OSHA: Intro to Combustible Dust Hazards



Key Takeaways:

– Learning about combustible dust and its sources.
– Recognizing potential ignition sources that may contribute to a dust explosion.
– Acknowledging combustible dust dangers in their workplace/industry.
– Learning methods to prevent the occurrence of combustible dust explosions.

Course Description

The aim of this course is to improve the safety of workers in environments where combustible dusts is encountered by increasing employee awareness and by demonstrating how the hazard can be identified and addressed in the workplace.

Combustible dust is composed of fine particles which present an explosion hazard while suspended in the air, in certain conditions. There explosions can be catastrophic and cause employee deaths, injuries, and destruction of entire buildings. Across many combustible dust incidents, it was reported that employers and employees were unaware a hazard even existed. Your company must determine if they do have this hazard, and if they do, they must take action now to prevent tragic consequences.

High Risk Industries
There are a variety of industries in which combustible dust explosion hazards exist, including: agriculture, chemicals, food (e.g., candy, sugar, spice, starch, flour, feed), grain, fertilizer, tobacco, plastics, wood, forest, paper, pulp, rubber, furniture, textiles, pesticides, pharmaceuticals, tire and rubber manufacturing, dyes, coal, metal processing (e.g., aluminum, chromium, iron, magnesium, and zinc), recycling operations, fossil fuel power generation (coal), and 3D welding (a form of 3D printing).

Recommendations for Dust Control:
– Develop a hazardous dust inspection, testing, housekeeping, and control program;
– Utilize proper dust collection systems and filters;
– Reduce the escape of dust from process equipment or ventilation systems;
– Work on surfaces that minimize dust accumulation and facilitate cleaning;
– Supply access to all hidden or remote areas to permit inspection;
– Search for dust residues in open and hidden areas at regular intervals;
– If ignition sources are present, use cleaning methods that do not generate dust clouds;
– Use only vacuum cleaners approved for dust collection; and

– Locate relief valves away from dust deposits.