

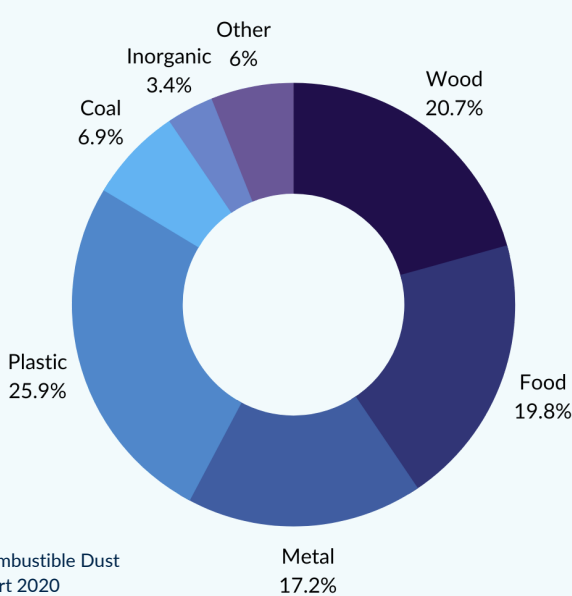
A DHA is a systematic review of processes, equipment and buildings to **determine where explosion and fire hazards exist, the potential consequences of a deflagration, and recommended safeguards for the prevention and mitigation of an explosion.**



A DHA IDENTIFIES THREE ELEMENTS OF A DUST EXPLOSION

1. DUST EXPLOSIBILITY

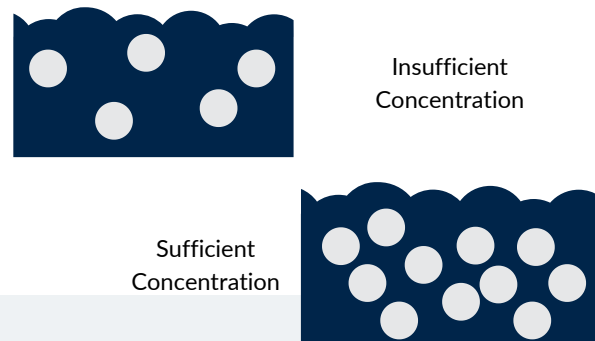
For a deflagration to occur, the handled or processed material must be combustible. A DHA will identify the areas of the process in which combustible material exists and will determine its explosibility characteristics.



Cloney, C. Combustible Dust Incident Report 2020

2. DUST CLOUD CONCENTRATION AND LOCATION

For a deflagration to occur, the combustible dust must be suspended in the form of a dust cloud. A DHA will identify equipment and areas of your facility where dust clouds can form. Dust cloud concentrations usually must reach 50-100g/m³ to ignite.

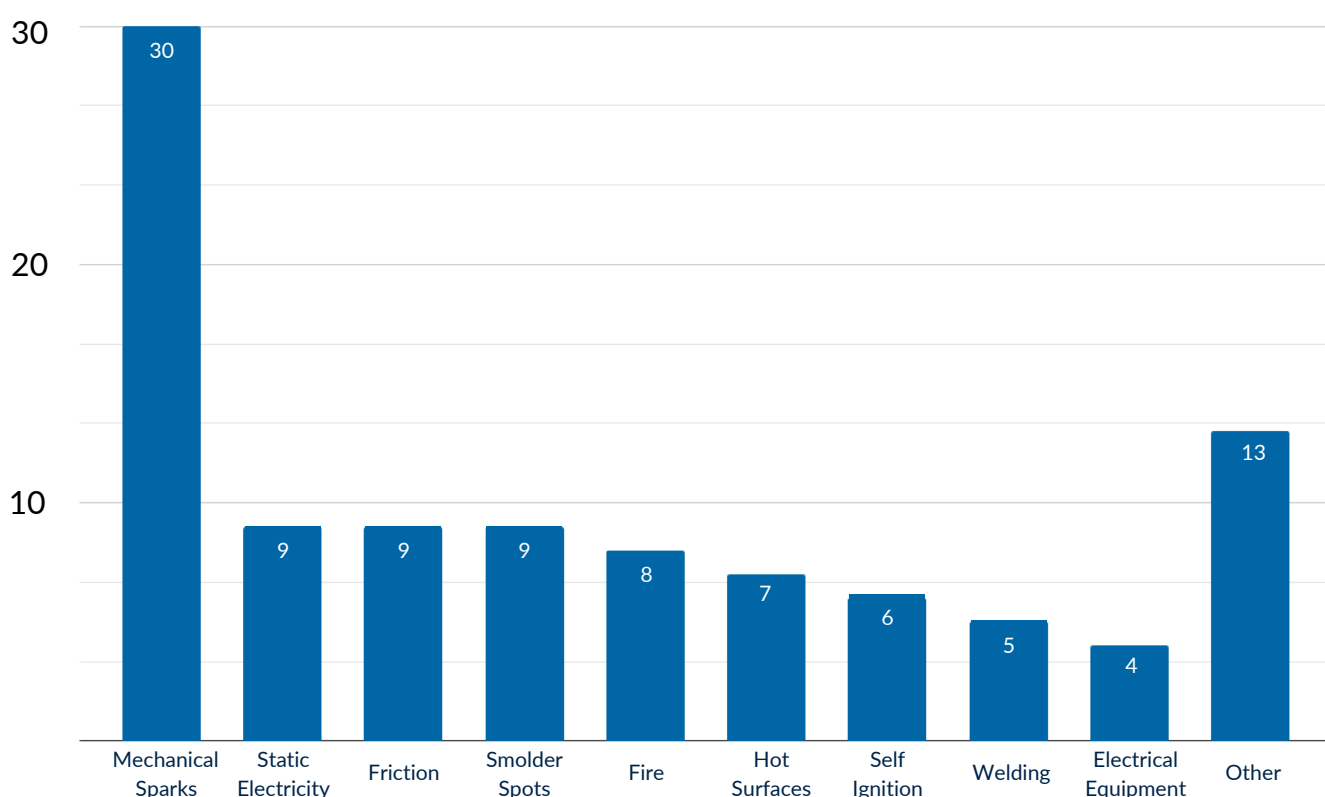


COMMON EQUIPMENT AT RISK

Types of Equipment	Icon	Percent of Recorded Explosions
storage and silos		29.3%
dust collectors		13.3%
dryers		14.2%
elevators and conveyors		12.9%
other, not specified		30.2%

3. IGNITION SOURCE LOCATIONS

For a deflagration to occur, it requires an ignition source (such as a spark, flame or static discharge) to reach the combustible dust cloud. A DHA identifies potential ignition sources and recommends methods of reducing or removing them.



Hughes Environmental, 2015

Once possible hazards are identified, the DHA will also evaluate existing safeguards and specify new safeguards:

- Explosion Protection Equipment
- Fire Protection Systems
- Housekeeping
- Process Improvements
- Ignition Source Removal
- Temperature Monitoring
- Preventative Devices
- And More



These process recommendations will form an "action plan" to ensure employee safety and compliance with local regulations.

For help executing your action plan and specifying Explosion and Fire Protection Systems, visit FIKE.COM