

## CHAPTER 8

# INTERIOR FINISH, DECORATIVE MATERIALS AND FURNISHINGS

### SECTION 801 GENERAL

**801.1 Scope.** The provisions of this chapter shall govern furniture and furnishings, interior finishes, interior trim, decorative materials and decorative vegetation in buildings. Sections 803, 804 and 805 shall be applicable to new and existing buildings. Section 806 shall be applicable to existing buildings.

### SECTION 802 DEFINITIONS

**802.1 Terms defined in Chapter 2.** Words and terms used in this chapter and defined in Chapter 2 shall have the meanings ascribed to them as defined therein.

### SECTION 803 FURNISHINGS

**803.1 General requirements.** The provisions of Sections 803.1.1 through 803.1.3 shall be applicable to all occupancies covered by Sections 803.2 through 803.7.

**803.1.1 Explosive and highly flammable materials.** Furnishings or decorations of an explosive or highly flammable character shall not be used.

**803.1.2 Fire-retardant coatings.** Fire-retardant coatings shall be maintained so as to retain the effectiveness of the treatment under service conditions encountered in actual use.

**803.1.3 Obstructions.** Furnishings or other objects shall not be placed to obstruct exits, access thereto, egress therefrom or visibility thereof.

**803.2 Group A.** The requirements in Sections 803.2.1 and 803.2.2 shall apply to occupancies in Group A.

**803.2.1 Foam plastics.** Exposed foam plastic materials and unprotected materials containing foam plastic used for decorative purposes or stage scenery or exhibit booths shall have a maximum heat release rate of 100 kilowatts (kW) when tested in accordance with UL 1975.

#### Exceptions:

1. Individual foam plastic items or items containing foam plastic where the foam plastic does not exceed 1 pound (0.45 kg) in weight.
2. Cellular or foam plastic shall be allowed for trim not in excess of 10 percent of the wall or ceiling area, provided it is not less than 20 pounds per cubic foot (320 kg per cubic meter) in density, is limited to 0.5 inch (12.7 mm) in thickness and 4 inches (102 mm) in width, and complies with the requirements for

Class B interior wall and ceiling finish, except that the smoke-developed index shall not be limited.

**803.2.2 Motion picture screens.** The screens upon which motion pictures are projected shall either meet the flame propagation performance criteria of NFPA 701, or shall comply with the requirements for a Class B interior finish in accordance with Section 803 of the *International Building Code*.

**803.3 Group E.** The requirements in Sections 803.3.1 and 803.3.2 shall apply to occupancies in Group E.

**803.3.1 Storage in corridors and lobbies.** Clothing and personal effects shall not be stored in corridors and lobbies.

#### Exceptions:

1. Corridors protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.
2. Corridors protected by an approved smoke detection system installed in accordance with Section 907.
3. Storage in metal lockers provided the minimum required egress width is maintained.

**803.3.2 Artwork.** Artwork and teaching materials shall be limited on the walls of corridors to not more than 20 percent of the wall area.

**803.4 Group I-4, day care facilities.** The requirements in Sections 803.4.1 and 803.4.2 shall apply to day care facilities classified in Group I-4.

**803.4.1 Storage in corridors and lobbies.** Clothing and personal effects shall not be stored in corridors and lobbies.

#### Exceptions:

1. Corridors protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.
2. Corridors protected by an approved smoke detection system installed in accordance with Section 907.
3. Storage in metal lockers provided the minimum required egress width is maintained.

**803.4.2 Artwork.** Artwork and teaching materials shall be limited on walls of corridors to not more than 20 percent of the wall area.

**803.5 Group I-2, nursing homes and hospitals.** The requirements in Sections 803.5.1 through 803.5.3 shall apply to nursing homes and hospitals classified in Group I-2.

**803.5.1 Upholstered furniture.** Newly introduced upholstered furniture shall be shown to resist ignition by ciga-

rettes as determined by tests conducted in accordance with NFPA 261 and shall have a char length not exceeding 1.5 inches (38 mm)

**Exceptions:**

1. Upholstered furniture belonging to the patient in sleeping rooms of nursing homes (Group I-2), provided that a smoke detector is installed in such rooms. Battery-powered, single-station smoke alarms shall be permitted.
2. Upholstered furniture in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.

**803.5.2 Upholstered furniture heat release rate.** Newly introduced upholstered furniture shall have limited rates of heat release when tested in accordance with ASTM E 1537 or NFPA 266.

1. The peak rate of heat release for the single upholstered furniture item shall not exceed 250 kW.

**Exception:** Upholstered furniture in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.

2. The total energy released by the single upholstered furniture item during the first 5 minutes of the test shall not exceed 40 megajoules (MJ).

**Exception:** Upholstered furniture in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.

**803.5.3 Mattresses, heat-release rate.** Newly introduced mattresses in Group I-2 occupancies shall have limited rates of heat release when tested in accordance with ASTM E 1590 or NFPA 267.

1. The peak rate of heat release for the mattress shall not exceed 250 kW.

**Exception:** Mattresses in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.

2. The total energy released by the mattress during the first 5 minutes of the test shall not exceed 40 MJ.

**Exception:** Mattresses in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.

**803.5.4 Identification.** Upholstered furniture shall bear the label of an approved agency, confirming compliance with the requirements of Sections 803.5.1 and 803.5.2.

**803.6 Group I-1, board and care facilities.** The requirements in Sections 803.6.1 through 803.6.3 shall apply to board and care facilities classified in Group I-1.

**803.6.1 Upholstered furniture.** Newly introduced upholstered furniture shall meet the requirements for Class I when tested in accordance with NFPA 260.

**Exception:** Upholstered furniture in rooms or spaces protected by an approved automatic sprinkler system.

**803.6.2 Mattresses.** New mattresses shall have a char length not exceeding 2 inches (51 mm) where tested in accordance with DOC 16 CFR Part 1632.

**Exception:** Mattresses in rooms or spaces protected by an approved automatic sprinkler system.

**803.6.3 Mattresses, heat-release rate.** Newly introduced mattresses in Group I-1 occupancies shall have limited rates of heat release when tested in accordance with ASTM E 1590.

1. The peak rate of heat release for the mattress shall not exceed 250 kW.

**Exception:** Mattresses in rooms or spaces protected by an approved automatic sprinkler system.

2. The total energy released by the mattress during the first 5 minutes of the test shall not exceed 40 MJ.

**Exception:** Mattresses in rooms or spaces protected by an approved automatic sprinkler system.

**803.7 Group I-3, detention and correction facilities.** The requirements in Sections 803.7.1 through 803.7.6 shall apply to detention and correction facilities classified in Group I-3.

**803.7.1 Upholstered furniture classification.** Newly introduced upholstered furniture shall meet the requirements for Class I where tested in accordance with NFPA 260.

**Exception:** Upholstered furniture in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.

**803.7.2 Upholstered furniture heat release rate.** Newly introduced upholstered furniture shall have limited rates of heat release, as follows:

1. The peak rate of heat release for the single upholstered furniture item shall not exceed 250 kW.

**Exceptions:**

1. In Use Condition I, II and III occupancies, as defined in the *International Building Code*, upholstered furniture in rooms or spaces protected by approved smoke detectors that initiate, without delay, an alarm that is audible in that room or space.
2. Upholstered furniture in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.

2. The total energy released by the single upholstered furniture item during the first 5 minutes of the test shall not exceed 40 MJ.

**Exception:** Upholstered furniture in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.

**803.7.3 Mattresses, char length.** Newly introduced mattresses shall have a char length not exceeding 2 inches (51 mm) when tested in accordance with DOC 16 CFR Part 1632.

**Exception:** Mattresses in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.

**803.7.4 Mattresses, heat release rate.** Newly introduced mattresses in detention and correctional occupancies shall have limited rates of heat release when tested in accordance with ASTM E 1590 or NFPA 267, as follows:

1. The peak rate of heat release for the mattress shall not exceed 250 kW.

**Exception:** Mattresses in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.

2. The total energy released by the mattress during the first 5 minutes of the test shall not exceed 40 mJ.

**Exception:** Mattresses in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.

**803.7.5 Wastebaskets.** Wastebaskets and other waste containers shall be of noncombustible or other approved materials.

**803.7.6 Wastebasket lids.** Waste containers with a capacity of more than 20 gallons (76 L) shall be provided with a lid of noncombustible or other approved material.

## SECTION 804 DECORATIVE VEGETATION

**804.1 Natural cut trees.** Natural cut trees, where permitted by this section, shall have the trunk bottoms cut off at least 0.5 inch (12.7 mm) above the original cut and shall be placed in a support device complying with Section 804.1.2.

**804.1.1 Restricted occupancies.** Natural cut trees shall be prohibited in Group A, E, I-1, I-2, I-3, I-4, M, R-1, R-2 and R-4 occupancies.

**Exceptions:**

1. Trees located in areas protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 shall not be prohibited in Groups A, E, M, R-1 and R-2.
2. Trees shall be allowed within dwelling units in Group R-2 occupancies.

**804.1.2 Support devices.** The support device that holds the tree in an upright position shall be of a type that is stable and that meets all of the following criteria:

1. The device shall hold the tree securely and be of adequate size to avoid tipping over of the tree.
2. The device shall be capable of containing a minimum 2-day supply of water.
3. The water level, when full, shall cover the tree stem at least 2 inches (51 mm). The water level shall be maintained above the fresh cut and checked at least once daily.

**804.1.3 Dryness.** The tree shall be removed from the building whenever the needles or leaves fall off readily when a tree branch is shaken or if the needles are brittle and break

when bent between the thumb and index finger. The tree shall be checked daily for dryness.

**804.2 Obstruction of means of egress.** The required width of any portion of a means of egress shall not be obstructed by decorative vegetation.

**804.3 Open flame.** Candles and open flames shall not be used on or near decorative vegetation. Natural cut trees shall be kept a distance from heat vents and any open flame or heat-producing devices at least equal to the height of the tree.

**804.3.1 Electrical fixtures and wiring.** The use of unlisted electrical wiring and lighting on decorative vegetation shall be prohibited.

**804.4 Artificial vegetation.** Artificial decorative vegetation shall meet the flame propagation performance criteria of NFPA 701. Meeting the flame propagation performance criteria in NFPA 701 shall be documented and certified by the manufacturer in an approved manner.

**804.4.1 Electrical fixtures and wiring.** The use of unlisted electrical wiring and lighting on decorative vegetation shall be prohibited. The use of electrical wiring and lighting on metal artificial trees shall be prohibited.

## SECTION 805 DECORATIONS AND TRIM

**805.1 General.** In occupancies of Groups A, E, I and R-1 and dormitories in Group R-2, curtains, draperies, hangings and other decorative materials suspended from walls or ceilings shall meet the flame propagation performance criteria of NFPA 701 in accordance with Section 805.2, or be noncombustible.

In Groups I-1 and I-2, combustible decorations shall meet the flame propagation performance criteria of NFPA 701 unless the decorations, such as photographs and paintings, are of such limited quantities that a hazard of fire development or spread is not present. In Group I-3, combustible decorations are prohibited.

Fixed or movable walls and partitions, paneling, wall pads and crash pads, applied structurally or for decoration, acoustical correction, surface insulation or other purposes, shall be considered interior finish if they cover 10 percent or more of the wall or of the ceiling area, and shall not be considered decorations or furnishings.

**805.1.1 Noncombustible materials.** The permissible amount of noncombustible decorative material shall not be limited.

**805.1.2 Combustible decorative materials.** The permissible amount of flame-resistant decorative materials meeting the flame propagation performance criteria of NFPA 701 shall not exceed 10 percent of the aggregate area of walls and ceilings.

**Exception:** In auditoriums of Group A, the permissible amount of decorative material meeting the flame propagation performance criteria of NFPA 701 shall not exceed 50 percent of the aggregate area of walls and ceiling where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, and

where the material is installed in accordance with Section 803.4 of the *International Building Code*.

**805.2 Acceptance criteria and reports.** Where required by Section 805.1, decorative materials shall be tested by an approved agency and meet the flame propagation performance criteria of NFPA 701, or such materials shall be noncombustible. Reports of test results shall be prepared in accordance with NFPA 701 and furnished to the fire code official upon request.

**805.3 Foam plastic.** Foam plastic used as interior trim shall comply with Sections 805.3.1 through 805.3.4.

**805.3.1 Density.** The minimum density of the interior trim shall be 20 pounds per cubic foot (320 kg/m<sup>3</sup>).

**805.3.2 Thickness.** The maximum thickness of the interior trim shall be 0.5 inch (12.7 mm) and the maximum width shall be 8 inches (203 mm).

**805.3.3 Area limitation.** The interior trim shall not constitute more than 10 percent of the aggregate wall and ceiling area of a room or space.

**805.3.4 Flame spread.** The flame spread rating shall not exceed 75 where tested in accordance with ASTM E 84. The smoke-developed index shall not be limited.

**805.4 Pyroxylin plastic.** Imitation leather or other material, consisting of or coated with a pyroxylin or similarly hazardous base, shall not be used in Group A occupancies.

**805.5 Trim.** Material used as interior trim shall have a minimum Class C flame spread index and smoke-developed index. Combustible trim, excluding handrails and guardrails, shall not exceed 10 percent of the aggregate wall or ceiling area in which it is located.

## SECTION 806

### INTERIOR FINISH AND DECORATIVE MATERIALS

**806.1 General.** The provisions of this section shall limit the allowable flame spread and smoke development of interior finishes and decorative materials in existing buildings based on location and occupancy classification.

#### Exceptions:

1. Materials having a thickness less than 0.036 inch (0.9 mm) applied directly to the surface of walls and ceilings.
2. Exposed portions of structural members complying with the requirements of buildings of Type IV construction in accordance with the *International Building Code* shall not be subject to interior finish requirements.

**806.1.1 Requirements based on occupancy.** Interior finish and decorative materials shall be restricted by combustibility, flame spread and smoke developed and according to occupancy group in accordance with Table 806.3. Motion picture screens in Group A occupancies shall be restricted according to occupancy group in accordance with Table 806.3 and Section 803.2.2.

**806.1.2 Foam plastics.** Cellular or foam plastics shall not be used as interior finish or trim.

#### Exceptions:

1. Cellular or foam plastic materials shall be permitted on the basis of fire tests that substantiate their combustibility characteristics for the use intended under actual fire conditions.
2. Cellular or foam plastic shall be permitted for trim not in excess of 10 percent of the wall or ceiling area, provided such trim is not less than 20 pounds per cubic foot (320 kg/m<sup>3</sup>) in density, is limited to 0.5 inch (12.7 mm) in thickness and 8 inches (203 mm) in width, and complies with the requirements for Class A or B interior wall and ceiling finish except that the smoke rating shall not be limited.

**806.1.3 Obstruction of means of egress.** No decorations or other objects shall be placed to obstruct exits, access thereto, egress therefrom, or visibility thereof.

**806.2 Wall and ceiling finish.** Interior wall and ceiling finishes shall be classified in accordance with Section 803 of the *International Building Code*. Such interior finishes shall be grouped in the following classes in accordance with their flame spread and smoke-developed index.

Class A: Flame spread index 0-25  
Smoke-developed index 0-450

Class B: Flame spread index 26-75  
Smoke-developed index 0-450

Class C: Flame spread index 76-200  
Smoke-developed index 0-450

**Exception:** Materials, other than textiles, tested in accordance with Section 806.2.1.

**806.2.1 Interior wall or ceiling finishes other than textiles.** Interior wall or ceiling finishes, other than textiles, shall be permitted to be tested in accordance with NFPA 286. Finishes tested in accordance with NFPA 286 shall comply with Section 806.2.1.1.

**806.2.1.1 Acceptance criteria.** During the 40 kW exposure, the interior finish shall comply with Item 1. During the 160 kW exposure, the interior finish shall comply with Item 2. During the entire test, the interior finish shall comply with Item 3.

1. During the 40 kW exposure, flames shall not spread to the ceiling.
2. During the 160 kW exposure, the interior finish shall comply with the following:
  - 2.1. Flame shall not spread to the outer extremity of the sample on any wall or ceiling.
  - 2.2. Flashover, as defined in NFPA 286, shall not occur.
3. The total smoke released throughout the NFPA 286 test shall not exceed 333 m<sup>2</sup> (3,588 square feet).

**806.2.2 Stability.** Interior finish materials regulated by this chapter shall be applied or otherwise fastened in such a manner that such materials will not readily become detached when subjected to a room temperature of 200°F (93°C) for not less than 30 minutes.

**806.2.3 Textiles.** Textile wall coverings shall have a Class A flame spread rating when tested in accordance with ASTM E 84 and be protected by approved automatic sprinklers installed in accordance with Section 903.3.1.1 or 903.3.1.2 or the covering shall meet the criteria of Section 806.2.3.1 or 806.2.3.2 when tested in accordance with NFPA 265 using the product-mounting system, including adhesive, of actual use.

**806.2.3.1 Method A.** When using method A, flame shall not spread to the ceiling during a 40 kW exposure. During the 150 kW exposure, all of the following criteria shall be met:

1. Flame shall not spread to the outer extremity of the sample on the 8-foot by 12-foot (2438 mm by 3657 mm) wall.
2. The specimen shall not burn to the outer extremity of the 2-foot-wide (610 mm) samples mounted vertically in the corner of the room.
3. Burning droplets that are judged by the fire code official to be capable of igniting the textile wall covering or that persist in burning for 30 seconds or more shall not be formed and dropped to the floor.
4. Flashover, as defined in NFPA 265, shall not occur.
5. The maximum instantaneous net peak rate of heat release shall not exceed 300 kW.

**806.2.3.2 Method B.** When using method B, flame shall not spread to the ceiling during the 40 kW exposure. During the 150 kW exposure, all of the following criteria shall be met:

1. Flame shall not spread to the outer extremity of the sample on the 8-foot by 12-foot (2438 mm by 3657 mm) wall.
2. Flashover, as defined in NFPA 265, shall not occur.

**806.2.4 Trim and incidental finish.** Interior wall and ceiling finish not in excess of 10 percent of the aggregate wall and ceiling areas of any room or space shall be permitted to be Class C materials.

**806.2.5 Expanded vinyl wall coverings.** Expanded vinyl wall coverings shall comply with the requirements for textile wall and ceiling materials and their use shall comply with Section 806.2.2.

**Exception:** Expanded vinyl wall or ceiling coverings complying with Section 806.2.1 shall not be required to comply with Sections 806.2 and 806.3.

**806.2.6 Fire-retardant coatings.** The required flame spread or smoke-developed classification of surfaces shall be permitted to be achieved by application of approved fire-retardant coatings, paints or solutions to surfaces having a flame spread rating exceeding that permitted. Such applications shall comply with NFPA 703 and the required fire-retardant properties shall be maintained or renewed in accordance with the manufacturer's instructions.

**806.3 Wall and ceiling finish requirements.** Interior wall and ceiling finish shall have a flame spread index not greater than that specified in Table 806.3 for the group and location desig-

nated. Interior wall and ceiling finish materials, other than textiles, tested in accordance with NFPA 286 and meeting the acceptance criteria of Section 806.2.1.1, shall be permitted to be used where a Class A classification in accordance with ASTM E84 is required.

TABLE 806.3  
 INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY<sup>k</sup>

GROUP	SPRINKLERED <sup>m</sup>			NONSPRINKLERED		
	Vertical exits and exit passageways <sup>a, b</sup>	Exit access corridors and other exitways	Rooms and enclosed spaces <sup>c</sup>	Vertical exits and exit passageways <sup>a, b</sup>	Exit access corridors and other exitways	Rooms and enclosed spaces <sup>c</sup>
A-1 <sup>l</sup> & A-2	B	B	C	A	A <sup>d</sup>	B <sup>e</sup>
A-3 <sup>f, l</sup> A-4, A-5	B	B	C	A	A <sup>d</sup>	C
B, E, M, R-1, R-4	B	C	C	A	B	C
F	C	C	C	B	C	C
H	B	B	C <sup>g</sup>	A	A	B
I-1	B	C	C	A	B	B
I-2	B	B	B <sup>h, i</sup>	A	A	B
I-3	A	A <sup>j</sup>	C	A	A	B
I-4	B	B	B <sup>h, i</sup>	A	A	B
R-2	C	C	C	B	B	C
R-3	C	C	C	C	C	C
S	C	C	C	B	B	C
U	No Restrictions			No Restrictions		

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m<sup>2</sup>.

- a. Class C interior finish materials shall be permitted for wainscoting or paneling of not more than 1,000 square feet of applied surface area in the grade lobby where applied directly to a noncombustible base or over furring strips applied to a noncombustible base and fireblocked as required by Section 803.3 of the *International Building Code*.
- b. In vertical exits of buildings less than three stories in height of other than Group I-3, Class B interior finish for unsprinklered buildings and Class C for sprinklered buildings shall be permitted.
- c. Requirements for rooms and enclosed spaces shall be based upon spaces enclosed by partitions. Where a fire-resistance rating is required for structural elements, the enclosing partitions shall extend from the floor to the ceiling. Partitions that do not comply with this shall be considered as enclosing spaces and the rooms or spaces on both sides shall be considered as one. In determining the applicable requirements for rooms and enclosed spaces, the specific occupancy thereof shall be the governing factor regardless of the group classification of the building or structure.
- d. Lobby areas in Group A-1, A-2 and A-3 occupancies shall not be less than Class B.
- e. Class C interior finish materials shall be permitted in Group A occupancies with an occupant load of 300 persons or less.
- f. For churches and places of worship, wood used for ornamental purposes, trusses, paneling, or chancel furnishing shall be permitted.
- g. Class B required where building exceeds two stories.
- h. Class C interior finish materials shall be permitted in administrative spaces.
- i. Class C interior finish materials shall be permitted in rooms with a capacity of four persons or less.
- j. Class B materials shall be permitted as wainscoting extending not more than 48 inches above the finished floor in exit access corridors.
- k. Finish materials as provided for in other sections of this code.
- l. Motion picture screens shall comply with Section 803.2.2.
- m. Applies when the vertical exits, exit passageways, exit access corridors or exitways, or rooms and spaces are protected by a sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.