



COMBUSTIBLE DUST IS A REAL RISK

Hazardous locations (HazLoc) are areas where a fire or explosion hazards may exist due to the presence of flammable gases, vapors or liquids, combustible dust or ignitable fibers or flyings. Most people

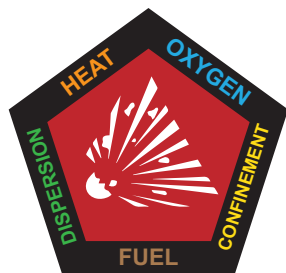


are familiar with the explosion hazards of common fuels (i.e. gasoline, kerosene) but many are unaware of the hazards posed by combustible dusts. Because many gases and vapors are odorless and invisible, special methods and equipment have been developed for handling, processing and detecting these flammable substances. Dust, on the other hand, is a common byproduct of many ordinary manufacturing processes and is so common in our everyday lives that we tend not to treat it as an explosion hazard. History has proven, however, that combustible dust can cause deadly and devastating explosions.

THE DUST EXPLOSION PENTAGON

Fuel, oxygen and heat—this combination of elements will produce a simple fire but is not enough to create an explosion.

Add two more elements, dispersion and confinement, and you have the 5 elements needed to start an explosion.



The 5 basic elements needed to start an explosion:

1. Fuel to burn (combustible dust);
2. Oxygen to sustain the fire (air);
3. Heat from an ignition source (spark);
4. Dispersion of a high concentration of dust into the air (deflagration);
5. Confinement of the dust within an enclosure or structure (explosion).

OSHA MAINTENANCE & HOUSEKEEPING GUIDELINES

OSHA is targeting over 30,000 companies who are at risk for a combustible dust fire or explosion!

Since the implementation of the NEP in 2008, OSHA has conducted more than 2,600 inspections of manufacturing facilities and has issued more than 12,000 violations to pursuant to combustible dust.

OSHA's guidelines and recommendations for decreasing the risk of combustible dust fire and explosions:

- 1** Utilize properly equipped vacuums for source capture and as portable suction devices to prevent fugitive dust from accumulating.
- 2** Make housekeeping as easy and ergonomic as possible by using lightweight, adjustable tools, flexible hoses and overhead cleaning accessories.
- 3** Keep dust levels below 1/32" by cleaning with an industrial vacuum cleaner that meets the requirements for explosion hazard locations and/or materials.
- 4** Inspect all equipment (especially older) for possible ignition sources and for needed deflagration venting upgrades.

FOR MORE INFORMATION

Contact your Lorchem Technologies sales representative, or e-mail us at info@lorchem.com, to learn more about the risk of combustible dust and how our line of Nilfisk CFM Explosion-Proof Vacuums can help keep you OSHA compliant. To view the Nilfisk CFM EXP Vacuums on our website, [click here](#), or visit our website at www.lorchem.com.

Lorchem Technologies, Inc.
1150 Davis Road, Suite J, Elgin, IL 60123

Phone: (847) 468-8800 • Fax: (847) 468-8811
info@lorchem.com • www.lorchem.com

We Know How to Get Things **CLEAN**