

Spot The Safety Violation: Winter Weather Increases Combustible Dust Risks



This equipment is covered in grain dust. Yes, it's messy but could it also pose a safety hazard?



Dust can be more than just unsightly. Dust from wood, metal, plaster, sugar or other sources is a serious safety hazard because it can catch fire and even explode—hence the name “combustible” dust.

This picture shows the surfaces and equipment in a workplace covered in grain dust, which is combustible. Even a handful of such dust can fuel an explosion if

exposed to heat or an ignition source.

WHY WINTER IMPACTS COMBUSTIBLE DUST

Combustible dust is always a safety hazard that must be properly addressed. But in the winter, the risks such dust poses increase—and some of the safety measures you have in place to control it may not work as well or at all. In fact, investigations by the U.S. Chemical Safety Board found that that seven out of eight fatal combustible dust explosions between 1995 and 2009 occurred during the colder months when conditions characteristic of the winter were prevalent.

The colder weather makes combustible dust more dangerous because the low humidity levels make dust easy to disperse and ignite. In addition:

- Control measures and clean up practices that rely on the use of water may not be suitable or effective
- Openings such as bay doors and wall dampers may be closed, increasing the degree of enclosure and reducing natural ventilation
- Ventilation may be reduced or shut down to conserve heat
- Re-circulation of air from exhaust systems may also increase
- Portable heating units, such as space heaters, may introduce additional ignition sources into workplaces.

So if combustible dust is a hazard in your workplace, now is a good time to look for any additional risks associated with the impact of the winter weather and conditions on dust accumulations in your workplace and to re-evaluate the safety measures you already have in place to control such dust.

For example, you may need to implement alternative dust control measures that take into account the temperature and changes to the workplace operations and conditions.

In addition, if you use space heaters in the workplace, they can become an ignition source if used near combustible dust. So make sure you comply with any portable heater requirements in your jurisdiction's OHS laws. And be sure not to locate such heaters in areas containing combustible dust (or any other flammable materials for that matter).

Also, implement proper housekeeping practices for cleaning up dust in the workplace and train workers on the hazards posed by combustible dust. For example, give them this handout as part of a safety talk on this hazard or show them this video on the hazards of combustible dust.