Controlling Combustible Dust

A wide variety of materials, even those that don't burn easily as large pieces, can become explosive when in dust form. Combustible dust can be found in food, agriculture, chemical, textile, recycling, pharmaceutical, woodworking, paper, plastic, and metal working industries. The United States averages 150 combustible dust fires and 33 combustible dust explosions per year, resulting in significant damage to property and personal injuries or death.

In 2020, the National Fire Protection Association (NFPA) started the process of consolidating several combustible dust standards. There's been no announcement about the timeline for a new standard. Current general and industry-specific standards are still available to reference.

The federal Occupational Safety and Health Administration (OSHA) doesn't have a stand-alone combustible dust standard. Rather, OSHA has addressed basic combustible dust hazards in the general industry standards (29 CFR 1910) and special industry standards within Subpart R.

As a companion to the West Bend Combustible Dust technical bulletin, these checklists are designed to help you assess the dust exposure in your facilities and supplement your current housekeeping and maintenance programs to minimize the release of fugitive dust particles. They can be printed out, copied, and used to document your dust mitigation efforts.

The **Facility Dust Exposure Checklist** is designed to provide you with a baseline evaluation and then a way to annually re-evaluate and document your efforts. Combustible metal and plastic dust may require additional safety measures that aren't addressed in this bulletin. Any "no" responses are areas that may need additional research and possible improvement.

The **Housekeeping Program – Dust Removal Checklist** can be incorporated into existing cleaning schedules. The form can also be adapted and used as an ongoing housekeeping log. The frequency of cleaning is determined by the amount and type of dust present. Any employee with responsibility for cleaning up dust must be trained on the appropriate tools and methods of dust removal. The appropriate equipment should be provided to employees.

continued...

Facility Dust Exposure Checklist	YES	NO
A dust hazard analysis has been completed to determine combustibility of dust.		
Dry dust collection systems larger than 8 cubic feet (in volume) are located outdoors and vented away from workers.		
Exhaust from dust collection system is not recycled into buildings without the proper spark detection and abort gates in place.		
Dust collection systems are equipped with spark detection and an explosion suppression system.		
Dust collection systems are made entirely from noncombustible materials.		
Collection system ducts maintain sufficient velocity to carry both coarse and fine particles.		
Collection system ducts are positioned to pull air away from the breathing zone of workers and prevent dust accumulation on work surfaces.		
All machines that produce dust, duct systems, and dust collectors are bonded and grounded to reduce the likelihood of static electrical charges.		
A comprehensive inspection, testing, and maintenance program is in place that includes (but is not limited to) work equipment, dust collection systems, and fire suppression systems.		
Hot work is only permitted in designated areas.		
Smoking is only allowed in designated areas which are clearly marked.		
A housekeeping program is in place to clean surfaces where dust may accumulate. (See additional checklist.)		
Dust accumulation on surfaces is kept below 1/32 of an inch (0.79mm) or approximately ½ the thickness of a penny.		
Wet cleaning methods are used where/when possible to limit the amount of surface dust that enters the air.		
Sweepers, vacuums, and other electric cleaning machines used in dusty areas are UL- or FM-listed and have the appropriate hazard classification (Class I or Class II).		
Compressed air is not used to clean surfaces or employee clothing.		
Training has been provided to all employees with housekeeping duties on proper tools and methods.		
Powered Industrial Trucks are approved for combustible dust locations.		
Facility is equipped with an overhead, automatic fire suppression system.		
An emergency action plan is in place and training has been provided to all employees.		
The facility has multiple exit routes which are clearly marked and remain clear.		

continued...

Housekeeping Program – Dust Removal Checklist

Focus Area	Minimum Frequency: (shift, daily, weekly, monthly, annually, other)	Personnel Responsible: (line worker, maintenance, third party contractor)
Floors		
Workstation, equipment, and table surfaces		
Elevated platforms, stairs, and catwalks		
Ductwork and piping		
Tops of equipment		
Exposed beams and rafters		
Hanging lights		
Walls, electrical outlets, shelving, and ledges		
Concealed spaces (above drop ceilings, grinding pits, electrical boxes, etc.)		

WEST BEND®
THE SILVER LINING®