780 CMR 26.00

PLASTIC

780 CMR 2601.0 GENERAL

2601.1 Scope. 780 CMR 26.00 shall govern the materials, design, application, construction and installation of foam plastic, foam plastic insulation, plastic veneer, interior plastic finish and trim and light-transmitting plastics. See 780 CMR 14.00 for requirements for exterior wall finish and trim.

Note: Requirements of 527 CMR 12.00: *Massachusetts Electrical Code* will also impact wiring/lighting requirements of 780 CMR 26.00.

780 CMR 2602.0 DEFINITIONS

2602.1 General. The following words and terms shall, for the purposes of 780 CMR 26.00 and as used elsewhere in 780 CMR, have the meanings shown in 780 CMR 2602.1.

CELLULAR OR FOAMED PLASTIC. A heterogeneous system comprised of not less than two phases, one of which is a continuous polymeric organic material, and the second of which is deliberately introduced for the purpose of distributing gas in voids throughout the material.

Cellular or foamed plastic might contain foamed and unfoamed polymeric or monomeric precursors (prepolymer, if used), plasticizers, fillers, extenders, catalysts, blowing agents, colorants, stabilizers, lubricants, surfactants, pigments, reaction control agents, processing aids, and flame retardants.

Cellular or foamed plastic can be flexible or rigid and can be thermoplastic (melts and drips when exposed to heat or flame) or thermoset (chars when exposed to heat or flame).

Such plastic is intentionally expanded by the use of a foaming agent to produce a reduced-density plastic containing voids consisting of open or closed cells distributed throughout the plastic for thermal insulating or acoustical purposes and that has a density less than 20 pounds per cubic foot (pcf) (320 kg/m^3).

LIGHT-DIFFUSING SYSTEM. Construction consisting in whole or in part of lenses, panels, grids or baffles made with light-transmitting plastics positioned below independently mounted electrical light sources, skylights or light-transmitting plastic roof panels. Lenses, panels, grids and baffles that are part of an electrical fixture shall not be considered as a light-diffusing system.

LIGHT-TRANSMITTING PLASTIC ROOF PANELS. Structural plastic panels other than skylights that are fastened to structural members, or panels or sheathing and that are used as light-transmitting media in the plane of the roof.

LIGHT-TRANSMITTING PLASTIC WALL PANELS. Plastic materials that are fastened to structural members, or to structural panels or sheathing, and that are used as light-transmitting media in exterior walls.

PLASTIC, APPROVED. Any thermoplastic, thermosetting or reinforced thermosetting plastic material that conforms to combustibility classifications specified in the section applicable to the application and plastic type.

PLASTIC GLAZING. Plastic materials that are glazed or set in frame or sash and not held by mechanical fasteners that pass through the glazing material.

REINFORCED PLASTIC, GLASS FIBER. Plastic reinforced with glass fiber having not less than 20% of glass fibers by weight.

THERMOPLASTIC MATERIAL. A plastic material that is capable of being repeatedly softened by increase of temperature and hardened by decrease of temperature.

THERMOSETTING MATERIAL. A plastic material that is capable of being changed into a substantially nonreformable product when cured.

780 CMR 2603.0 FOAM PLASTIC INSULATION

2603.1 General. The provisions of 780 CMR 2603.0 shall govern the requirements and uses of foam plastic insulation in buildings and structures.

2603.2 Labeling and Identification. Packages and containers of foam plastic insulation and foam plastic insulation components delivered to the job site shall bear the label of an approved agency showing the manufacturer's name, the product listing, product identification and information sufficient to determine that the end use will comply with the code requirements.

2603.3 Surface-burning Characteristics. Unless otherwise indicated in 780 CMR 2603.3, foam plastic insulation and foam plastic cores of manufactured assemblies shall have a flame spread index of not more than 75 and a smoke-developed index of not more than 450 where tested in the maximum thickness intended for use in accordance with ASTM E 84. Loose fill-type foam plastic insulation shall be tested as board stock for the flame spread index and smoke-developed index.

Exceptions:
1. Smoke-developed index for interior trim as provided for in 780 CMR 2604.2.
2. In cold storage buildings, ice plants, food plants, food processing rooms and similar areas, foam plastic insulation where tested in a thickness of four inches (102 mm) shall be permitted in a thickness up to ten inches (254 mm) where the building is equipped throughout with an automatic fire sprinkler system in accordance with 780 CMR 903.3.1.1. The approved automatic sprinkler system shall be provided in both the room and that part of the building in which the room is located.
3. Foam plastic insulation that is a part of a Class A, B or C roof-covering assembly provided the assembly with the foam plastic insulation satisfactorily passes FM 4450 or UL 1256. The smoke-developed index shall not be limited for roof applications.
4. Foam plastic insulation greater than 4 inches (102 mm) in thickness shall have a maximum flame spread index of 75 and a smoke-developed index of 450 where tested at a minimum thickness of four inches (102 mm), provided the end use is approved in accordance with 780 CMR 2603.8 using the thickness and density intended for use.
5. Flame spread and smoke-developed indexes for foam plastic interior signs in covered mall buildings provided the signs comply with 780 CMR 402.14.

2603.4 Thermal Barrier. Except as provided for in 780 CMR 2603.4.1 and 2603.8, foam plastic shall be separated from the interior of a building by an approved thermal barrier of 0.5-inch (12.7 mm) gypsum wallboard or equivalent thermal barrier material that will limit the average temperature rise of the unexposed surface to not more than 250°F (120°C) after 15 minutes of fire exposure, complying with the standard time-temperature curve of ASTM E 119. The thermal barrier shall be installed in such a manner that it will remain in place for 15 minutes based on FM 4880, UL 1040, NFPA 286 or UL 1715. Combustible concealed spaces shall comply with 780 CMR 717.0.

2603.4.1 Thermal Barrier Not Required. The thermal barrier specified in 780 CMR 2603.4 is not required under the conditions set forth in 780 CMR 2603.4.1.1 through 2603.4.1.13.

2603.4.1.1 Masonry or Concrete Construction. In a masonry or concrete wall, floor or roof system where the foam plastic insulation is covered on each face by a minimum of one inch (25 mm) thickness of masonry or concrete.

2603.4.1.2 Cooler and Freezer Walls. Foam plastic installed in a maximum thickness of ten inches (254 mm) in cooler and freezer walls shall:

1. Have a flame spread index of 25 or less and a smoke-developed index of not more than 450, where tested in a minimum 4 inch (102 mm) thickness.
2. Have flash ignition and self-ignition temperatures of not less than 600°F and 800°F (316°C and 427°C), respectively.
3. Have a covering of not less than 0.032-inch (0.8 mm) aluminum or corrosion-resistant steel having a base metal thickness not less than 0.0160 inch (0.4 mm) at any point.
4. Be protected by an automatic sprinkler system. Where the cooler or freezer is within a building, both the cooler or freezer and that part of the building in which it is located shall be sprinklered.

2603.4.1.3 Walk-in Coolers. In nonsprinklered buildings, foam plastic having a thickness that does not exceed four inches (102 mm) and a maximum flame spread index of 75 is permitted in walk-in coolers or freezer units where the aggregate floor area does not exceed 400 square feet (37 m^2) and the foam plastic is covered by a metal facing not less than 0.032-inch-thick (0.81 mm) aluminum or corrosion-resistant steel having a minimum base metal thickness of 0.016 inch (0.41 mm). A thickness of up to ten inches (254 mm) is permitted where protected by a thermal barrier.

2603.4.1.4 Exterior Walls - One-story Buildings. For one-story buildings, foam plastic having a flame spread index of 25 or less, and a smoke-developed index of not more than 450, shall be permitted without thermal barriers in or on exterior walls in a thickness not more than four inches (102 mm) where the foam plastic is covered by a thickness of not less than 0.032-inch-thick (0.81 mm) aluminum or corrosion-resistant steel having a base metal thickness of 0.0160 inch (0.41 mm) and the building is equipped throughout with an automatic sprinkler system in accordance with 780 CMR 903.3.1.1.

2603.4.1.5 Roofing. Foam plastic insulation under a roof assembly or roof covering that is installed in accordance with the code and the manufacturer's instructions shall be separated from the interior of the building by wood structural panel sheathing not less than 0.47 inch (11.9 mm) in thickness bonded with exterior glue, with edges supported by blocking, tongue-and-groove joints or other approved type of edge support, or an equivalent material. A thermal barrier is not required for foam plastic insulation that is a part of a Class A, B or C roof-covering assembly, provided the assembly with the foam plastic insulation satisfactorily passes FM 4450 or UL 1256.

2603.4.1.6 Attics and Crawl Spaces. Within an attic or crawl space where entry is made only for service of utilities, foam plastic insulation shall be protected against ignition by 1.5-inch-thick (38 mm) mineral fiber insulation; 0.25-inch-thick (6.4 mm) wood structural panel, particleboard or hardboard; 0.375-inch (9.5 mm) gypsum wallboard, corrosion-resistant steel having a base metal thickness of 0.016 inch (0.4 mm) or other approved material installed in such a manner that the foam plastic insulation is not exposed. The protective covering shall be consistent with the requirements for the type of construction.

2603.4.1.7 Doors Not Required to Have a Fire Protection Rating. Where pivoted or side-hinged doors are permitted without a fire protection rating, foam plastic insulation, having a flame spread index of 75 or less and a smoke-developed index of not more than 450, shall be permitted as a core material where the door facing is of metal having a minimum thickness of 0.032-inch (0.8 mm) aluminum or steel having a base metal thickness of not less than 0.016 inch (0.4 mm) at any point.

2603.4.1.8 Exterior Doors in Buildings of Group R-2 or R-3. In occupancies classified as Group R-2 or R-3 as applicable in 780 CMR 3.00, foam-filled exterior entrance doors to individual dwelling units that do not require a fire-resistance rating shall be faced with wood or other approved materials.

2603.4.1.9 Garage Doors. Where garage doors are permitted without a fire-resistance rating and foam plastic is used as a core material, the door facing shall be metal having a minimum thickness of 0.032-inch (0.8 mm) aluminum or 0.010-inch (0.25 mm) steel or the facing shall be minimum 0.125-inch-thick (3.2 mm) wood. Garage doors having facings other than those described above shall be tested in accordance with, and meet the acceptance criteria of DASMA 107.

Exception. Garage doors using foam plastic insulation complying with 780 CMR 2603.3 in detached and attached garages associated with one- and two-family dwellings need not be provided with a thermal barrier.

2603.4.1.10 Siding Backer Board. Foam plastic insulation of not more than 2,000 British thermal units per square feet (Btu/sq. ft.) (22.7 MJ/m^2) as determined by NFPA 259 shall be permitted as a siding backer board with a maximum thickness of 0.5 inch (12.7 mm), provided it is separated from the interior of the building by not less than two inches (51 mm) of mineral fiber insulation or equivalent or where applied as insulation with residing over existing wall construction.

2603.4.1.11 Interior Trim. Foam plastic used as interior trim in accordance with 780 CMR 2604.0 shall be permitted without a thermal barrier.

2603.4.1.12 Interior Signs. Foam plastic used for interior signs in covered mall buildings in accordance with 780 CMR 402.14 shall be permitted without a thermal barrier.

2603.4.1.13 Type V Construction. Foam plastic spray applied to a sill plate and header of Type V construction is subject to all of the following:

1. The maximum thickness of the foam plastic shall be 3¼ inches (82.6 mm).
2. The density of the foam plastic shall be in the range of 1.5 to 2.0 pcf (24 to 32 kg/m^3).
3. The foam plastic shall have a flame spread index of 25 or less and an accompanying smoke-developed index of 450 or less when tested in accordance with ASTM E84.

2603.5 Exterior Walls of Buildings of Any Height. Exterior walls of buildings of Type I, II, III or IV construction of any height shall comply with 780 CMR 2603.5.1 through 2603.5.7. Exterior walls of cold storage buildings required to be constructed of noncombustible materials, where the building is more than one story in height, shall also comply with the provisions of 780 CMR 2603.5.1 through 2603.5.7. Exterior walls of buildings of Type V construction shall comply with 780 CMR 2603.2, 2603.3 and 2603.4.

2603.5.1 Fire-resistance-rated Walls. Where the wall is required to have a fire-resistance rating, data based on tests conducted in accordance with ASTM E 119 shall be provided to substantiate that the fire-resistance rating is maintained.

2603.5.2 Thermal Barrier. Any foam plastic insulation shall be separated from the building interior by a thermal barrier meeting the provisions of 780 CMR 2603.4, unless special approval is obtained on the basis of 780 CMR 2603.8.

Exception. One-story buildings complying with 780 CMR 2603.4.1.4.

2603.5.3 Potential Heat. The potential heat of foam plastic insulation in any portion of the wall or panel shall not exceed the potential heat expressed in Btu per square feet (mJ/m^2) of the foam plastic insulation contained in the wall assembly tested in accordance with 780 CMR 2603.5.5. The potential heat of the foam plastic insulation shall be determined by tests conducted in accordance with NFPA 259 and the results shall be expressed in Btu per square feet (mJ/m^2).

Exception. One-story buildings complying with 780 CMR 2603.4.1.4.

2603.5.4 Flame Spread and Smoke-developed Indexes. Foam plastic insulation, exterior coatings and facings shall be tested separately in the thickness intended for use, but not to exceed four inches (102 mm), and shall each have a flame spread index of 25 or less and a smoke-developed index of 450 or less as determined in accordance with ASTM E 84.

Exception. Prefabricated or factory-manufactured panels having minimum 0.020-inch (0.51 mm) aluminum facings and a total thickness of 0.25 inch (6.4 mm) or less are permitted to be tested as an assembly where the foam plastic core is not exposed in the course of construction.

2603.5.5 Test Standard. The wall assembly shall be tested in accordance with and comply with the acceptance criteria of NFPA 285.

Exception. One-story buildings complying with 780 CMR 2603.4.1.4.

2603.5.6 Label Required. The edge or face of each piece of foam plastic insulation shall bear the label of an approved agency. The label shall contain the manufacturer's or distributor's identification, model number, serial number or definitive information describing the product or materials' performance characteristics and approved agency's identification.

2603.5.7 Ignition. Exterior walls shall not exhibit sustained flaming where tested in accordance with NFPA 268. Where a material is intended to be installed in more than one thickness, tests of the minimum and maximum thickness intended for use shall be performed.

Exception. Assemblies protected on the outside with one of the following:

1. A thermal barrier complying with 780 CMR 2603.4.
2. A minimum one inch (25 mm) thickness of concrete or masonry.
3. Glass-fiber-reinforced concrete panels of a minimum thickness of 0.375 inch (9.5 mm).
4. Metal-faced panels having minimum 0.019- inch-thick (0.48 mm) aluminum or 0.016-inch- thick (0.41 mm) corrosion-resistant steel outer facings.
5. A minimum 0.875 inch (22.2 mm) thickness of stucco complying with 780 CMR 2510.

2603.6 Roofing. Foam plastic insulation meeting the requirements of 780 CMR 2603.2, 2603.3 and 2603.4 shall be permitted as part of a roof-covering assembly, provided the assembly with the foam plastic insulation is a Class A, B or C roofing assembly where tested in accordance with ASTM E 108 or UL 790.

2603.7 Plenums. Foam plastic insulation shall not be used as interior wall or ceiling finish in plenums except as permitted in 780 CMR 2604.0 or when protected by a thermal barrier in accordance with 780 CMR 2603.4.

2603.8 Special Approval. Foam plastic shall not be required to comply with the requirements of 780 CMR 2603.4 through 2603.7, where specifically approved based on large-scale tests such as, but not limited to, FM 4880, UL 1040, NFPA 286 or UL 1715. Such testing shall be related to the actual end-use configuration and be performed on the finished manufactured foam plastic assembly in the maximum thickness intended for use. Foam plastics that are used as interior finish on the basis of special tests shall also conform to the flame spread requirements of 780 CMR 8.00. Assemblies tested shall include seams, joints and other typical details used in the installation of the assembly and shall be tested in the manner intended for use.

780 CMR 2604.0 INTERIOR FINISH AND TRIM

2604.1 General. Plastic materials installed as interior finish or trim shall comply with 780 CMR 8.00. Foam plastics shall only be installed as interior finish where approved in accordance with the special provisions of 780 CMR 2603.8. Foam plastics that are used as interior finish shall also meet the flame spread index requirements for interior finish in accordance with 780 CMR 8.00. Foam plastics installed as interior trim shall comply with 780 CMR 2604.2.

2604.1.1 Foam Plastics for Use in A-2 Occupancies. Foam plastics shall not be permitted in A-2 USE occupancies unless the room or space in which the foam plastics are installed is/are equipped with an automatic fire suppression system in accordance with 780 CMR 904.3.

[F] 2604.2 Interior Trim. Foam plastic used as interior trim shall comply with 780 CMR 2604.2.1 through 2604.2.4.

[F] 2604.2.1 Density. The minimum density of the interior trim shall be 20 pcf (320 kg/m^3).

[F] 2604.2.2 Thickness. The maximum thickness of the interior trim shall be 0.5 inch (12.7 mm) and the maximum width shall be eight inches (204 mm).

[F] 2604.2.3 Area Limitation. The interior trim shall not constitute more than 10% of the aggregate wall and ceiling area of any room or space.

[F] 2604.2.4 Flame Spread. The flame spread index shall not exceed 75 where tested in accordance with ASTM E 84. The smoke-developed index shall not be limited.

780 CMR 2605.0 PLASTIC VENEER

2605.1 Interior Use. Where used within a building, plastic veneer shall comply with the interior finish requirements of 780 CMR 8.00.

2605.1.1 Foam Plastics for Use in A-2 Occupancies. Foam plastics shall not be permitted in A-2 USE occupancies unless the room or space in which the foam plastics are installed is/are equipped with an automatic fire suppression system in accordance with 780 CMR 904.3.

2605.2 Exterior Use. Exterior plastic veneer shall be permitted to be installed on the exterior walls of buildings of any type of construction in accordance with all of the following requirements:

1. Plastic veneer shall comply with 780 CMR 2606.4.
2. Plastic veneer shall not be attached to any exterior wall to a height greater than 50 feet (15 240 mm) above grade.
3. Sections of plastic veneer shall not exceed 300 square feet (27.9 m^2) in area and shall be separated by a minimum of 4 feet (1219 mm) vertically.

Exception. The area and separation requirements and the smoke-density limitation are not applicable to plastic veneer applied to buildings constructed of Type VB construction, provided the walls are not required to have a fire-resistance rating.

780 CMR 2606.0 LIGHT-TRANSMITTING PLASTICS

2606.1 General. The provisions of 780 CMR 2606.0 and780 CMR 2607 through 2611 shall govern the quality and methods of application of light-transmitting plastics for use as light-transmitting materials in buildings and structures. Foam plastics shall comply with 780 CMR 2603. 0. Light-transmitting plastic materials that meet the other code requirements for walls and roofs shall be permitted to be used in accordance with the other applicable chapters of 780 CMR.

2606.2 Approval for Use. Sufficient technical data shall be submitted to substantiate the proposed use of any light-transmitting material, as approved by the building official and subject to the requirements of 780 CMR2606.0.

2606.3 Identification. Each unit or package of light-transmitting plastic shall be identified with a mark or decal satisfactory to the building official, which includes identification as to the material classification.

2606.4 Specifications. Light-transmitting plastics, including thermoplastic, thermosetting or reinforced thermosetting plastic material, shall have a self-ignition temperature of 650°F (343°C) or greater where tested in accordance with ASTM D 1929; a smoke-developed index not greater than 450 where tested in the manner intended for use in accordance with ASTM E 84, or not greater than 75 where tested in the thickness intended for use in accordance with ASTM D 2843 and shall conform to one of the following combustibility classifications:

Class CC1. Plastic materials that have a burning extent of 1 inch (25 mm) or less where tested at a nominal thickness of 0.060 inch (1.5 mm), or in the thickness intended for use, in accordance with ASTM D 635,

Class CC2. Plastic materials that have a burning rate of 2.5 inches per minute (1.06 mm/s) or less where tested at a nominal thickness of 0.060 inch (1.5 mm), or in the thickness intended for use, in accordance with ASTM D 635.

2606.5 Structural Requirements. Light-transmitting plastic materials in their assembly shall be of adequate strength and durability to withstand the loads indicated in 780 CMR 16.00. Technical data shall be submitted to establish stresses, maximum unsupported spans and such other information for the various thicknesses and forms used as deemed necessary by the building official.

2606.6 Fastening. Fastening shall be adequate to withstand the loads in 780 CMR 16.00. Proper allowance shall be made for expansion and contraction of light-transmitting plastic materials in accordance with accepted data on the coefficient of expansion of the material and other material in conjunction with which it is employed.

2606.7 Light-diffusing Systems. Unless the building is equipped throughout with an automatic sprinkler system in accordance with 780 CMR 903.3.1.1, light-diffusing systems shall not be installed in the following occupancies and locations:

1. Group A with an occupant load of 1,000 or more.
2. Theaters with a stage and proscenium opening and an occupant load of 700 or more.
3. Group I-2.
4. Group I-3.
5. Exit stairways and exit passageways.

2606.7.1 Support. Light-transmitting plastic diffusers shall be supported directly or indirectly from ceiling or roof construction by use of noncombustible hangers. Hangers shall be at least No. 12 steel-wire gage (0.106 inch) galvanized wire or equivalent.

2606.7.2 Installation. Light-transmitting plastic diffusers shall comply with 780 CMR 8.00 unless the light-transmitting plastic diffusers will fall from the mountings before igniting, at an ambient temperature of at least 200°F (93°C) below the ignition temperature of the panels. The panels shall remain in place at an ambient room temperature of 175°F (79°C) for a period of not

less than 15 minutes.

2606.7.3 Size Limitations. Individual panels or units shall not exceed ten feet (3048 mm) in length nor 30 square feet (2.79 m^2) in area.

2606.7.4 Fire Suppression System. In buildings that are equipped throughout with an automatic sprinkler system in accordance with 780 CMR 903.3.1.1, plastic light-diffusing systems shall be protected both above and below unless the sprinkler system has been specifically approved for installation only above the light-diffusing system. Areas of light-diffusing systems that are protected in accordance with 780 CMR 2606.7 shall not be limited.

2606.7.5 Electrical Lighting Fixtures. Light-transmitting plastic panels and light-diffuser panels that are installed in approved electrical lighting fixtures, **conforming to all applicable requirements of 527 CMR 12.00: *Massachusetts Electrical Code***, shall comply with the requirements of 780 CMR 8.00 unless the light-transmitting plastic panels conform to the requirements of 780 CMR 2606.7.2. The area of approved light-transmitting plastic materials that are used in required exits or corridors shall not exceed 30% of the aggregate area of the ceiling in which such panels are installed, unless the building is equipped throughout with an automatic sprinkler system in accordance with 780 CMR 903.3.1.1.

2606.8 Partitions. Light-transmitting plastics used in or as partitions shall comply with the requirements of 780 CMR 6.00 and 8.00.

2606.9 Bathroom Accessories. Light-transmitting plastics shall be permitted as glazing in shower stalls, shower doors, bathtub enclosures and similar accessory units. Safety glazing shall be provided in accordance with 780 CMR 24.00.

2606.10 Awnings, Patio Covers and Similar Structures. Awnings constructed of light-transmitting plastics shall be constructed in accordance with provisions specified in 780 CMR 3105 and 780 CMR 32.00 for projections and appendages. Patio covers constructed of light-transmitting plastics shall comply with 780 CMR 2606. Light-transmitting plastics used in canopies at motor fuel-dispensing facilities shall comply with 780 CMR 2606 except as modified by 780 CMR 406.5.2.

2606.11 Greenhouses. Light-transmitting plastics shall be permitted in lieu of plain glass in greenhouses.

2606.12 Solar Collectors. Light-transmitting plastic covers on solar collectors having noncombustible sides and bottoms shall be permitted on buildings not over three stories in height or 9,000 square feet (836.1 m^2) in total floor area, provided the light-transmitting plastic cover does not exceed 33.33% of the roof area for CC1 materials or 25% of the roof area for CC2 materials.

Exception. Light-transmitting plastic covers having a thickness of 0.010 inch (0.3 mm) or less or shall be permitted to be of any plastic material provided the area of the solar collectors does not exceed 33.33% of the roof area.

780 CMR 2607.0 LIGHT-TRANSMITTING PLASTIC WALL PANELS

2607.1 General. Light-transmitting plastics shall not be used as wall panels in exterior walls in occupancies in Groups A-l, A-2, H, I-2 and I-3. In other groups, light-transmitting plastics shall be permitted to be used as wall panels in exterior walls, provided that the walls are not required to have a fire-resistance rating and the installation conforms to the requirements of 780 CMR 2607.0. Such panels shall be erected and anchored on a foundation, waterproofed or otherwise protected from moisture absorption and sealed with a coat of mastic or other approved waterproof coating. Light-transmitting plastic wall panels shall also comply with 780 CMR 2606.0.

2607.2 Installation. Exterior wall panels installed as provided for in 780 CMR 2607.0 shall not alter the type of construction classification of the building.

2607.3 Height Limitation. Light-transmitting plastics shall not be installed more than 75 feet (22 860 mm) above grade plane, except as allowed by 780 CMR 2607.5.

2607.4 Area Limitation and Separation. The maximum area of a single wall panel and minimum vertical and horizontal separation requirements for exterior light-transmitting plastic wall panels shall be as provided for in Table 2607.4. The maximum percentage of wall area of any story in light-transmitting plastic wall panels shall not exceed that indicated in Table 2607.4 or the percentage of unprotected openings permitted by 780 CMR 704.8, whichever is smaller.

Exceptions:

1. In structures provided with approved flame barriers extending 30 inches (760 mm) beyond the exterior wall in the plane of the floor, a vertical separation is not required at the floor except that provided by the vertical thickness of the flame barrier projection.
2. Veneers of approved weather-resistant light-transmitting plastics used as exterior siding in buildings of Type V construction in compliance with 780 CMR 1406.
3. The area of light-transmitting plastic wall panels in exterior walls of greenhouses shall be exempt from the area limitations of Table 2607.4 but shall be limited as required for unprotected openings in accordance with 780 CMR 704.8.

TABLE 2607.4 AREA LIMITATION AND SEPARATION REQUIREMENTS FOR LIGHT-TRANSMITTING PLASTIC WALL PANELS

FIRE SEPARATION DISTANCE (feet)	CLASS OF PLASTIC	MAXIMUM PERCENTAGE AREA OF EXTERIOR WALL IN PLASTIC WALL PANELS	MAXIMUM SINGLE AREA OF PLASTIC WALL PANELS (square feet)	MINIMUM SEPARATION OF PLASTIC WALL PANELS (feet)	
				Vertical	Horizontal
Less than 6		Not Permitted	Not Permitted		
6 or more but less than 11	CC1	10	50	8	4
	CC2	Not Permitted	Not Permitted		
11 or more but less than or equal to 30	CC1	25	90	6	4
	CC2	15	70	8	4
Over 30	CC1	50	Not Limited	3b	0
	CC2	50	100	6b	3

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m^2.

a. For combinations of plastic glazing and plastic wall panel areas permitted, see 780 CMR 2607.6.

b. For reductions in vertical separation allowed, see 780 CMR 2607.4.

2607.5 Automatic Sprinkler System. Where the building is equipped throughout with an automatic sprinkler system in accordance with 780 CMR 903.3.1.1, the maximum percentage area of exterior wall in any story in light-transmitting plastic wall panels and the maximum square footage of a single area given in Table 2607.4 shall be increased 100%, but the area of light-transmitting plastic wall panels shall not exceed 50% of the wall area in any story, or the area permitted by 780 CMR 704.8 for unprotected openings, whichever is smaller. These installations shall be exempt from height limitations.

2607.6 Combinations of Glazing and Wall Panels. Combinations of light-transmitting plastic glazing and light-transmitting plastic wall panels shall be subject to the area, height and percentage limitations and the separation requirements applicable to the class of light-transmitting plastic as prescribed for light-transmitting plastic wall panel installations.

780 CMR 2608.0 LIGHT-TRANSMITTING PLASTIC GLAZING

2608.1 Buildings of Type VB Construction. Openings in the exterior walls of buildings of Type VB construction, where not required to be protected by 780 CMR 704.0, shall be permitted to be glazed or equipped with light-transmitting plastic. Light-transmitting plastic glazing shall also comply with 780 CMR 2606.

2608.2 Buildings of Other Types of Construction. Openings in the exterior walls of buildings of types of construction other than Type VB, where not required to be protected by 780 CMR 704.0, shall be permitted to be glazed or equipped with light-transmitting plastic in accordance with 780 CMR 2606.0 and all of the following:

1. The aggregate area of light-transmitting plastic glazing shall not exceed 25% of the area of any wall face of the story in which it is installed. The area of a single pane of glazing installed above the first story above grade plane shall not exceed 16 square feet (1.5 m^2) and the vertical dimension of a single pane shall not exceed four feet (1219 mm).

   Exception. Where an automatic sprinkler system is provided throughout in accordance with 780 CMR 903.3.1.1, the area of allowable glazing shall be increased to a maximum of 50% of the wall face of the story in which it is installed with no limit on the maximum dimension or area of a single pane of glazing.

2. Approved flame barriers extending 30 inches (762 mm) beyond the exterior wall in the plane of the floor, or vertical panels not less than four feet (1219 mm) in height, shall be installed between glazed units located in adjacent stories.

   Exception. Buildings equipped throughout with an automatic sprinkler system in accordance with 780 CMR 903.3.1.1.

3. Light-transmitting plastics shall not be installed more than 75 feet (22 860 mm) above grade level.

   Exception. Buildings equipped throughout with an automatic sprinkler system in accordance with 780 CMR 903.3.1.1.

780 CMR 2609.0 LIGHT-TRANSMITTING PLASTIC ROOF PANELS

2609.1 General. Light-transmitting plastic roof panels shall comply with 780 CMR 2609.0 and 780 CMR 2606. Light-transmitting plastic roof panels shall not be installed in Groups H, I-2 and I-3. In all other groups, light-transmitting plastic roof panels shall comply with any one of the following conditions:

1. The building is equipped throughout with an automatic sprinkler system in accordance with 780 CMR 903.3.1.1.
2. The roof construction is not required to have a fire-resistance rating by Table 601.

3. The roof panels meet the requirements for roof coverings in accordance with 780 CMR 15.00.

2609.2 Separation. Individual roof panels shall be separated from each other by a distance of not less than four feet (1219 mm) measured in a horizontal plane.

Exceptions:
1. The separation between roof panels is not required in a building equipped throughout with an automatic sprinkler system in accordance with 780 CMR 903.3.1.1.
2. The separation between roof panels is not required in low-hazard occupancy buildings complying with the conditions of 780 CMR 2609.4, Exception 2. or 3.

2609.3 Location. Where exterior wall openings are required to be protected by 780 CMR 704.8, a roof panel shall not be installed within six feet (1829 mm) of such exterior wall.

2609.4 Area Limitations. Roof panels shall be limited in area and the aggregate area of panels shall be limited by a percentage of the floor area of the room or space sheltered in accordance with Table 2609.4.

Exceptions:
1. The area limitations of Table 2609.4 shall be permitted to be increased by 100% in buildings equipped throughout with an automatic sprinkler system in accordance with 780 CMR 903.3.1.1.
2. Low-hazard occupancy buildings, such as swimming pool shelters, shall be exempt from the area limitations of Table 2609.4, provided that the buildings do not exceed 5,000 square feet (465 m^2) in area and have a minimum fire separation distance of ten feet (3048 mm).
3. Greenhouses that are occupied for growing plants on a production or research basis, without public access, shall be exempt from the area limitations of Table 2609.4 provided they have a minimum fire separation distance of four feet (1220 mm).
4. Roof coverings over terraces and patios in occupancies in Group R-3 as applicable in 780 CMR 120.Z shall be exempt from the area limitations of Table 2609.4 and shall be permitted with light-transmitting plastics.

TABLE 2609.4 AREA LIMITATIONS FOR LIGHT-TRANSMITTING PLASTIC ROOF PANELS

CLASS OF PLASTIC	MAXIMUM AREA OF INDIVIDUAL ROOF PANELS (square feet)	MAXIMUM AGGREGATE AREA OF ROOF PANELS (percent of floor area)
CC1	300	30
CC2	100	25

For SI: 1 square foot = 0.0929 m^2.

780 CMR 2610.0 LIGHT-TRANSMITTING PLASTIC SKYLIGHT GLAZING

2610.1 Light-transmitting Plastic Glazing of Skylight Assemblies. Skylight assemblies glazed with light-transmitting plastic shall conform to the provisions of 780 CMR 2610.0 and 780 CMR 2606. Unit skylights glazed with light-transmitting plastic shall also comply with 780 CMR 2405.5.

Exception. Skylights in which the light-transmitting plastic conforms to the required roof-covering class in accordance with 780 CMR 1505.

2610.2 Mounting. The light-transmitting plastic shall be mounted above the plane of the roof on a curb constructed in accordance with the requirements for the type of construction classification, but at least four inches (102 mm) above the plane of the roof. Edges of light-transmitting plastic skylights or domes shall be protected by metal or other approved noncombustible material, or the light-transmitting plastic dome or skylight shall be shown to be able to resist ignition where exposed at the edge to a flame from a Class B brand as described in ASTM E 108 or UL 790.

Exceptions:
1. Curbs shall not be required for skylights used on roofs having a minimum slope of three units vertical in 12 units horizontal (25% slope) in occupancies in Group R-3 as applicable in 780 CMR 120.Z and on buildings with a nonclassified roof covering.
2. The metal or noncombustible edge material is not required where nonclassified roof coverings are permitted.

2610.3 Slope. Flat or corrugated light-transmitting plastic skylights shall slope at least four units vertical in 12 units horizontal (4:12). Dome-shaped skylights shall rise above the mounting flange a minimum distance equal to 10% of the maximum span of the dome but not less than three inches (76 mm).

Exception. Skylights that pass the Class B Burning Brand Test specified in ASTM E 108 or UL 790.

2610.4 Maximum Area of Skylights. Each skylight shall have a maximum area within the curb of 100 square feet (9.30 m^2).

Exception. The area limitation shall not apply where the building is equipped throughout with an automatic sprinkler system in accordance with 780 CMR 903.3.1.1 or the building is equipped with smoke and heat vents in accordance with 780 CMR 910.

2610.5 Aggregate Area of Skylights. The aggregate area of skylights shall not exceed 33⅓% of the floor area of the room or space sheltered by the roof in which such skylights are installed where Class CC1 materials are utilized, and 25% where

Class CC2 materials are utilized.

Exception. The aggregate area limitations of light-transmitting plastic skylights shall be increased 100% beyond the limitations set forth in 780 CMR 2610.5 where the building is equipped throughout with an automatic sprinkler system in accordance with 780 CMR 903.3.1.1 or the building is equipped with smoke and heat vents in accordance with 780 CMR 910.

2610.6 Separation. Skylights shall be separated from each other by a distance of not less than four feet (1219 mm) measured in a horizontal plane.

Exceptions:

1. Buildings equipped throughout with an automatic sprinkler system in accordance with 780 CMR 903.3.1.1.
2. In Group R-3 as applicable in 780 CMR 101.2, multiple skylights located above the same room or space with a combined area not exceeding the limits set forth in 780 CMR 2610.4.

2610.7 Location. Where exterior wall openings are required to be protected in accordance with 780 CMR 704.0, a skylight shall not be installed within six feet (1829 mm) of such exterior wall.

2610.8 Combinations of Roof Panels and Skylights. Combinations of light-transmitting plastic roof panels and skylights shall be subject to the area and percentage limitations and separation requirements applicable to roof panel installations.

780 CMR 2611.0 LIGHT-TRANSMITTING PLASTIC INTERIOR SIGNS

2611.1 General. Light-transmitting plastic interior wall signs shall be limited as specified in 780 CMR 2611.2 through 2611.4. Light-transmitting plastic interior wall signs in covered mall buildings shall comply with 780 CMR 402.14. Light-transmitting plastic interior signs shall also comply with 780 CMR 2606.

2611.2 Aggregate Area. The sign shall not exceed 20% of the wall area.

2611.3 Maximum Area. The sign shall not exceed 24 square feet (2.23 m^2).

2611.4 Encasement. Edges and backs of the sign shall be fully encased in metal.

NON-TEXT PAGE