

CHAPTER 8 INTERIOR FINISHES

SECTION 801 GENERAL

801.1 Scope. Provisions of this chapter shall govern the use of materials as interior finishes by limiting the allowable flamespread and smoke development based on location and occupancy classification.

SECTION 802 DEFINITIONS

For definitions, see Chapter 2.

SECTION 803 RESTRICTIONS ON INTERIOR FINISHES

803.1 General

803.1.1 Combustible materials may be used as a finish for ceilings, floors and other interior surfaces of buildings as provided in this section. Show windows in the first story of buildings may be of wood or of unprotected metal framing.

803.1.2 Interior finish shall mean the exposed interior surfaces of buildings including, but not limited to, fixed or movable walls and partitions, columns, and ceilings, interior wainscoting, paneling or other finish applied structurally or for decoration, acoustical correction, surface insulation, structural fire resistance or similar purposes. Requirements for finishes shall not apply to trim, defined as picture molds, chair rails, baseboards and handrails; to doors and windows or their frames nor to materials which are less than 1/28 inch (0.9 mm) thick cemented to the surface of walls or ceilings.

803.2 Classification. Interior finish materials other than those applied to floors shall be classified in accordance with ASTM E 84. Such interior finish materials shall be grouped in the following classes in accordance with their flamespread and smoke development:

1. Class A Interior Finish. Flamespread 0-25, Smoke Developed 0-450. Any element thereof when so tested shall not continue to propagate fire.
2. Class B Interior Finish. Flamespread 26-75, Smoke Developed 0-450.
3. Class C Interior Finish. Flamespread 76-200, Smoke Developed 0-450.

803.3 Interior finish requirements based on occupancy

803.3.1 The minimum flamespread classification of interior finish other than floor finish and floor coverings shall be based on the use or occupancy as set forth in Table 803.3.

Exceptions:

1. Except in Group I occupancies and in enclosed vertical exits, Class C interior finish material may be used in access to exits and other spaces as wainscoting extending not more than 48 inches (1219 mm) above the floor and for tack and bulletin boards covering not more than 5 percent of the gross wall area of the room. In Group I occupancies, Class B interior finish material may be used in access to exits as wainscoting extending not more than 48 inches (1219 mm) above the floor.
2. The exposed faces of Type III structural members, including decking and planking, where otherwise permitted by this code, are excluded from flamespread requirements.
3. For churches or places of worship, nothing in this section shall prevent the use of wood for ornamental purposes, trusses, paneling, or chancel furnishing.

**TABLE 803.3
MINIMUM INTERIOR FINISH CLASSIFICATION**

OCCUPANCY	UNSPRINKLERED			SPRINKLERED		
	Exit Exits ^{1,5}	Access	Other Spaces	Exit Exits ^{1,5}	Access	Other Spaces
A	A	A	B	B	C	C
B	B	B	C	C	C	C
D	A	A	B	A	A	B
E	A	B	C	B	C	C
F	C	C	C	C	C	C
H	Sprinklers required			B	C	C
I Restrained	A	A	C	A	A	C
I Unrestrained	Sprinklers required			B	B	B ³
M	B	B	C	C	C	C
R ^{2,4}	B	B	C	C	C	C
S	C	C	C	C	C	C

Notes:

1. In vertical exitways of buildings three stories or less in height of other than Group I Restrained and Group D, the interior finish may be Class B for unsprinklered buildings and Class C for sprinklered buildings.
2. Class C interior finish materials may be used within a dwelling unit.
3. Rooms with 4 or fewer persons require Class C interior finish.
4. Class C interior finish materials are not permitted in Group R4 occupancies.
5. Stairways, corridors and lobbies.

803.3.2 - 803.8.1

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

803.4 Foam plastics. Foam plastics shall not be used as interior finish.

Exception: Foam plastic trim, defined as picture molds, chair rails, baseboards, handrails, ceiling beams, door trim and window trim shall be permitted to be used provided:

1. The minimum density is 20 lb/cu ft (320 kg/m³).
2. The maximum thickness of the trim is 1/2 inch (12.7 mm) and the maximum width is 4 inches (102 mm).
3. The trim constitutes no more than 10 percent of the area of any wall or ceiling.
4. The flamespread rating does not exceed 75 when tested per ASTM E 84. The smoke developed rating is not limited.

803.5 Carpet on walls and ceilings

803.5.1 Textile materials having a napped, tufted, looped, woven, nonwoven or similar surface may be used as interior finish on ceilings only when said materials have a flamespread rating of 25 or less in accordance with ASTM E 84.

803.5.2 Textile wall coverings, including materials such as those having a napped, tufted, looped, nonwoven, woven or similar surface, shall comply with one of the following:

1. Textile wall coverings shall have a flamespread index of 25 or less in accordance with ASTM E 84 and shall be protected by automatic sprinklers, or
2. Textile wall coverings shall meet the acceptance criteria specified in 803.5.3 when tested in accordance with NFPA 265 using the product mounting system, including adhesive, of actual use.

803.5.3 Acceptance criteria

803.5.3.1 Textile wall coverings tested in accordance with NFPA 265 shall be considered as demonstrating satisfactory performance if, during the screening test protocol, all of the following conditions are met:

1. Flame shall not spread to the ceiling during the 40 kW exposure.
2. During the 150 kW exposure, the following criteria shall be met:
 1. Flame shall not spread to the outer extremity of the sample on the 8 ft x 12 ft wall.
 2. The specimen shall not burn to the outer extremity of the 2 ft wide samples mounted vertically in the corner of the room.
 3. Burning droplets shall not be formed and drop to the floor which are judged to be capable of igniting the textile wall covering or which persist in burning for 30 seconds or more.
 4. Flashover shall not occur. Flashover may be judged to occur when the heat flux at floor level exceeds 20 kW/m², upper level air temperatures within the room exceed 1100°F

(594°C) or flames project out the room door opening.

5. The maximum instantaneous net peak rate of heat release shall not exceed 300 kW. The maximum instantaneous net peak rate of heat release is derived by taking the measured maximum rate of heat release and subtracting the burner output.

803.5.3.2 Textile wall coverings which fail to meet the criteria of 803.5.3.1 shall be judged to perform satisfactorily when tested following the fully lined test protocol and when meeting all of the following criteria:

1. Flame shall not spread to the ceiling during the 40 kW exposure.
2. During the 150 kW exposure, the following criteria shall be met:
 1. Flame shall not spread to the outer extremities of the samples on the 8 ft x 12 ft walls.
 2. Flashover shall not occur. Flashover may be judged to occur when the heat flux at floor level exceeds 20 kW/m², upper level air temperatures exceed 1100°F (594°C) or flames project out the room door opening.

803.6 Expanded vinyl wall coverings

803.6.1 Expanded vinyl wall coverings shall comply with the requirements for textile wall and ceiling materials and its use shall be in accordance with 803.5.2.

803.7 Floor finish

803.7.1 In buildings of Type I or Type II construction, floor finish, if of combustible material, shall be applied directly upon the floor construction, except that a floor finish of wood, linoleum, rubber, tile or cork may be secured to a subfloor of wood. Where wood sleepers are used for laying wood floors or subfloors in such buildings, they shall be fireblocked so that there will not be an open space extending under any permanent partition. Where wood sleepers are used and the space between the floor slab and the underside of the floor or subfloor is more than 2 1/2 inches (64 mm), such space shall be filled with noncombustible material so that such space is not more than 2 1/2 inches (64 mm).

803.7.2 Combustible insulating boards may be used for sound deadening or insulating of floors, except that in buildings required to be of Type I or Type II construction, such insulating board shall not be more than 1/2 inch (12.7 mm) thick and cemented directly to the floor slab or secured to wood sleepers fireblocked as called for above and covered with approved finish flooring.

803.8 Floor covering

803.8.1 Finished floors or floor covering materials of a traditional type, such as wood, vinyl, linoleum, terrazzo and other resilient floor covering materials, are exempt from the requirements of this section. Carpet type floor coverings shall be tested as proposed for use including underlayment.

803.8.2 Carpet materials used on floors of exit access corridors and enclosed exits in other than Group I occupancies shall satisfactorily withstand a minimum critical radiant flux of 0.22 watt/cm² when tested in accordance with the NFPA 253.

Exception: Buildings equipped with an approved automatic sprinkler system.

803.8.3 Interior floor finish materials used on floors of exit access corridors and enclosed exits in Group I occupancies shall satisfactorily withstand a minimum critical radiant flux of 0.45 watt/cm² when tested in accordance with the NFPA 253.

803.8.4 All carpet required by this code to meet critical radiant flux limits established by NFPA 253 shall have been tested by an approved laboratory. A copy of the test report representing the style shall be provided to the building official upon request. The test report shall identify the carpet by manufacturer or supplier and style name and shall be representative of the current construction of the carpet.

803.8.5 The carpet shall be identified by a hang tag or other method suitable to identify the manufacturer or supplier and style and shall indicate the critical radiant flux level.

803.9 Application of interior finish

803.9.1 When walls and ceilings are required by any provision in this code to be of fire resistant, noncombustible, or fire retardant treated wood construction and the finish material is applied to furring strips not exceeding 1³/₄ inch (44 mm) thick applied directly against such surfaces, the intervening spaces between such furring strips shall be filled with inorganic or Class A materials or shall be fire-blocked not to exceed 8 ft (2438 mm) in any direction.

803.9.2 Where walls and ceilings are required to be of fire resistant, noncombustible, or fire retardant treated wood construction and walls are set out or ceilings are dropped distances greater than specified in 803.9.1, Class A finish materials shall be used except where the finish materials are protected on both sides by automatic fire extinguishing systems or are attached to a noncombustible or fire retardant treated wood backing or to furring strips installed as specified in 803.9.1. The hangers and assembly members of such dropped ceilings that are below the main ceiling line shall be of noncombustible or fire retardant treated wood materials.

803.9.3 Wall and ceiling finish materials of all Class A, B or C materials, as permitted, may be installed directly against the wood decking or planking of heavy timber construction or to wood furring strips applied directly to the wood decking or planking installed and firestopped as specified in 803.9.1.

803.9.4 Interior finish materials shall be cemented or otherwise fastened in place so that they will not readily become detached when subjected to room temperatures of 300°F (149°C) for 25 minutes.

803.10 Interior Plastic Signs. Applications using approved plastic interior signs shall comply with 2604.15. Applications using approved plastic interior signs in covered mall buildings shall comply with 413.13.

SECTION 804 ACOUSTICAL CEILING SYSTEMS

804.1 General. The quality, design, fabrication and erection of metal suspension systems for acoustical tile and lay-in panel ceilings in buildings or structures shall conform to good engineering practice, the provisions of this chapter and other applicable requirements of this code.

804.2 Materials and installation

804.2.1 Acoustical materials complying with the interior finish requirements of 803 shall be installed in accordance with the manufacturer's recommendations and applicable provisions for applying interior finish.

804.2.2 Suspended acoustical ceiling systems shall be installed in accordance with the provisions of ASTM C 635 and ASTM C 636.

804.2.3 Acoustical ceiling systems which are part of a fire resistant construction shall be installed in the same manner used in the assembly tested and shall comply with the provisions of 701 of this code. If the weight of lay-in ceiling panels, used as a part of fire resistant floor/ceiling or roof/ceiling assemblies, is not adequate to resist an upward force of 1 psf (48 Pa), wire or other approved devices shall be installed above the panels to prevent upward displacement under such upward force.

