

The dangers of using compressed air to clean up combustible dust

Using compressed air to clean up combustible dust may stir up dust clouds and move dust into confined or enclosed areas. These dust clouds can contact ignition sources, such as hot surfaces, energized electrical equipment, open flames, sparks, and static electricity. As a result, a fire or explosion could occur.

To protect workers and workplaces from these dangers, assess the risks before using compressed air equipment to clean up combustible dust.

How to work safely with compressed air

Combustible dust cleaning must occur in a way that prevents it from spreading and coming into contact with potential ignition sources. Prior to cleaning with compressed air, consider the nature and combustibility of the dust created by the work process.

Apply these necessary risk controls:

- Reduce the amount of dust by thoroughly sweeping and/or vacuuming the work area, equipment, and other nearby areas prior to clean-up.
- Minimize the spread of dust by cleaning in localized or isolated areas, covering a number of work areas in stages, and avoiding the creation of dust piles. Where possible, wash with water or apply water mist. Minimize compressed air pressure as much as practicable (15 psi is recommended).

- Ensure the compressed air stream does not contact a dust deposit containing a “smoldering nest,” which occurs when a dust deposit rests on a heated surface. Dust in a deposit that has not yet burned can form an explosive dust cloud.
- Eliminate sources of ignition by identifying, removing, or cooling recently operated equipment prior to blow-down. De-energize and lock out electrical equipment, and identify and eliminate sources of open flame, sparks, or static discharge.
- Consider grounding all equipment to further reduce the risk of ignition in dusty environments where compressed air is being used.

For more information

For more information on how to safely use compressed air equipment, follow the manufacturer’s instructions. In the absence of such instructions, contact the manufacturer.

Go to worksafebc.com to learn more about cleaning with compressed air under section 4.42 of the Occupational Health and Safety Regulation, and find additional resources on combustible dust on the website’s combustible dust portal.