



Fire Department

HEADQUARTERS

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CODE SUMMARY

PERMITS – AEROSOL PRODUCTS IN M OCCUPANCIES

A code summary is a compilation of code sections related to a specific occupancy or permit. This code summary lists sections of code pertaining to occupancies and operations as defined by the **California Fire Code**. Under each heading you will find the correlating code language and the reference cited. These requirements pertain to existing buildings. New construction may be subject to additional requirements. Please feel free to direct any questions to the Fire Prevention Division at (805) 681-5500.

SCOPE:

Aerosol products defined:

Aerosol products shall be classified as Level 1, 2, or 3 in accordance with CFC Table 5103.1 and NFPA 30B. Aerosol products in cartons that are not identified in accordance with this section shall be classified as Level 3.

CFC TABLE 5103.1

CHEMICAL HEAT OF COMBUSTION		AEROSOL CLASSIFICATION
Greater than (Btu/lb)	Less than or equal to (Btu/lb)	
0	8,600	1
8,600	13,000	2
13,000	----	3

1. Storage - General:

- A. Storage in of Level 2 and 3 aerosol products in Occupancy Groups A, B, E, F, I, and R buildings shall be limited to the following maximum quantities:
 1. A net weight of 1,000 pounds of Level 2 aerosol products.
 2. A net weight of 500 pounds of Level 3 aerosol products.(CFC 5104.2)
- B. For storage and/or manufacture of Level 2 and Level 3 aerosol products in aerosol warehouses, see the California Fire Code, Chapter 51.
- C. For retail display and storage in M occupancies, amounts of aerosol products shall not exceed the quantities in Table 5106.2.1 below. (CFC 5106.3.1)

MAXIMUM NET WEIGHT PER FLOOR (pounds)			
Floor	Unprotected	Protected in accordance with Section 5106.2	Protected in accordance with Section 5106.3
Basement	Not Allowed	500	500
Ground	2,500	10,000	10,000
Upper	500	2,000	Not Allowed

2. Section 5106.2 Requirements:

- A. Level 2 and 3 aerosol containers shall not be stacked more than 6 feet high from the base of the array unless the containers are placed on fixed shelving. (CFC 5106.2.2)
- B. When retail display is on shelves, the height of such storage shall not exceed 8 feet to the top of the array. (CFC 5106.2.2)
- C. When automatic sprinkler system is installed for the protected display of aerosol products, the minimum design shall be for Ordinary Hazard Group 2 occupancy. The system shall be provided throughout the retail display area. (CFC 5106.2.4)

3. Section 5106.3 Requirements:

- A. Level 2 and 3 aerosol containers may be arrayed higher than 8 feet high. (CFC 5105.3)
- B. Aerosol products in retail display areas shall be protected by an automatic sprinkler system based upon the requirements of NFPA 30B and the following: (CFC 5106.3.2)
 - 1) Protection shall be based upon the highest level of aerosol product in the array and the packaging method of the storage located more than 6 feet above the finished floor.
 - 2) The designed protection area shall extend not less than 20 feet beyond the aerosol display areas.
 - 3) Where ordinary and high-temperature ceiling sprinkler systems are adjacent to each other, non-combustible draft curtains shall be installed at the interface.
- C. Separation of Level 2 and 3 aerosol areas shall comply with the following:
 - 1) Level 2 and 3 aerosol display areas shall be separated from each other by not less than 25 feet.
 - 2) Level 2 and 3 aerosol display areas shall be separated from flammable and combustible liquids storage and display areas by a horizontal distance of not less than 25 feet.
 - 3) Isolating aerosol areas from flammable liquid areas from each other by a non-combustible partition extending not less than 18 inches above the merchandise (Non-combustible partition shall be liquid tight at the floor to prevent spilled liquids from flowing beneath the aerosol products).

4. Operational Permit required.

- A. To manufacture, store or handle an aggregate quantity of Level 2 or Level 3 aerosol products in excess of 500 pounds net weight.

5. Extinguishers Required:

- A. One Class 2-A rated fire extinguisher shall be provided for each 3000 sq. ft. of ordinary hazard fuel load. Travel distance shall not exceed 75 feet. (California Fire Code 906.3)
- B. If Class B fuel hazards are present, a Class B rated fire extinguisher shall be provided in accordance with Table 906.3(2) of the CFC. (California Fire Code 906.3)

TYPE OF HAZARD	BASIC MINIMUM EXTINGUISHER RATING	MAXIMUM TRAVEL DISTANCE TO EXTINGUISHERS	
		(in feet)	(in meters)
<i>Light (low)</i>	<i>5B</i>	<i>30</i>	<i>9.15</i>
	<i>10B</i>	<i>50</i>	<i>15.25</i>
<i>Ordinary (moderate)</i>	<i>10B</i>	<i>30</i>	<i>9.15</i>
	<i>20B</i>	<i>50</i>	<i>15.25</i>
<i>Extra (high)</i>	<i>40B</i>	<i>30</i>	<i>9.15</i>
	<i>80B</i>	<i>50</i>	<i>15.25</i>

- C. Fire extinguisher shall not be obstructed or obscured from view. (California Fire Code 906.6)
- D. Fire extinguishers not housed in cabinets, shall be installed on the hangers or brackets supplied. Hangers or brackets shall be securely anchored to the mounting surface in accordance with the manufacturer's installation instructions. (California Fire Code 906.7)
- E. Extinguishers shall be inspected monthly by the building owner or occupant, or electronically monitored. (T19 Sec. 574.1)
- F. Extinguishers shall be subject to maintenance annually by licensed technician. (T19 Sec. 575.1)

6. Means of Egress:

- A. For occupant load greater than 49 people, see exit requirements for Assembly Occupancy.
- B. Means of egress shall be continuously maintained free from obstructions. (California Fire Code 1003.6)
- C. Means of egress doors shall travel in direction of egress travel when occupant load is greater than 49. (California Fire Code 1008.1.2)
- D. Egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.
Exception: The main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side provided a sign is posted on the egress side stating "This door is to remain unlocked when building is occupied". (California Fire Code 1008.1.9)
- E. Manually operated flush bolts or surface bolts are not permitted. (California Fire Code 1008.1.9.4)
- F. The unlatching of any door shall not require more than one operation. (California Fire Code 1008.9.5)
- G. Means of egress shall not pass through kitchens, storage rooms, closets or spaces used for similar purposes, or through rooms subject to locking. (California Fire Code 1014.2)
- H. Two exits shall be provided from buildings when the building has more than one story above grade plane, when the number of occupants per floor exceed 49, or when travel distance to any exit in the building is greater than 75 feet. (California Fire Code 1015.2)
- I. Total travel distance to an exit shall not exceed 200 feet in non-sprinklered buildings and 300 feet in sprinklered buildings. (California Fire Code 1016.1)
- J. Minimum clear aisle width shall not be less than 36 inches. (California Fire Code 1017.3)
- K. Required corridors shall not be less than 36 inches for a required occupancy capacity of less than 50. (California Fire Code 1018.2)
- L. Where more than one exit is required, there shall be no dead end corridors more than 20 feet. (California Fire Code 1018.4)

7. Housekeeping:

- A. Combustible waste containers larger than 40 gallons shall be constructed of noncombustible material or approved combustible material and provided with a lid. (California Fire Code 304.3)
- B. Combustible waste containers larger than 1.5 cubic yards shall not be stored in buildings or placed within 5 feet of combustible walls, openings or combustible roof eave lines. (California Fire Code 304.3)
- C. Materials subject to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. (California Fire Code 304.3)
- D. Storage of combustible materials shall be orderly, with storage separated from heating devices by a distance or shielded so that ignition cannot occur. (California Fire Code 315.3)

- E. Storage shall be maintained 2 feet or more below the ceiling in nonsprinklered areas or a minimum of 18 inches below sprinkler deflectors in sprinklered areas of buildings. (California Fire Code 315.3.1)
- F. Combustible materials shall not be stored in boiler rooms, mechanical rooms or electrical equipment rooms. (California Fire Code 315.3.3)

8. Electrical

- A. A working space of not less than 30 inches in width, 36 inches in depth, and 78 inches in height shall be provided in front of electrical service equipment. Storage is prohibited within the designated working space. (California Fire Code 605.3)
- B. Multiplug adaptors, such as cube adaptors, unfused plug strips or other such devices not complying with the California Electrical Code shall be prohibited. (California Fire Code 605.4)
- C. Extension cords shall not be affixed to structures, extended through walls, ceilings or floors, or under doors or floor covering nor subject to physical damage. (California Fire Code 605.4.3)
- D. Extension cords shall not be used in place of permanent wiring. (California Fire Code 605.5)
- E. Appliance cords and extension cords shall be maintained in good condition without splices, deterioration or damage. (California Fire Code 605.5.3)
- F. Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and electrical outlet boxes. (California Fire Code 605.6)
- G. Temporary wiring is allowed for a period not to exceed 90 days; such wiring is allowed for longer periods for construction, remodeling, or repair work. (California Fire Code 605.9)

9. Flammable and Combustible Liquids:

- A. An operational permit is required for the storage, handling or use of more than 5 gallons of flammable liquid indoors or 10 gallons of flammable liquid outdoors. (California Fire Code 105.6.16)
- B. An operational permit is required for the storage, handling or use of more than 25 gallons of combustible liquid indoors or 60 gallons of combustible liquid outdoors. (California Fire Code 105.6.16)
- C. An operational permit is required to conduct spraying or dipping operation utilizing flammable or combustible liquids or the application of combustible powders. (California Fire Code 105.6.41)
- D. Spray finishing operations shall be conducted in a spray room, spray booth or limited spraying space approved for such use. (California Fire Code 2404.2)
- E. Storage of flammable liquids shall not exceed 30 gallons of Class 1A flammable liquid or 120 gallons of Class 1B and 1C flammable liquids per control area. Storage of Combustible liquids shall not exceed 120 gallons of Class 2 combustible liquid or 330 gallons of Class 3A combustible liquid. (California Fire Code 5704.3.4.2)

Exceptions:

- 1. Maximum allowable quantities shall be increased 100 percent in buildings equipped throughout with an approved automatic sprinkler system.
 - 2. Maximum allowable quantities shall be increased 100 percent when stored in approved storage cabinets, day boxes, gas cabinets, exhausted enclosures or listed safety cans.
 - 3. Where exception #1 and #2 both apply, increase for both exceptions shall be applied accumulatively.
- F. Quantities of flammable and combustible liquids in excess of 10 gallons used for maintenance purposes and operation of equipment shall be stored in liquid storage cabinets. (California Fire Code 5704.3.4.4)

10. Miscellaneous:

- A. Fire access roads shall be marked with approved signs or markings that state "NO PARKING FIRE LANE". Marking shall be maintained in clean, legible condition and repaired when necessary. (California Fire Code 503.3)
- B. An approved fire apparatus access road not less than 20 feet wide shall be provided for access to within 150 feet of all portions of the building. (California Fire Code 503.1.1)
- C. Fire access roads shall not be obstructed in any manner, including the parking of vehicles. (California Fire Code 503.4)

- D. Exterior doors and their function cannot be eliminated without approval. If approved, and door retains the appearance as a functional, door shall be posted on the exterior "THIS DOOR BLOCKED". (California Fire Code 504.2)
- E. All buildings shall have approved address numbers or building numbers placed in a position to be plainly legible from the street or road fronting the property. (California Fire Code 505.1)