780 CMR 8.00

INTERIOR FINISHES

780 CMR 801.0 GENERAL

801.1 Scope. Provisions of 780 CMR 8.00 shall govern the use of materials used as interior finishes, trim and decorative materials.

801.1.1 Interior Finishes. These provisions shall limit the allowable flame spread and smoke development 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 or ceilings.
2. Exposed portions of structural members complying with the requirements for buildings of Type IV construction in 780 CMR 602.4 shall not be subject to interior finish requirements.

801.1.2 Decorative Materials and Trim. Decorative materials and trim shall be restricted by combustibility and flame resistance in accordance with 780 CMR 805.0.

801.1.3 Applicability. For buildings in flood hazard areas as established in 780 CMR 1612.3, interior finishes, trim and decorative materials below the design flood elevation shall be flood-damage-resistant materials.

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

801.2.1 Windows. Show windows in the first story of buildings shall be permitted to be of wood or of unprotected metal framing.

801.2.2 Foam Plastics. Foam plastics shall not be used as interior finish or trim except as provided in 780 CMR 2603.7 or 2604.0.

780 CMR 802.0 DEFINITIONS

802.1 General. The following words and terms shall, for the purposes of 780 CMR 8.00 and as used elsewhere in 780 CMR, have the meanings shown in 780 CMR 802.1.

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 RESISTANCE. That property of materials or combinations of component materials that restricts the spread of flame in accordance with NFPA 701.

FLAME SPREAD. The propagation of flame over a surface.

FLAME SPREAD INDEX. The numerical value assigned to a material tested in accordance with ASTM E 84.

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

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

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

SMOKE-DEVELOPED INDEX. The numerical value assigned to 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.

780 CMR 803.0 WALL AND CEILING FINISHES

803.1 General. Interior wall and ceiling finishes shall be classified in accordance with ASTM E 84. 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 0-25; smoke-developed 0-450.

Class B: Flame spread 26-75; smoke-developed 0-450.

Class C: Flame spread 76-200; smoke-developed 0-450.

Exception.0 Materials, other than textiles, tested in accordance with 780 CMR 803.2.

803.2. 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 780 CMR 803.2.1.

803.2.1 Acceptance Criteria. During the 40 kW exposure, the interior finish shall comply with 780 CMR 803.2.1 Item 1. During the 160 kW exposure, the interior finish shall comply with780 CMR 803.2.1 Item 2. During the entire test, the interior finish shall comply with 780 CMR 803.2.1 Item 3.

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 total smoke released throughout the NFPA 286 test shall not exceed 1,000 m^2.

803.3 Stability. Interior finish materials regulated by 780 CMR 8.00 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.

803.4 Application. Where these materials are applied on walls, ceilings or structural elements required to have a fire-resistance rating or to be of noncombustible construction, they shall comply with the provisions of 780 CMR.

803.4.1 Direct Attachment and Furred Construction. Where walls and ceilings are required by any provision in 780 CMR to be of fire-resistance-rated or noncombustible construction, the interior finish material shall be applied directly against such construction or to furring strips not exceeding 1.75 inches (44 mm) applied directly against such surfaces. The intervening spaces between such furring strips shall be filled with inorganic or Class A material or shall be fireblocked at a maximum of eight feet (2438 mm) in any direction in accordance with 780 CMR 717.0.

803.4.2 Set-out Construction. Where walls and ceilings are required to be of fire-resistance-rated or noncombustible construction and walls are set out or ceilings are dropped distances greater than specified in 780 CMR 803.4.1, Class A finish materials shall be used except where interior finish materials are protected on both sides by an automatic sprinkler system or attached to noncombustible backing or furring strips installed as specified in 780 CMR 803.4.1. The hangers and assembly members of such dropped ceilings that are below the main ceiling line shall be of noncombustible materials, except that in Type 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 780 CMR.

803.4.3 Heavy Timber Construction. Wall and ceiling finishes of all classes as permitted in 780 CMR 8.00 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 780 CMR 803.4.1.

803.4.4 Materials. An interior wall or ceiling finish that is not more than 0.25 inch (6.4 mm) thick shall be applied directly against a noncombustible backing.

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

803.5 Interior Finish Requirements Based on Group. Interior wall and ceiling finish shall have a flame spread index not greater than that specified in Table 803.5 for the group and location designated. Interior wall and ceiling finish materials, other than textiles, tested in accordance with NFPA 286 and meeting the acceptance criteria of 780 CMR 803.2.1, shall be permitted to be used where a Class A classification in accordance with ASTM E 84 is required.

TABLE 803.5 INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY

GROUP	SPRINKLERED[l]			NONSPRINKLERED		
	Vertical exits and exit passageways[a, b]	Exit access corridors and other exitways	Rooms and enclosed spaces[c]	Vertical exits and exit passageways[a, b]	Exit access corridors and other exitways	Rooms and enclosed spaces[c]
A-1 & A-2	B	B	C	A	A[d]	B[e]
A-3[f], A-4, A-5	B	B	C	A	A[d]	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[g]	A	A	B
I-1	B	C	C	A	B	B
I-2	B	B	B[h, I]	A	A	B
I-3	A	A[j]	C	A	A	B
I-4	B	B	B[h, I]	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^2.

a. Class C interior finish materials shall be permitted for wainscotting 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 fire blocked as required by 780 CMR 803.4.1.
b. In vertical exits of buildings less than three stories in height of other than Group I-3, Class B interior finish for non sprinklered buildings and Class C interior finish 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 enclosing spaces and the rooms or spaces on both sides shall be considered 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 A-1, A-2 and A-3 occupancies shall not be less than Class B materials.
e. Class C interior finish materials shall be permitted in places of assembly 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 material 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 wainscotting extending not more than 48 inches above the finished floor in exit access corridors.
k. Finish materials as provided for in other sections of 780 CMR.
l. Applies when the vertical exits, exit passageways, exit access corridors or exit ways, or rooms and spaces are protected by a sprinkler system installed in accordance with 780 CMR 903.3.1.1 or 903.3.1.2.

803.6 Textiles. Where used as interior wall or ceiling finish materials, textiles, including materials having woven or nonwoven, napped, tufted, looped or similar surface, shall comply with the requirements of 780 CMR 803.6.

803.6.1 Textile Wall Coverings. Textile wall coverings shall have a Class A flame spread index in accordance with ASTM E 84 and be protected by automatic sprinklers installed in accordance with 780 CMR 903.3.1.1 or 903.3.1.2 or the covering shall meet the criteria of 780 CMR 803.6.1.1 or 803.6.1.2 when tested in the manner intended for use in accordance with NFPA 265 using the product mounting system, including adhesive.

803.6.1.1 Method A Test Protocol. During the Method A protocol, flame shall not spread to the ceiling during the 40 kW exposure. During the 150 kW exposure, the textile wall covering shall comply with all of the following:

1. Flame shall not spread to the outer extremity of the sample on the 8-foot by 12-foot (203 mm by 305 mm) wall.
2. The specimen shall not burn to the outer extremity of the two-foot-wide (610 mm) samples mounted in the corner of the room.
3. Burning droplets deemed capable of igniting textile wall coverings or that burn for 30 seconds or more shall not form.
4. Flashover, as defined in NFPA 265, shall not occur.

5. The maximum net instantaneous peak heat release rate, determined by subtracting the burner output from the maximum heat release rate, does not exceed 300 kW.

803.6.1.2 Method B Test Protocol. During the Method B protocol, flames shall not spread to the ceiling at any time during the 40 kW exposure. During the 150 kW exposure, the textile wall covering shall comply with the following:

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. Flashover, as described in NFPA 265, shall not occur.

803.6.2 Textile Ceiling Finish. Where used as a ceiling finish, carpet and similar textile materials shall have a Class A flame spread index in accordance with ASTM E 84 and be protected by automatic sprinklers.

803.7 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 780 CMR 803.6.

Exception: Expanded vinyl wall or ceiling coverings complying with 780 CMR 803.2 shall not be required to comply with 780 CMR 803.1 or 803.6.

803.8 Insulation. Thermal and acoustical insulation shall comply with 780 CMR 719.0.

803.9 Acoustical Ceiling Systems. The quality, design, fabrication and erection of metal suspension systems for acoustical tile and lay-in panel ceilings in buildings or structures shall conform with generally accepted engineering practice, the provisions of 780 CMR 8.00 and other applicable requirements of 780 CMR.

803.9.1 Materials and Installation. Acoustical materials complying with the interior finish requirements of 780 CMR 803 shall be installed in accordance with the manufacturer's recommendations and applicable provisions for applying interior finish.

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

803.9.1.2 Fire-resistance-rated Construction. Acoustical ceiling systems that are part of fire-resistance-rated construction shall be installed in the same manner used in the assembly tested and shall comply with the provisions of 780 CMR 7.00.

780 CMR 804.0 INTERIOR FLOOR FINISH

804.1 General. Interior floor finish and floor covering materials shall comply with 780 CMR 804.0.

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

804.2 Classification. Interior floor finish and floor covering materials required by 780 CMR 804.5.1 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^2 or greater; Class II, 0.22 watts/cm^2 or greater.

804.3 Testing and Identification. Floor covering materials shall be tested by an approved 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 780 CMR 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 Application. Combustible materials installed in or on floors of buildings of Type I or II construction shall conform with the requirements of 780 CMR 804.4.

Exception: Stages and platforms constructed in accordance with 780 CMR 410.3 and 410.4, respectively.

804.4.1 Subfloor Construction. Floor sleepers, bucks and nailing blocks shall not be constructed of combustible materials, unless the space between the fire-resistance-rated floor construction and the flooring is either solidly filled with approved noncombustible materials or fireblocked in accordance with 780 CMR 717.0, and provided that such open spaces shall not extend under or through permanent partitions or walls.

804.4.2 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 approved fire-resistance-rated construction or directly to a wood subfloor attached to sleepers as provided for in 780 CMR 804.4.1.

804.4.3 Insulating Boards. Combustible insulating boards not more than 0.5-inch (12.7 mm) thick and covered with approved finished flooring are permitted, where attached directly to a noncombustible floor assembly or to wood subflooring attached to sleepers as provided for in 780 CMR 804.4.1.

804.5 Interior Floor Finish Requirements. In all occupancies, interior floor finish in vertical exits, exit passageways, exit access corridors and rooms or spaces not separated from exit access 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 780 CMR 804.5.1.

804.5.1 Minimum Critical Radiant Flux. Interior floor finish in vertical exits, exit passageways and exit access corridors shall not be less than Class I in Groups 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 other areas, the interior floor finish shall comply with the DOC FF-1 "pill test" (CPSC 16 CFR, Part 1630).

Exception: Where a building is equipped throughout with an automatic sprinkler system in accordance with 780 CMR 903.3.1.1, Class II materials are permitted in any area where Class I materials are required and materials complying with DOC FF-1 "pill test" (CPSC 16 CFR, Part 1630) are permitted in any area where Class II materials are required.

780 CMR 805.0 DECORATIONS AND TRIM

805.1 General. In all occupancies, curtains, draperies, hangings and other decorative materials suspended from walls or ceilings shall satisfy all applicable requirements of 527 CMR.

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

805.1.2 Flame-resistant Materials. Reserved.

805.2 Acceptance Criteria and Reports. Reserved

805.3 Foam Plastic. Foam plastic used as trim in any occupancy shall comply with 780 CMR 2604.2.

Exception: Foam plastics utilized in A-2nc Uses are subject to *780 CMR 26.00*

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 minimum Class C flame spread and smoke-developed indexes. Combustible trim, excluding handrails and guardrails, shall not exceed 10% of the aggregate wall or ceiling area in which it is located.

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