



Corona Fire Department

Combustible Dust Producing Operations Guideline per 2022 California Fire Code

PURPOSE

The intent of this guideline is to provide the minimum standards necessary for the prevention of dust explosions, in accordance with 2022 California Fire Code Chapters 22 and 28. Failure to comply with these standards shall be due cause for denial or revocation of required permits and filing for civil or criminal prosecution. The Fire Chief may waive any of these requirements upon review and approval of alternate methods and materials that meet the intent of these standards.

SCOPE

These requirements shall apply to all dust producing or dust agitating machinery, such as grinding mills and separators, elevators, elevator legs, spouts, hoppers and other conveyors, in addition to wood product machinery and equipment.

DEFINITIONS

Combustible Dust.

Finely divided solid material which is 420 microns or less in diameter and which, when dispersed in air in the proper proportions, could be ignited by a flame, spark or other source of ignition.

Combustible Fibers

Readily ignitable and free burning materials in a fibrous or shredded form, such as cocoa fiber, cloth, cotton...straw, wastepaper, certain synthetic fibers, or other like materials.

Dust Collection system

A combination of equipment designed to contain, capture, and collect airborne combustible dusts.

REQUIREMENTS

A. Permit required.

1. A combustible dust-producing operation permit is required to operate a grain elevator, flour starch mill, feed mill, or plant pulverizing aluminum, coal, cocoa, magnesium, spices or sugar, or other operations producing combustible dust.
2. A combustible fibers permit is required for the storage and handling of combustible fibers in quantities greater than 100 cubic feet.

B. Dust Collection.

1. Equipment or machinery located inside buildings which generates or emits combustible dust shall be provided with an approved dust-collection system and exhaust system installed in conformance with CFC Chapter 22 and the California Mechanical Code, per CFC 2803.2. Equipment or systems that are used to collect, process or convey combustible dust shall be provided with an approved explosion control system.



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C. Explosion Venting.

1. Where a dust explosion hazard exists in equipment rooms, buildings or other enclosures, such areas shall be provided with explosion (deflagration) venting or an approved explosion suppression system complying with CFC Section 911.

D. Waste removal.

1. Sawmills, planing mills, and other woodworking plants shall be equipped with a waste removal system that will collect and remove sawdust and shavings. Such systems shall be installed in accordance with CFC Chapter 22 and the California Mechanical Code.

Exception: Manual waste removal where approved in writing by the Corona Fire Prevention Division. Such approval shall be limited to a specific number of pieces of equipment and shall be subject to revocation at any time.

E. Housekeeping.

1. Provisions shall be made for a systematic and thorough cleaning of the entire plant at sufficient intervals to prevent the accumulations of combustible dust and spilled combustible or flammable liquids.
2. Accumulation of dust shall be kept at a minimum inside buildings. Accumulated combustible dust shall be collected by vacuum cleaning or other means that will not place combustible dust into suspension in air. Forced air or similar methods shall not be used to remove dust from surfaces, per CFC Section 2203.4.

F. Control of Ignition Sources.

1. Smoking, or the use of spark producing equipment is prohibited in areas where combustible dust is generated, stored, manufactured, processed or handled, per CFC 2203.3.
2. Cutting, welding, and hot works operations shall comply with CFC Chapter 35
3. Static electricity shall be prevented from accumulating on machines and equipment subject to static electricity buildup by permanent grounding and bonding wires or other approved means
4. Approved "No Smoking" signs complying with CFC Section 310 shall be posted.

G. Electrical Equipment.

1. Electrical wiring and equipment shall comply with the California Electrical Code. CFC Section 603.

H. Portable fire extinguishers or standpipes and hoses.

1. Portable fire extinguishers or standpipes and hose supplied from an approved water system shall be provided within 50' of travel distance to any machine producing shavings or sawdust, per CFC 2804.3. Portable fire extinguishers shall be provided in accordance with CFC Section 906 for extra-high hazards.

The use of nationally recognized standards for explosion hazards or approved performance-based analysis prepared by a registered Fire Protection Engineer, which addresses the specific combustible dust hazard present, shall be required by the Fire Prevention Division.