Recommendations for good practice - fire performance of rooflight components

Rooflights are currently available in a range of shapes (eg in-plane, domes, barrel vaults, etc), in a range of materials (typically glass, polycarbonate and GRP), and a range of configurations (eg double, triple or multiple skin). For full details refer to NTD01.2.

Rooflights were traditionally double skin, but increased requirements for thermal insulation mean that many rooflights (most plastic rooflights, and some glass rooflights) have more layers. Where rooflights have more than two layers the fire rating of the intermediate layer(s) is currently not regulated by Building Regulations.

In the absence of such regulation or other guidance, this document defines good practice in specifying rooflight construction.

Where any intermediate layer has significant mass (including any rigid sheet rather than thin film), it is recommended that the fire performance of that intermediate layer is at least as good as the required fire performance of either the inner or outer sheet (whichever is the lesser).

For example, in polycarbonate domes, where inner skin and outer skin are both polycarbonate which achieves Class 1 (to BS 476 part 7), the intermediate sheet should also achieve Class 1 – which would usually require the intermediate sheet to be polycarbonate rather than a flammable material such as acrylic.

Where fire performance of a material is dependent upon thickness, the fire rating of the intermediate layer should still achieve the fire performance required for the inner or outer – so the intermediate layer(s) either need to be the same thickness as the inner or outer, or if a thinner intermediate layer is used, then the fire performance of the intermediate sheet needs to be demonstrated to be the same.

For “hybrid” products where inner and outer glazing are dissimilar materials, then any intermediate layer should still have at least as good a fire performance as either the inner or outer layer (whichever is the lesser).
For example if a rooflight with a polycarbonate outer and glass inner has an additional intermediate layer, the fire performance of that intermediate layer should be demonstrated to be at least as good as either the glass inner skin or the polycarbonate outer skin.

Where a rooflight is fitted onto an upstand, where the inner skin of the upstand forms part of the ceiling lining of a room or building, then the fire rating of the kerb material should be the same as the required fire rating of the ceiling lining and inner skin of the rooflight.

In all cases, it is the responsibility of the designer of the building to ensure that the requirements of the Building Regulations are implemented correctly. Guidance is available from all NARM member companies, but for specific applications (particularly where interpretation of the Regulations are open to question or there is any doubt) it is recommended that guidance should be sought from the Local Authority Building Control Department.

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