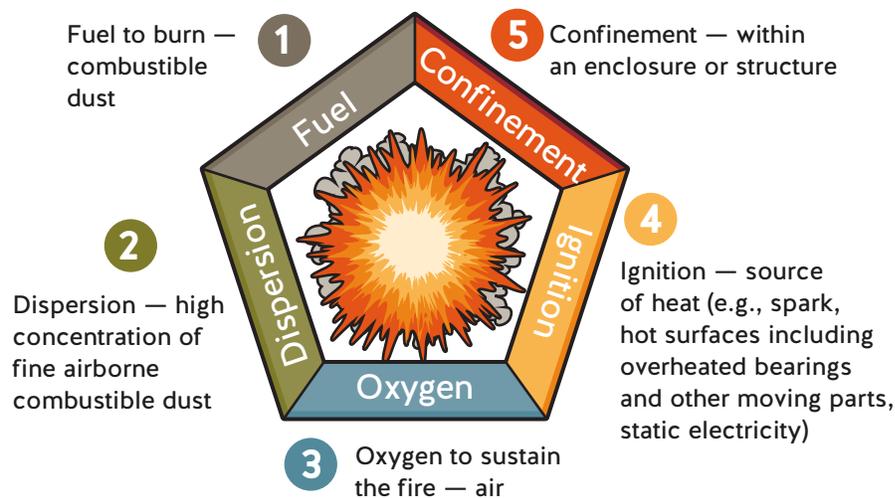


## Combustible dust: awareness and controls

Be aware of the potential for a combustible dust fire or explosion in your workplace.

If combustible dust collects in a building or structure, or on machinery or equipment, it must be safely removed before built-up dust could cause a fire or explosion.

### Dust explosion pentagon



Your employer should provide you with education on the following:

- Processes in your workplace that use or produce combustible dust
- Areas in your workplace where combustible dust can build up
- Hidden areas where dust may build up (for example, on rafters, in enclosed areas, underneath structures, in cable trays, in or on top of electrical panels, and behind equipment)
- How combustible dust is dispersed in the air
- Potential fuel sources other than combustible dust (i.e., anything flammable)
- Potential ignition sources, such as the following:
  - Production and maintenance equipment and machinery
  - Hot work (e.g., welding, cutting, grinding)
  - Hot surfaces (e.g., steam pipes, ovens)
  - Friction (e.g., seized/overheated bearings, motors, or belts; metal or electrical sparks)
  - Heating equipment
  - Electricity
  - Lighting
  - Smoking
  - Static electricity (e.g., ducting not grounded and bonded)

## How to spot an explosion in the making

If you spot a scene like the one to the right, report it immediately.

The dust buildup does not have to be as bad as what you see in the picture. Less than a handful of fine dust can be enough to fuel an explosion. Depending on the type of material, as little as 0.8 mm (1/32 in.) of dust, covering as little as five percent of a room's surface area, can create a significant fire or explosion hazard.



Even scenes like the ones below can present combustible dust hazards.



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

## Controlling the hazards of combustible dust

You must be trained in applicable safe work procedures that relate to safely managing combustible dust. These procedures may include the following:

- Cleaning and maintenance of machinery and equipment. These items could be ignition sources or fuel sources or both.
- Safe cleaning methods that do not send clouds of dust into the air. Examples include the following:
  - Appropriate vacuum systems for dust collection
  - Washing with water or wet rags
  - Using soft bristle brooms on telescopic poles to clean high areas

- Hot work procedures (e.g., welding, cutting).
- Other applicable safe work procedures such as fall protection, the use of proper PPE, and the de-energization and lockout of equipment.

Cleaning with compressed air can be hazardous. When it's done incorrectly, it can disperse combustible dust into the air. If the dust becomes airborne near an ignition source in an enclosed area, it can cause an explosion. For these reasons, cleaning with compressed air should be avoided, and should only be used when strict safe work procedures are in place to control the hazards.

Remove accumulated dust from accessible surfaces after every shift or as directed by your supervisor.

**If you see an accumulation of dust in your workplace, report it to your supervisor or employer immediately.** A handful of fine dust can be enough to fuel an explosion.

Depending on the type of material, as little as 0.8 mm (1/32 in.) of dust, covering as little as five percent of a room's surface area, can create a significant fire or explosion hazard.

For more information on how to work safely around combustible dust at your facility, ask your supervisor or employer. And learn more at WorkSafeBC's combustible dust resources page for manufacturing.

[www2.worksafebc.com/Portals/Manufacturing/InjuryPreventionResources.asp?ReportID=37460](http://www2.worksafebc.com/Portals/Manufacturing/InjuryPreventionResources.asp?ReportID=37460)



Work areas must be kept clear of dust buildups.

# Record of meeting

Project				
Address		City	Province	Postal code
Employer		Supervisor		
Date (yyyy-mm-dd)	Time		Shift	
Number in crew		Number attending		

## Other safety issues or suggestions made by crew members


## Record of those attending

Name (please print)	Signature	Company
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		

Manager's remarks	
Manager's signature	Supervisor's signature