

RULE XVI - PLASTICS

SECTION 1601. Approved Plastics

Approved plastic materials shall be those which have a **flame-spread rating of two hundred twenty five (225) or less** and a **smoke density not greater than that obtained from the burning of untreated wood under similar conditions** when tested in accordance with generally accepted engineering practices. The products of combustion shall be **no more toxic** than the burning of untreated wood under similar conditions.

SECTION 1602. Installation

1. *Structural Requirements* - All plastic materials shall be of adequate strength and durability to withstand the prescribed design loads. Sufficient and substantial technical data shall be submitted to establish stresses, maximum unsupported spans, and such other information as may be deemed necessary for the various thicknesses and forms used.
2. *Fastenings* - Fastenings shall be adequate to withstand design loads and internal and external stresses required of the assembly. Proper allowances of plastic materials in conjunction with other materials with which it is assembled or integrated shall be provided.

SECTION 1603. Glazing of Openings

1. The location of doors, sashes and framed openings glazed or equipped with approved plastics at the exterior walls of a building shall be so arranged that in case of fire, the occupants may use such openings to escape from the building to a place of safety. The travel distance from any point of the building towards the location of such openings should not be over 45.00 meters in any place of assembly for spaces **not** protected by automatic fire suppression and 60.00 meters in areas so protected.
2. Openings glazed with approved plastics at the ground floor shall be so located such that it shall open directly to a street or into an exit court. Such openings at the upper floor shall be so located at a horizontal distance not less than 3.00 meters from the enclosed stairway, outside stairway or exit passageway leading to a street or into an exit court.
3. The use of plastic doors, sashes and framings of openings for Group A to I Occupancies may be allowed except for entrance doors and exit doors which should be of materials other than plastics permitted by the Code.
4. The size of openings glazed with approved plastics shall have a minimum dimension where one person could pass through or 600 millimeters square.
5. The maximum size of such openings depends upon the structural strength and the fastening adequacy requirements of approved plastics being used.
6. The spacing between openings glazed with approved plastics shall have a minimum distance such that the materials used in between can withstand the vertical and lateral forces within the influence of such openings. The minimum distance shall be 2.00 meters for all spans.

SECTION 1604. Skylights

1. *General* - Approved plastics may be used in skylights installed on roofs of Types I, II or III Constructions and all buildings in these categories shall be equipped with an approved automatic fire-extinguishing system in Groups A, B, C, E, F, J, H-3 and H-4 Occupancies; *Except*, that:

- a. Approved plastics may be used in any type of construction or occupancy as a fire venting system when approved by the **Building Official**.
- b. Plastics may be used in approved skylights in **Type II one-hour fire-resistive** construction which are located 300 millimeters or more above the lower flange of the ceiling. The walls of the skylight well shall be no less fire-resistive than the adjacent ceiling.
- c. Where a fire-resistive ceiling is **not** required in one-storey buildings, approved plastics may be used in skylights.

2. *Installation Requirements*

- a. Except in Group A Occupancies, no skylight shall be installed within 3.00 meters of a property line.
- b. The edges of dome-type skylights shall be properly flashed.
- c. Plastic skylights shall be separated from each other by at least 2.50 meters laterally and 3.00 meters along the slope of the roof.

3. *Allowable areas* - The area of individual plastic skylights shall not exceed 10.00 square meters. The total aggregate area of plastics used in skylights, monitors, and sawtooth glazing shall not exceed 20% of the floor area of the room or occupancy sheltered.

4. *Curb Requirements* - Plastic skylights in roofs having a slope of less than 1 in 3 shall have a 100 millimeters high curb. The curb may be omitted where a wire screen not smaller than No. 12 U.S. gauge with a mesh not larger than 25 millimeters is provided immediately below the skylight. The screen shall be substantially mounted below the skylight.

SECTION 1605. Light-Transmitting Panels in Monitors and Sawtooth Roofs

1. *General* - Where a fire-resistive rating is **not** required for the roof structure, and in all buildings provided with an approved automatic fire-extinguishing system, approved plastics may be used with or without sash as the light-transmitting medium in monitors and sawtooth; *Except*, that plastics used in monitors or sawtooth roofs of **Type II** Construction shall be of materials appropriate to be used according to flame-spread characteristics.

2. *Allowable Areas* - The area of individual plastic glazing used in monitors and sawtooth glazing shall not exceed 15.00 square meters. The total aggregate area of plastics used in skylights, monitors, and sawtooth glazing shall not exceed 20% of the floor area of the room or occupancy sheltered.

3. *Area Separation* - The area of such plastic panels shall be separated from each other by a section of incombustible material or by a section of the roofing material of the structure not less than 1.50 meters in length. The lower edge of the plastic material shall be at least 150 millimeters above the surface of the adjoining roof surface.

SECTION 1606. Plastic Light Diffusers in Ceilings

1. *General* - Ceiling light diffusers having an area greater than 10% of any 10.00 sq. meters of room area shall be of approved plastics conforming to the requirements specified in the Code.

2. *Installation* - Plastic light diffusers shall be installed in such a manner that they will not readily become detached when subjected to room temperature of 80°C for 15 minutes, *Except*, for plastic light diffusers which are installed in the first floor area of Group C Occupancies having egress directly to the exterior of the building; and plastic light diffusers which are located between an

approved automatic Fire-extinguishing system and the area to be protected other than public corridors for Group A, B, C, D, E, G, H, and I Occupancies if tests required by the Secretary have established that such installation will not interfere with the efficient operation of such automatic fire-extinguishing systems.

SECTION 1607. Partitions

Where partitions are not required to be of fire-resistive or incombustible construction, approved plastics conforming to the requirements specified in the Code may be used.

SECTION 1608. Exterior Veneer

1. *General* - Exterior veneer may be of approved plastic materials, and shall conform to the provisions of this Section.
2. *Height* - Plastic veneer shall not be attached to any exterior wall above the first storey; *Provided*, that plastic veneer may be attached to exterior walls above the first storey of buildings located outside of highly restrictive Fire Zones; *Provided*, further that the height of veneer is **not** in excess of 10.00 meters above the adjacent grade of elevation.
3. *Area* - Sections of plastic veneer shall not exceed 15.00 sq. meters in area, *Except*, that in less restrictive Fire Zones, the area may be increased by 50%.
4. *Separation* - Sections of plastic veneer shall be separated by a minimum of 1.20 meters vertically and 600 millimeters horizontally.

SECTION 1609. Awnings and Canopies

1. Plastic materials appropriate for use according to Flame Spread characteristics may be utilized in awnings and canopies, provided such awnings and canopies are constructed in accordance with provisions governing projections and appendages as specified in the **Code**.
2. Approved plastics may be used in awnings where untreated canvass is permitted.
3. Approved plastics may be used in lieu of plain glass in greenhouses in less restrictive Fire Zones.

(emphases supplied)

Rule XVII follows