

Excerpt from 2009 International Building Code (IBC)  
Chapter 8: Interior Finishes  
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## CHAPTER 8

# INTERIOR FINISHES

### SECTION 801 GENERAL

**801.1 Scope.** Provisions of this chapter shall govern the use of materials used as *interior finishes, trim and decorative materials*.

**801.2 Interior wall and ceiling finish.** The provisions of Section 803 shall limit the allowable fire performance and smoke development of *interior wall and ceiling finish* materials based on occupancy classification.

**801.3 Interior floor finish.** The provisions of Section 804 shall limit the allowable fire performance of *interior floor finish* materials based on occupancy classification.

**[F] 801.4 Decorative materials and trim.** *Decorative materials* and *trim* shall be restricted by combustibility and the flame propagation performance criteria of NFPA 701, in accordance with Section 806.

**801.5 Applicability.** For buildings in flood hazard areas as established in Section 1612.3, *interior finishes, trim and decorative materials* below the design flood elevation shall be flood-damage-resistant materials.

**801.6 Application.** Combustible materials shall be permitted to be used as finish for walls, ceilings, floors and other interior surfaces of buildings.

**801.7 Windows.** Show windows in the exterior walls of the first *story* above grade shall be permitted to be of wood or of unprotected metal framing.

**801.8 Foam plastics.** Foam plastics shall not be used as *interior finish* except as provided in Section 803.4. Foam plastics shall not be used as interior *trim* except as provided in Section 806.3 or 2604.2. This section shall apply both to exposed foam plastics and to foam plastics used in conjunction with a textile or vinyl facing or cover.

### SECTION 802 DEFINITIONS

**802.1 General.** The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

**EXPANDED VINYL WALL COVERING.** Wall covering consisting of a woven textile backing, an expanded vinyl base coat layer and a nonexpanded vinyl skin coat. The expanded base coat layer is a homogeneous vinyl layer that contains a blowing agent. During processing, the blowing agent decomposes, causing this layer to expand by forming closed cells. The total thickness of the wall covering is approximately 0.055 inch to 0.070 inch (1.4 mm to 1.78 mm).

**FLAME SPREAD.** The propagation of flame over a surface.

**FLAME SPREAD INDEX.** A comparative measure, expressed as a dimensionless number, derived from visual

measurements of the spread of flame versus time for a material tested in accordance with ASTM E 84 or UL 723.

**INTERIOR FINISH.** *Interior finish* includes *interior wall and ceiling finish* and *interior floor finish*.

**INTERIOR FLOOR FINISH.** The exposed floor surfaces of buildings including coverings applied over a finished floor or *stair*, including risers.

**[F] INTERIOR FLOOR-WALL BASE.** Interior floor finish trim used to provide a functional and/or decorative border at the intersection of walls and floors.

**INTERIOR WALL AND CEILING FINISH.** The exposed interior surfaces of buildings, including but not limited to: fixed or movable walls and partitions; toilet room privacy partitions; columns; ceilings; and interior wainscoting, paneling or other finish applied structurally or for decoration, acoustical correction, surface insulation, structural fire resistance or similar purposes, but not including trim.

**SITE-FABRICATED STRETCH SYSTEM.** A system, fabricated on site and intended for acoustical, tackable or aesthetic purposes, that is comprised of three elements: (a) a frame (constructed of plastic, wood, metal or other material) used to hold fabric in place, (b) a core material (infill, with the correct properties for the application), and (c) an outside layer, comprised of a textile, fabric or vinyl, that is stretched taut and held in place by tension or mechanical fasteners via the frame.

**SMOKE-DEVELOPED INDEX.** A comparative measure, expressed as a dimensionless number, derived from measurements of smoke obscuration versus time for a material tested in accordance with ASTM E 84.

**TRIM.** Picture molds, chair rails, baseboards, handrails, door and window frames and similar decorative or protective materials used in fixed applications.

### SECTION 803 WALL AND CEILING FINISHES

**803.1 General.** *Interior wall and ceiling finish* materials shall be classified for fire performance and smoke development in accordance with Section 803.1.1 or 803.1.2, except as shown in Sections 803.2 through 803.13. Materials tested in accordance with Section 803.1.2 shall not be required to be tested in accordance with Section 803.1.1.

**803.1.1 Interior wall and ceiling finish materials.** Interior wall and ceiling finish materials shall be classified in accordance with ASTM E 84 or UL 723. Such *interior finish* materials shall be grouped in the following classes in accordance with their flame spread and *smoke-developed indexes*.

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 tested in accordance with Section 803.1.2.

**803.1.2 Room corner test for interior wall or ceiling finish materials.** *Interior wall or ceiling finish* materials shall be permitted to be tested in accordance with NFPA 286. Interior wall or ceiling finish materials tested in accordance with NFPA 286 shall comply with Section 803.1.2.1.

**803.1.2.1 Acceptance criteria for NFPA 286.** 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 Items 3 and 4.

1. During the 40kW 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 peak rate of heat release throughout the NFPA 286 test shall not exceed 800 kW.
4. The total smoke released throughout the NFPA 286 test shall not exceed 1,000 m<sup>2</sup>.

**803.1.3 Room corner test for textile wall coverings and expanded vinyl wall coverings.** Textile wall coverings and expanded vinyl wall coverings shall meet the criteria of Section 803.1.3.1 when tested in the manner intended for use in accordance with the Method B protocol of NFPA 265 using the product-mounting system, including adhesive.

**803.1.3.1 Acceptance criteria for NFPA 265.** During the 40 kW exposure the *interior finish* shall comply with Item 1. During the 150 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 150 kW exposure, the *interior finish* shall comply with the following:
  - 2.1. Flame shall not spread to the outer extremities of the samples on the 8-foot by 12-foot (203 mm by 305 mm) walls.
  - 2.2. Flashover, as described in NFPA 265, shall not occur.
3. The total smoke released throughout the NFPA 265 test shall not exceed 1,000 m<sup>2</sup>.

**803.1.4 Acceptance criteria for textile and expanded vinyl wall or ceiling coverings tested to ASTM E 84 or**

**UL 723.** Textile wall and ceiling coverings and expanded vinyl wall and ceiling coverings shall have a Class A flame spread index in accordance with ASTM E 84 or UL 723 and be protected by an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2. Test specimen preparation and mounting shall be in accordance with ASTM E 2404.

**803.2 Thickness exemption.** Materials having a thickness less than 0.036 inch (0.9 mm) applied directly to the surface of walls or ceilings shall not be required to be tested.

**803.3 Heavy timber exemption.** Exposed portions of structural members complying with the requirements for buildings of Type IV construction in Section 602.4 shall not be subject to *interior finish* requirements.

**803.4 Foam plastics.** Foam plastics shall not be used as *interior finish* except as provided in Section 2603.9. This section shall apply both to exposed foam plastics and to foam plastics used in conjunction with a textile or vinyl facing or cover.

**803.5 Textile wall coverings.** Where used as interior wall finish materials, textile wall coverings, including materials having woven or nonwoven, napped, tufted, looped or similar surface and carpet and similar textile materials, shall be tested in the manner intended for use, using the product mounting system, including adhesive, and shall comply with the requirements of Section 803.1.2, 803.1.3 or 803.1.4.

**803.6 Textile ceiling coverings.** Where used as interior ceiling finish materials, textile ceiling coverings, including materials having woven or nonwoven, napped, tufted, looped or similar surface and carpet and similar textile materials, shall be tested in the manner intended for use, using the product mounting system, including adhesive, and shall comply with the requirements of Section 803.1.2 or 803.1.4.

**803.7 Expanded vinyl wall coverings.** Where used as interior wall finish materials, expanded vinyl wall coverings shall be tested in the manner intended for use, using the product mounting system, including adhesive, and shall comply with the requirements of Section 803.1.2, 803.1.3 or 803.1.4.

**803.8 Expanded vinyl ceiling coverings.** Where used as interior ceiling finish materials, expanded vinyl ceiling coverings shall be tested in the manner intended for use, using the product mounting system, including adhesive, and shall comply with the requirements of Section 803.1.2 or 803.1.4.

**803.9 Interior finish requirements based on group.** *Interior wall and ceiling finish* shall have a flame spread index not greater than that specified in Table 803.9 for the group and location designated. *Interior wall and ceiling finish* materials tested in accordance with NFPA 286 and meeting the acceptance criteria of Section 803.1.2.1, shall be permitted to be used where a Class A classification in accordance with ASTM E 84 or UL 723 is required.

**803.10 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 where subjected to room temperatures of 200°F (93°C) for not less than 30 minutes.

the main ceiling line shall be of noncombustible materials, except that in Types III and V construction, *fire-retardant-treated wood* shall be permitted. The construction of each set-out wall shall be of fire-resistance-rated construction as required elsewhere in this code.

**803.11.3 Heavy timber construction.** Wall and ceiling finishes of all classes as permitted in this chapter that are installed directly against the wood decking or planking of Type IV construction or to wood furring strips applied directly to the wood decking or planking shall be fireblocked as specified in Section 803.11.1.

**803.11.4 Materials.** An interior wall or ceiling finish that is not more than 1/4 inch (6.4 mm) thick shall be applied directly against a noncombustible backing.

**Exceptions:**

1. Noncombustible materials.
2. Materials where the qualifying tests were made with the material suspended or furred out from the noncombustible backing.

**803.12 High-density polyethylene (HDPE).** Where high-density polyethylene is used as an *interior finish*, it shall comply with the requirements of Section 803.1.2.

**803.13 Site-fabricated stretch systems.** Where used as interior wall or interior ceiling finish materials, site-fabricated stretch systems shall be tested in the manner intended for use, and shall comply with the requirements of Section 803.1.1 or 803.1.2. If the materials are tested in accordance with ASTM E 84 or UL 723, specimen preparation and mounting shall be in accordance with ASTM E 2573.

**SECTION 804  
INTERIOR FLOOR FINISH**

**804.1 General.** *Interior floor finish* and floor covering materials shall comply with Sections 804.2 through 804.4.1.

**Exception:** Floor finishes and coverings of a traditional type, such as wood, vinyl, linoleum or terrazzo, and resilient floor covering materials that are not comprised of fibers.

**804.2 Classification.** *Interior floor finish* and floor covering materials required by Section 804.4.1 to be of Class I or II materials shall be classified in accordance with NFPA 253. The classification referred to herein corresponds to the classifications determined by NFPA 253 as follows: Class I, 0.45 watts/cm<sup>2</sup> or greater; Class II, 0.22 watts/cm<sup>2</sup> or greater.

**804.3 Testing and identification.** *Interior floor finish* and floor covering materials shall be tested by an agency in accordance with NFPA 253 and identified by a hang tag or other suitable method so as to identify the manufacturer or supplier and style, and shall indicate the *interior floor finish* or floor covering classification according to Section 804.2. Carpet-type floor coverings shall be tested as proposed for use, including underlayment. Test reports confirming the information provided in the manufacturer's product identification shall be furnished to the building official upon request.

**804.4 Interior floor finish requirements.** In all occupancies, *interior floor finish* and floor covering materials in *exit* enclosures, *exit* passageways, corridors and rooms or spaces not separated from corridors by full-height partitions extending from the floor to the underside of the ceiling shall withstand a minimum critical radiant flux as specified in Section 804.4.1.

**804.4.1 Minimum critical radiant flux.** *Interior floor finish* and floor covering materials in *exit* enclosures, *exit* passageways and corridors shall not be less than Class I in Groups I-1, I-2 and I-3 and not less than Class II in Groups A, B, E, H, I-4, M, R-1, R-2 and S. In all areas, floor covering materials shall comply with the DOCFF-1 "pill test" (CPS 16 CFR, Part 1630).

**Exception:** Where a building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2, Class II materials are permitted in any area where Class I materials are required, and materials complying with the DOC FF-1 "pill test" (CPS 16 CFR, Part 1630) are permitted in any area where Class II materials are required.

**SECTION 805  
COMBUSTIBLE MATERIALS IN  
TYPES I AND II CONSTRUCTION**

**805.1 Application.** Combustible materials installed on or embedded in floors of buildings of Type I or II construction shall comply with Sections 805.1.1 through 805.1.3.

**Exception:** Stages and platforms constructed in accordance with Sections 410.3 and 410.4, respectively.

**805.1.1 Subfloor construction.** Floor sleepers, bucks and nailing blocks shall not be constructed of combustible materials, unless the space between the fire-resistance-rated floor assembly and the flooring is either solidly filled with noncombustible materials or fireblocked in accordance with Section 717, and provided that such open spaces shall not extend under or through permanent partitions or walls.

**805.1.2 Wood finish flooring.** Wood finish flooring is permitted to be attached directly to the embedded or fireblocked wood sleepers and shall be permitted where cemented directly to the top surface of fire-resistance-rated floor assemblies or directly to a wood subfloor attached to sleepers as provided for in Section 805.1.1.

**805.1.3 Insulating boards.** Combustible insulating boards not more than 1/2 inch (12.7 mm) thick and covered with finish flooring are permitted where attached directly to a noncombustible floor assembly or to wood subflooring attached to sleepers as provided for in Section 805.1.1.

**[F] SECTION 806  
DECORATIVE MATERIALS AND TRIM**

**[F] 806.1 General requirements.** In occupancies in 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 crite-

The 2009 ICC International Building Code (IBC) clarifies the definition of interior finish includes toilet partitions and therefore requires compliance with provisions for such. This will require either ASTM E 84 (tunnel test) or NFPA 286 (full scale room-corner test) testing. This is indicated in the green highlighted text.

The 2009 International Building Code (IBC) requires where high-density polyethylene (HDPE) is used as an interior finish it shall comply with NFPA 286 (full scale room-corner test). It is recommended when HDPE is being considered for use as an interior finish, ask for copy of NFPA 286 test results to confirm compliance. This is indicated in the yellow highlighted text.

Bobrick Washroom Equipment, Inc. presents this reprint to educate architects and building owners/management on code changes that impact the selection, specification and purchase of toilet partition and urinal screens. For further information on Bobrick Toilet Partitions, see Bobrick's current toilet partition catalog or visit [www.bobrick.com](http://www.bobrick.com).

