



Introduction

In many cases, the Fire Authority asks for a wall to have a minimum period of fire resistance. This fire resistance is usually for a period of 30 minutes to protect the means of escape. Sometimes, a period of 60 minutes will be required when separating areas of high fire risk from other areas.

NOTE: The periods of fire resistance quoted in this advice note are for walls tested in accordance with the relevant part of British Standard.

Other Authorities You May Need To Consult

It is likely that the upgrading of walls will require approval by the local authority building control department or by an approved inspector.

Other bodies may also need to be consulted such as:

- Health and Safety Executive
- Environmental Health Department (local authority)
- Licensing Justices
- Entertainments Licensing Authority (local authority)
- Insurers of property

What Is "Fire Resisting"?

Fire resisting can be defined as:

"A structure or door which is able to resist the passage of fire, heat and smoke for a minimum period of 30 minutes and meets with the relevant parts of the British Standard".

Applying Fire Resistance

When a requirement or recommendation is made by an authority for an existing wall to be made fire resisting, the materials should be applied to the "risk" side, eg, if it is recommended or required that a kitchen be separated from the adjoining accommodation, the fire resisting materials should be applied on the kitchen side of the wall. Likewise, if a cupboard under the stairs is to be made fire resisting, the interior of the cupboard should be lined with fire resisting materials.

Where pipe work or other services pass through a fire resisting structure, it is essential to ensure that all gaps are sealed with fire resisting material such as plaster or an intumescent material to prevent the passage of fire, smoke and other products of combustion to adjoining rooms or structures.

It is essential that any gap between a doorframe and the structural wall are filled to make it fire resisting for the relevant time period.

Walls that require fire resisting should be imperforate and should either:

a) extend from the true floor through any cavity to the underside of the structural floor above.

or

b) extend from the true floor to a fire resisting ceiling. The join between the wall and the ceiling should be a good fit to prevent the spread of fire and smoke.

For the construction of the wall suitable materials would be brick, blockwork or studwork partitioning with a 12.5mm thickness of Portland Cement Plaster or Gypsum Plaster on each face of the studwork with joints taped, filled and timber backed. The studwork should not be less than 76mm x 50mm (3" x 2"). Any door in a fire resisting wall should comprise of a fire resisting doorset, ie, door and frame tested in accordance with the relevant British Standard and where necessary a smoke seal door may also be required.

Fire Resisting Glazing

Glazed elements in fire resisting walls should be of fire resisting wired cast glass or other fire resisting glass. Where insulation against radiated heat is required, a type of fire resisting glass, which affords such insulation should be specified.

There are various ways of fixing fire resisting glass into its frame. For example, in a wooden frame the glass should be fixed with hardwood beads of specified dimensions, chamfered and fixed to the frame with steel woodscrews. An intumescent bead is fitted between each side of the glass and the bead or frame. There are also various metal frame systems available.

It is essential that the glass manufacturer's instructions are carefully followed in order that the finished glazing system will achieve the minimum period of fire resistance that is sought.

Surface Spread Of Flame Category

The finished fire resisting wall should have a low surface spread of flame rating, at least no higher than that required by the relevant authority. Class O is the safest category.

Lightweight Demountable Partitioning

If lightweight demountable partitioning is used, the manufacturer's instructions should be carefully followed to ensure that the heights or lengths of partitioning do not exceed the dimensions covered by fire resisting test evidence.

General

The above methods are given as examples of effective ways of achieving an acceptable level of fire resistance. There are many other ways of achieving a similar standard of fire resistance, which can be obtained by contacting your local council Building Control department.

