

Fire safety and rooflights: a summary of the regulations



Welcome to this 'Quickguide': part 2 of a series published by NARM, to provide busy roofing contractors and installers with quick access to the information they need to maintain professional and compliant working practices.

UK Regulations for fire safety in buildings

Building Regulations Approved Document B (2006 edition amended 2007) sets out the rules for fire safety of buildings, which can be met by achieving specific fire ratings to either British (BS476) or European (BS EN 13501) test standards.

Section B2 covers internal fire spread, and applies to the linings of both the roof and walls of buildings. In general these are surface spread of flame requirements to BS476 Part 7 or to BS EN 13501 Part 1.

Section B4 covers external fire spread and applies to external coverings or roofs and walls; in general these are fire resistance requirements to BS476 Part 3 or to BS EN13501 Part 5.

For the majority of applications, the requirements can be summarised as follows:

Inner skin:

- The inner skin of a ceiling or wall should normally be rated Class 1 (BS476 Part 7) or Class C-s3,d2 (BS EN 13501 Part 1).
- The inner skin of a rooflight should either meet that same rating, or achieve Tp(a).
- A concession allows the inner skin of a rooflight to be rated Class 3 (BS476 Part 7) Class D-s3,d2 (BS EN 13501 Part 1) or Tp(b) if the area of each rooflight is less than 5m², and there is a clear space of 3 metres (1.8 metres in some applications) in all directions between each rooflight.

Outer skin:

- There are no restrictions on use of rooflights with outer sheets rated at least AC (BS476 Part 3) or B_{ROOF}(t4) (BS EN 13501 Part 5).
- Some lower fire ratings for the outer sheet may be acceptable, but not within 6 metres of a boundary.

- The only requirement for fire protection of wall outer sheets is where the building is within 1 metre of a boundary or is over 18 metres tall or is a building to which the public have access, when some areas will require sheets rated Class 0 or Class B-s3,d2 (BS EN 13501 Part 1).

Single skin:

- A single skin sheet must meet the requirements for both the inner ceiling and outer roof surfaces.

Commonly used rooflight glazing materials and their fire ratings

Rooflights are available with a variety of glazing materials to suit different applications, as follows:

GRP (Glass Reinforced Polyester)

Used typically for profiled rooflights for industrial buildings, GRP can be classified to BS476 Parts 3 and 7, and to BS EN 13501 Parts 1 and 5, and a variety of grades are usually available offering alternative fire ratings to meet the main requirements.

Thermoplastics: polycarbonate and PVC

Thermoplastic materials including PVC, solid polycarbonate and multiwall polycarbonate cover a wide range of applications. These materials cannot be tested to BS476 Part 3 or BS EN 13501 Part 5, as the material melts during the test. Building Regulations define an alternative classification method for these materials:

- Polycarbonate or PVC which achieves Class 1 (BS476 Part 7) or Class C-s3,d2 (BS EN 13501 Part 1), can also be regarded as having AA or B_{ROOF}(t4) designation.
- Multiwall polycarbonate which is rated Class 1 (BS476 Part 7), solid polycarbonate at least 3mm thick, and solid PVC (any thickness) are given the rating Tp(a).
- Other thermoplastic materials can be tested to BS2782, and given ratings of Tp(a) or Tp(b).

Further information

Further information can be obtained from NARM, (National Association of Rooflight Manufacturers) at www.narm.org.uk