

## CHAPTER 37

# COMBUSTIBLE FIBERS

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**User note:**

**About this chapter:** Chapter 37 establishes the requirements for storage and handling of combustible fibers, including animal, vegetable and synthetic fibers, whether woven into textiles, baled, packaged or loose. Operations involving combustible fibers are typically associated with salvage, paper milling, recycling, cloth manufacturing, carpet and textile mills and agricultural operations, among others. The primary hazard associated with these operations is the abundance of materials and their ready ignitability.

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### SECTION 3701 GENERAL

**3701.1 Scope.** The equipment, processes and operations involving *combustible fibers* shall comply with this chapter.

**3701.2 Applicability.** Storage of *combustible fibers* in any quantity shall comply with this section.

**3701.3 Permits.** Permits shall be required as set forth in Section 105.6.

### SECTION 3702 DEFINITIONS

**3702.1 Definitions.** The following terms are defined in Chapter 2:

**BALED COTTON.**

**BALED COTTON, DENSELY PACKED.**

**COMBUSTIBLE FIBERS.**

**COTTON.**

**SEED COTTON.**

### SECTION 3703 GENERAL PRECAUTIONS

**3703.1 Use of combustible receptacles.** Ashes, waste, rubbish or sweepings shall not be placed in wood or other combustible receptacles and shall be removed daily from the structure.

**3703.2 Vegetation.** Grass or weeds shall not be allowed to accumulate at any point on the premises.

**3703.3 Clearances.** A minimum clearance of 3 feet (914 mm) shall be maintained between automatic sprinklers and the top of piles.

**3703.4 Agricultural products.** Hay, straw, *seed cotton* or similar agricultural products shall not be stored adjacent to structures or combustible materials unless a clear horizontal distance equal to the height of a pile is maintained between such storage and structures or combustible materials. Storage shall be limited to stacks of 100 tons (91 metric tons) each. Stacks shall be separated by not less than 20 feet (6096 mm) of clear space. Quantities of hay, straw, *seed cotton* and other agricultural products shall not be limited where stored in or near farm structures located outside closely built areas. A permit shall not be required for agricultural storage.

**3703.5 Dust collection.** Where located within a building, equipment or machinery that generates or emits *combustible fibers* shall be provided with an *approved* dust-collecting and exhaust system. Such systems shall comply with Chapter 22 of this code and Section 511 of the *International Mechanical Code*.

**3703.6 Portable fire extinguishers.** Portable fire extinguishers shall be provided in accordance with Section 906 as required for extra-hazard occupancy protection as indicated in Table 906.3(1).

**3703.7 Sources of ignition.** Sources of ignition shall comply with Sections 3703.7.1 and 3703.7.2.

**3703.7.1 Smoking.** Smoking shall be prohibited and “No Smoking” signs provided as follows:

1. In rooms or areas where materials are stored or dispensed or used in *open systems*.
2. Within 25 feet (7620 mm) of outdoor storage or open use areas.

## COMBUSTIBLE FIBERS

3. Facilities or areas within facilities that have been designated as totally “no smoking” shall have “No Smoking” signs placed at all entrances to the facility or area. Designated areas within such facilities where smoking is permitted either permanently or temporarily shall be identified with signs designating that smoking is permitted in these areas only.

Signs required by this section shall be in English as a primary language or in symbols allowed by this code and shall comply with Section 310.

**3703.7.2 Open flames.** Open flames and high-temperature devices shall not be used in a manner that creates a hazardous condition. High-temperature devices and those devices utilizing an open flame shall be *listed* for use with the materials stored or used.

### SECTION 3704 LOOSE FIBER STORAGE

**3704.1 General.** Loose *combustible fibers*, not in suitable bales or packages and stored outdoors in the open, shall comply with Section 2808 of this code. Occupancies involving the indoor storage of loose *combustible fibers* in amounts exceeding the *maximum allowable quantity per control area* as set forth in Section 5003.1 shall comply with Sections 3704.2 through 3704.6.

**3704.2 Storage of 100 cubic feet or less.** Loose *combustible fibers* in quantities of not more than 100 cubic feet (3 m<sup>3</sup>) located in a structure shall be stored in a metal or metal-lined bin equipped with a self-closing cover.

**3704.3 Storage of more than 100 cubic feet to 500 cubic feet.** Loose *combustible fibers* in quantities exceeding 100 cubic feet (3 m<sup>3</sup>) but not exceeding 500 cubic feet (14 m<sup>3</sup>) shall be stored in rooms enclosed with 1-hour *fire barriers* constructed in accordance with Section 707 of the *International Building Code* or *horizontal assemblies* constructed in accordance with Section 711 of the *International Building Code*, or both, with openings protected by an *approved* opening protective assembly having a *fire protection rating* of 3/4 hour in accordance with the *International Building Code*.

**3704.4 Storage of more than 500 cubic feet to 1,000 cubic feet.** Loose *combustible fibers* in quantities exceeding 500 cubic feet (14 m<sup>3</sup>) but not exceeding 1,000 cubic feet (28 m<sup>3</sup>) shall be stored in rooms enclosed with 2-hour *fire barriers* constructed in accordance with Section 707 of the *International Building Code* or *horizontal assemblies* constructed in accordance with Section 711 of the *International Building Code*, or both, with openings protected by an *approved* opening protective assembly having a *fire protection rating* of 1-1/2 hours in accordance with the *International Building Code*.

**3704.5 Storage of more than 1,000 cubic feet.** Loose *combustible fibers* in quantities exceeding 1,000 cubic feet (28 m<sup>3</sup>) shall be stored in rooms enclosed with 2-hour *fire barriers* constructed in accordance with Section 707 of the *International Building Code* or *horizontal assemblies* constructed in accordance with Section 711 of the *International Building Code*, or both, with openings protected by an *approved* opening protective assembly having a *fire protection rating* of 1-1/2 hours in accordance with the *International Building Code*. The storage room shall be protected by an *automatic sprinkler system* installed in accordance with Section 903.3.1.1.

**3704.6 Detached storage structure.** Not more than 2,500 cubic feet (70 m<sup>3</sup>) of loose *combustible fibers* shall be stored in a detached structure suitably located, with openings protected against entrance of sparks. The structure shall not be occupied for any other purpose.

### SECTION 3705 BALED STORAGE

**3705.1 Bale size and separation.** Baled *combustible fibers* shall be limited to single blocks or piles not more than 25,000 cubic feet (700 m<sup>3</sup>) in volume, not including aisles or clearances. Blocks or piles of baled fiber shall be separated from adjacent storage by aisles not less than 5 feet (1524 mm) wide, or by flash-fire barriers constructed of continuous sheets of noncombustible material extending from the floor to a minimum height of 1 foot (305 mm) above the highest point of the piles and projecting not less than 1 foot (305 mm) beyond the sides of the piles.

**3705.2 Special baling conditions.** Sisal and other fibers in bales bound with combustible tie ropes, jute and other fibers that swell when wet, shall be stored to allow for expansion in any direction without affecting building walls, ceilings or columns. A minimum clearance of 3 feet (914 mm) shall be required between walls and sides of piles, except that where the storage compartment is not more than 30 feet (9144 mm) wide, the minimum clearance at side walls shall be 1 foot (305 mm), provided that a center aisle not less than 5 feet (1524 mm) wide is maintained.