Section 3: Wall and ceiling linings

Classification of linings

3.1 Subject to the variations and specific provisions described in paragraphs 3.2 to 3.16, the surface linings of walls and ceilings should meet the following classifications:

Table 1 **Classification of linings**

Location	National class [1]	European class [1][3][4]
Small rooms [2] of area not more than 4m²	3	D-s3, d2
Domestic garages of area not more than 40m²		
Other rooms [2] (including garages)	1	C-s3, d2
Circulation spaces within dwellinghouses		

Notes:

1. See paragraph B2.v.
2. For meaning of room, see definition in Appendix E.
3. The National classifications do not automatically equate with the equivalent classifications in the European column, therefore products cannot typically assume a European class, unless they have been tested accordingly.
4. When a classification includes 's3, d2', this means that there is no limit set for smoke production and/or flaming droplets/particles.

Definition of walls

3.2 For the purpose of the performance of wall linings, a wall includes:

a. the surface of glazing (except glazing in doors); and

b. any part of a ceiling which slopes at an angle of more than 70° to the horizontal.

But a wall does not include:

c. doors and door frames;

d. window frames and frames in which glazing is fitted;

e. architraves, cover moulds, picture rails, skirtings and similar narrow members; or

f. fireplace surrounds, mantle shelves and fitted furniture.

Definition of ceilings

3.3 For the purposes of the performance of ceiling linings, a ceiling includes:

a. the surface of glazing;

b. any part of a wall which slopes at an angle of 70° or less to the horizontal;

c. the underside of a gallery; and

d. the underside of a roof exposed to the room below.

But a ceiling does not include:

e. trap doors and their frames;

f. the frames of windows or rooflights (see Appendix E) and frames in which glazing is fitted; or

g. architraves, cover moulds, picture rails, exposed beams and similar narrow members.

Variations and special provisions

Walls

3.4 Parts of walls in rooms may be of a poorer performance than specified in paragraph 3.1 (but not poorer than Class 3 (National class) or Class D-s3, d2 (European class) provided the total area of those parts in any one room does not exceed one half of the floor area of the room, subject to a maximum of 20m².

Fire-protecting suspended ceilings

3.5 A suspended ceiling can contribute to the overall fire resistance of a floor/ceiling assembly. Such a ceiling should satisfy paragraph 3.1. It should also meet the provisions of Appendix A, Table A3.

Fire-resisting ceilings

3.6 Cavity barriers are needed in some concealed floor or roof spaces (see Section 6), however, this need can be reduced by the use of a fire-resisting ceiling below the cavity.

Rooflights

3.7 Rooflights should meet the relevant classification in 3.1. However, plastic rooflights with at least a Class 3 rating may be used where 3.1 calls for a higher standard, provided the limitations in Table 2 and in Table 6 are observed.

Note: No guidance is currently possible on the performance requirements in the European fire tests as there is no generally accepted test and classification procedure.

Thermoplastic materials

General

3.8 Thermoplastic materials (see Appendix A, paragraph 17) which cannot meet the performance given in Table 1, can nevertheless be used in windows, rooflights and lighting diffusers in suspended ceilings if they comply with the provisions described in paragraphs 3.10 to 3.14. Flexible thermoplastic material may be used in panels to form a suspended ceiling if it complies with the guidance in paragraph 3.16. The classifications used in paragraphs 3.11 to 3.16, Table 2 and Diagram 9 are explained in Appendix A, paragraph 20.

Note: No guidance is currently possible on the performance requirements in the European fire tests as there is no generally accepted test and classification procedure.

Windows and internal glazing

3.9 External windows to rooms (though not to circulation spaces) may be glazed with thermoplastic materials, if the material can be classified as a TP(a) rigid product.

Internal glazing should meet the provisions in paragraph 3.1.

Notes:

1. A 'wall' does not include glazing in a door (see paragraph 3.2).

2. Attention is drawn to the guidance on the safety of glazing in Approved Document N *Glazing – safety in relation to impact, opening and cleaning*.

Rooflights

3.10 Rooflights to rooms and circulation spaces (with the exception of protected stairways) may be constructed of a thermoplastic material if:

a. the lower surface has a TP(a) (rigid) or TP(b) classification

b. the size and disposition of the rooflights accords with the limits in Table 2 and with the guidance to B4 in Table 7.

Lighting diffusers

3.11 The following provisions apply to lighting diffusers which form part of a ceiling. They are not concerned with diffusers of light fittings which are attached to the soffit of, or suspended beneath a ceiling (see Diagram 8).

Lighting diffusers are translucent or open-structured elements that allow light to pass through. They may be part of a luminaire or used below rooflights or other sources of light.

3.12 Thermoplastic lighting diffusers should not be used in fire-protecting or fire-resisting ceilings, unless they have been satisfactorily tested as part of the ceiling system that is to be used to provide the appropriate fire protection.

3.13 Subject to the above paragraphs, ceilings to rooms and circulation spaces (but not protected stairways) may incorporate thermoplastic lighting diffusers if the following provisions are observed:

a. Wall and ceiling surfaces exposed within the space above the suspended ceiling (other than the upper surfaces of the thermoplastic panels) should comply with the general provisions of paragraph 3.1, according to the type of space below the suspended ceiling;

b. If the diffusers are of classification TP(a) (rigid), there are no restrictions on their extent;

c. If the diffusers are of classification TP(b), they should be limited in extent as indicated in Table 2 and Diagram 9.

Suspended or stretched-skin ceilings

3.14 The ceiling of a room may be constructed either as a suspended or stretched-skin membrane from panels of a thermoplastic material of the TP(a) flexible classification, provided that it is not part of a fire-resisting ceiling. Each panel should not exceed 5m² in area and should be supported on all its sides.

Diagram 8 **Lighting diffuser in relation to ceiling**

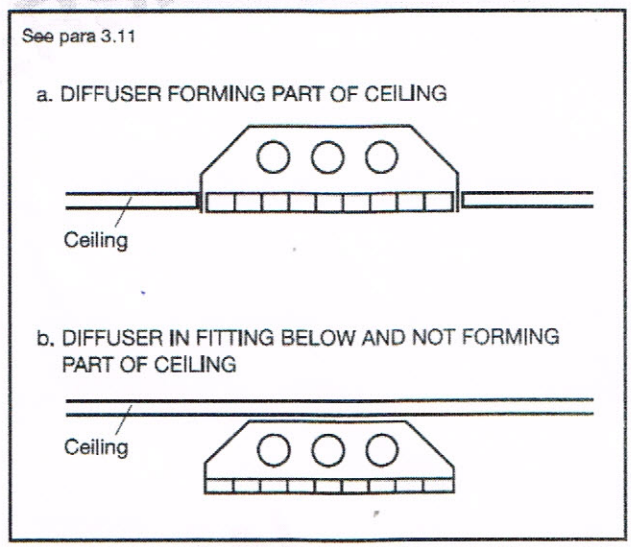


Table 2 Limitations applied to thermoplastic rooflights and lighting diffusers in suspended ceilings and Class 3 plastic rooflights

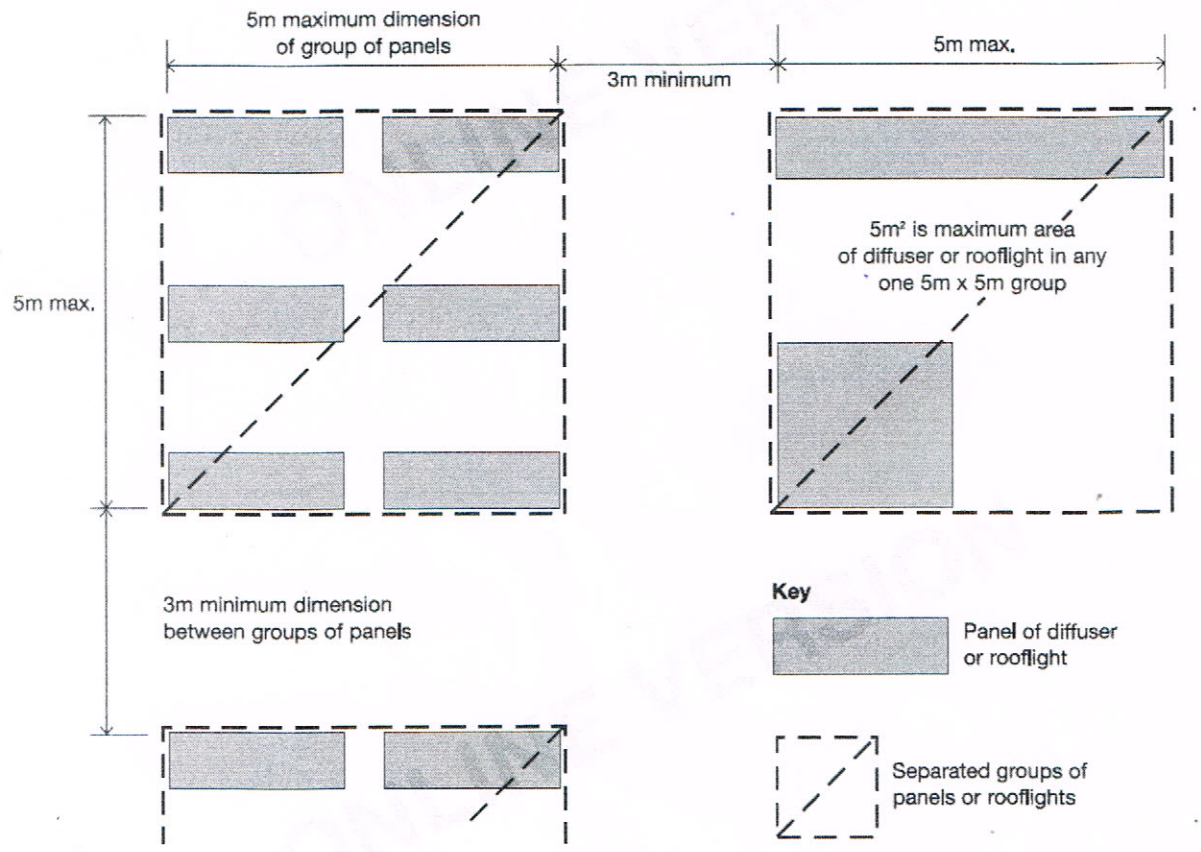
Minimum classification of lower surface	Use of space below the diffusers or rooflight	Maximum area of each diffuser panel or rooflight [1] (m²)	Max total area of diffuser panels and rooflights as percentage of floor area of the space in which the ceiling is located (%)	Minimum separation distance between diffuser panels or rooflights [1] (m)
TP(a)	Any except protected stairway	No limit [2]	No limit	No limit
Class 3 [3] or TP(b)	Rooms	5	50 [4]	3
	Circulation spaces except protected stairways	5	15 [4]	3

Notes:

1. Smaller panels can be grouped together provided that the overall size of the group and the space between one group and any others satisfies the dimensions shown in Diagram 9.
2. Lighting diffusers of TP(a) flexible rating should be restricted to panels of not more than 5m² each, see paragraph 3.14.
3. There are no limits on Class 3 material in small rooms see Table 1.
4. The minimum 3m separation specified in Diagram 9 between each 5m² must be maintained. Therefore, in some cases it may not also be possible to use the maximum percentage quoted.

Diagram 9 Layout restrictions on Class 3 plastic rooflights, TP(b) rooflights and TP(b) lighting diffusers

See Table 2



Notes:

a. Upper and lower surface of suspended ceiling, between plastic panels, to comply with paragraph 3.1.
b. No restriction on Class 3 rooflights in small rooms see Table 1.