



  
**SonicAire®**

**The Real Cost of Fugitive Dust  
in Hard-to-Reach Spaces:  
What You Can't See Can Hurt You**



# Fugitive dust is a problem, not just when it comes to combustible dust events.

If you work in manufacturing or food processing, there's a good chance you've had to deal with fugitive dust. While combustible dust events aren't a concern in every manufacturing environment, it represents a real concern for those in grain, woodworking, plastics, woven materials, and food processing.

In addition to the potentially catastrophic cost of a combustible dust explosion, there are some obvious and not-so-obvious costs related to fugitive dust buildup. These costs should reinforce the importance of effectively managing combustible dust and help you make smarter, more efficient decisions to maintain productivity and profitability.

# 1. Housekeeping Costs (Internal or External)

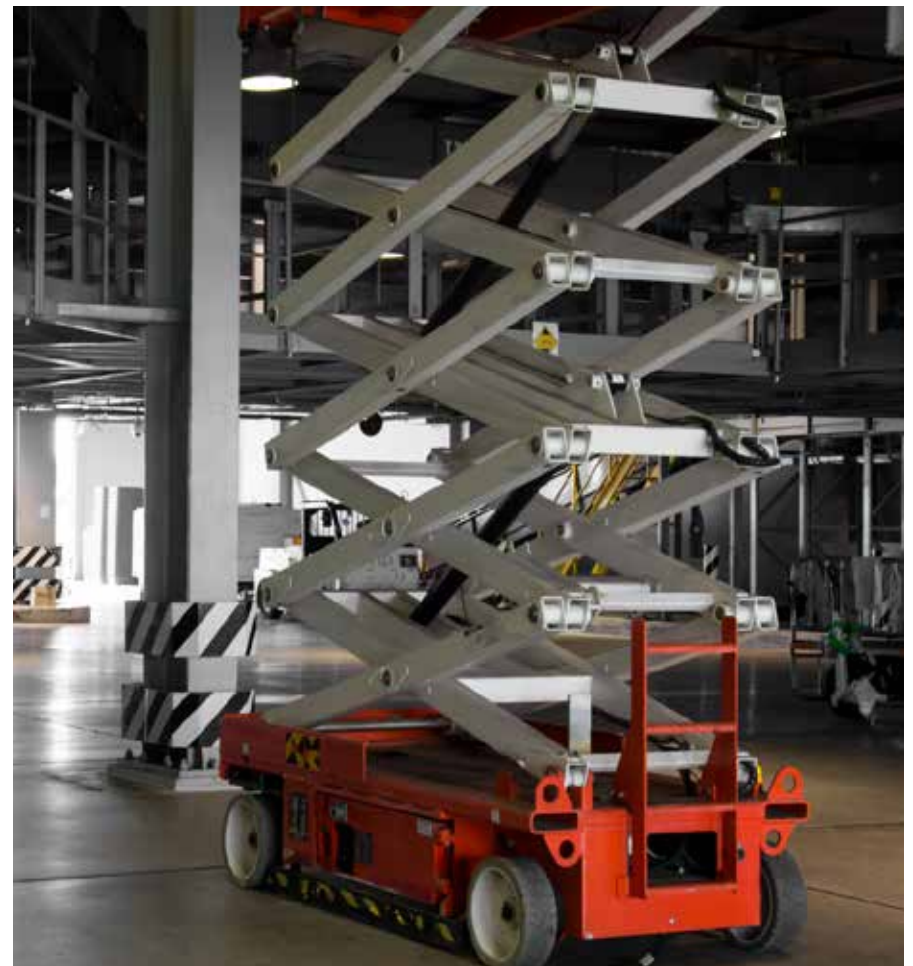
One of the most significant costs related to fugitive dust is cleaning it to reduce buildup. Often, the areas of greatest concern are in the ceiling or overhead areas where dust rises and settles on HVAC ducts, rafters, and beams. NFPA regulations require facilities to keep this buildup under 1/32" in most cases.

Most facilities comply with this regulation by performing regular housekeeping. That is, they clean this dust buildup with vacuum systems or sweep off overhead areas and clean up the floor afterward.

Facilities may use external cleaning crews, but more often, internal staff is responsible for housekeeping duties. Depending upon the size of the operation, this could mean hours of labor spent cleaning instead of producing anything.

**Industry data shows that housekeeping costs range from \$4-8 per square foot depending upon who is doing the work and the frequency required.**

For most manufacturers with already slim margins, these costs do nothing to improve profitability or increase production. That's why it's critically important to prevent dust buildup before it starts.





## 2. Downtime

Production almost inevitably has to stop to adequately clean hard-to-reach areas. Planned shutdowns for maintenance may offer sufficient time for housekeeping. Unfortunately, this isn't always the case. Facilities with excessive fugitive dust creation require more frequent cleanings, meaning additional downtime.

For so many manufacturers, every hour of production-time matters. In some industries, an hour of downtime could mean hundreds of thousands of dollars in lost output. Regulations require cleaning, but it doesn't make it any easier to stomach the loss in revenue.

Every year as facility managers revise their budgets, they have to consider how much production time they are missing out on thanks to fugitive dust.

Minimizing downtime is the key. **You could wait as long as possible between housekeeping efforts, but this puts your facility and employees at risk.** Preventing combustible dust buildup is the ideal way to maximize productivity and minimize your risk.

### 3. Equipment Maintenance/ Replacement

A major line item on the budget for most production facilities is equipment cost. These machines, ranging anywhere from thousands to millions of dollars, are critical to maintaining profitability. Planned downtime is costly, unscheduled maintenance on machinery kills the bottom line.

Fugitive dust does more than build up in overhead spaces. Whatever doesn't settle on ductwork has to settle somewhere, often on and in the machinery itself. This dust can wreak havoc on sensitive equipment, requiring maintenance to clean and recalibrate machines.

**In some cases, it can even lead to more frequent equipment replacement, adding to capital expenditures and hurting the companies profitability.**

Fugitive dust is a significant concern for food processing as it carries bacteria and mold that could ruin entire lots of production if not properly managed.

It's important to keep fugitive dust out of your production equipment as much as possible. Vacuum systems may be part of the solution, but they aren't always designed with specialized equipment in mind.





## 4. Customer/Visitor Perception

While not a tangible cost, *the appearance of your facility has a real impact on your reputation*. There will be instances when management wants to bring someone in to see your location. Or a major customer wants to tour production before signing on.

These visitors are looking at any number of criteria as they judge your operations. Cleanliness may be difficult to quantify, but it is a factor. Dust buildup, no matter the amount, can detract from their perception of the company as a whole.

Before a visit occurs, it's occasionally used as a reason to shut down and clean so the company puts its best foot forward. Not only is this a nuisance, but it also affects production. Everyone is aware of this fact, but some see it as the cost of doing business.

While it may generate new revenue sources, facility managers are all too aware of the cost it creates for the organization. **Minimizing disruptions while keeping your facility clean could be the difference between landing a big deal or missing out.**

## 5. Worker's Safety/Compensation Premiums



Production facilities are already dangerous places to work. Housekeeping efforts only complicate things. Raising employees in scissor lifts while using blowers or brooms to clean off overhead areas creates additional injury opportunities. Not to mention, the dust blown down from the ceiling might be hazardous to breathe.

An injury to an employee would be devastating. It could also result in a Worker's Compensation Claim that would be detrimental to your business. **Fugitive dust must be effectively managed but safely to protect employees and your business.**

Don't let these dangers cost you more than they should. If you're handling housekeeping yourself, make sure employees follow all safety protocols. Document these protocols to protect yourself and ensure there's a record of employees doing what they're supposed to do on a regular basis.





## 6. Insurance Premiums

Combustible dust events are yet another reason to make manufacturing facilities a risk for insurance carriers. While they won't explicitly name it as a reason for increasing premiums, *every incident drives up costs for the rest of the industry.*

Any incidents caused by fugitive dust, even injuries during housekeeping, could have an impact on your insurance premiums. The last thing you want is a severe accident derailing your business and the lives of employees.

**Minimize your risk by following appropriate OSHA and NFPA standards.** This way you're not only protected, you can prove it to your insurance carrier, potentially limiting their exposure and lowering your insurance costs.





## 7. OSHA Citations and Fines

During an inspection, OSHA is looking for anything that might endanger your employees. The newest NFPA 652 regulations create an additional burden for your company. In addition to a Dust Hazard Analysis, you need to have clear documentation you are doing everything you can to avoid an explosive dust incident. This means doing more than traditional housekeeping. If you haven't already, you'll need to have laboratory testing to measure the combustibility of dust and clear processes to mitigate its impact.

**OSHA has been known to cite facilities for failure to comply with these regulations, and they could even fine you for repeat violations.** In addition to the financial implications, this puts you on their radar for additional scrutiny in the future.

The best way to prevent this from happening? *Prevent dust buildup before it starts.*

# SonicAire Dust Control Fans: A Preventative Solution

The costs caused by fugitive dust could become a real burden for your organization. But they don't have to.

At SonicAire, we've spent decades developing dust control fans that keep fugitive dust from building up in hard-to-reach areas. They not only mitigate the risk of a combustible dust explosion, but they also reduce housekeeping costs, keep employees safe, and make it easier for you to comply with regulations.



**Here's how easy SonicAire Dust Control Fans make fugitive dust management in your facility.**

- 1. DISCOVER** - We'll identify your biggest dust control challenges.
- 2. DESIGN** - We'll develop an engineered system specifically for your facility.
- 3. DELIVER** - Your fans can be installed by you or a qualified contractor.
- 4. DUST IS DONE** - You'll know you're protected from future dust accumulation.

No more facility shutdowns for cleaning. You'll no longer be putting your employees in danger on lifts and ladders to clean or paying expensive cleaning companies to do it for you.

**Talk to one of our Dust Control Specialists today.**

**Call 336-712-2437 or visit [SonicAire.com](https://sonicaire.com) to schedule a call.**