PREMDOR®

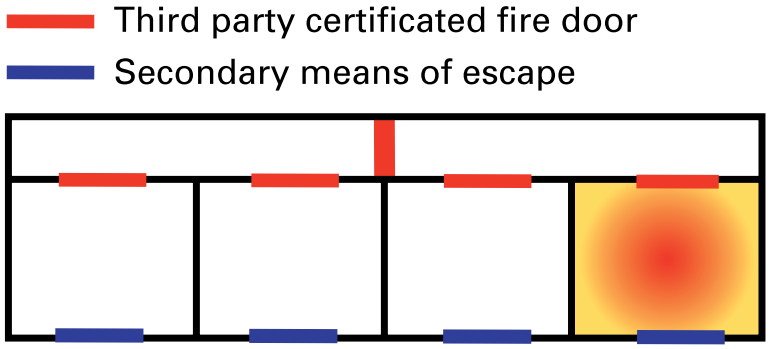
GIVING YOU THE FACTS ABOUT PASSIVE FIRE PROTECTION

Your silent guard

The primary purpose of fire protection planning is to safeguard human life. In 2010–11, over 11,000 people were either killed or injured in a fire. The plan also seeks to protect property by reducing the amount of physical damage caused, and so reducing the financial loss and disruption to business or family life. The most effective approach to maximising the fire safety of buildings, is to implement a planned combination of both passive and active measures.

The unique role of passive fire protection

The principle behind passive fire protection is to divide a building into individual fire compartments, constructed and lined with suitable fire resisting materials to reduce the spread of fire. If a fire should occur, the structure is protected as the fire is contained for a period of time within one compartment, thus reducing fire spread through the building by limiting the movement of flame and smoke. Containment of fire through effective passive fire protection serves to minimise the damage caused by a fire by protecting the escape routes to ensure that the building's occupants can leave the building safely.



Fire compartments

PASSIVE FIRE PROTECTION

Including:

- Active and passive fire protection working together
- The unique role of passive fire protection
- The role of a fire door
- Third-party certification of fire doors

BWF-CERTIFIRE Fact Card
Passive Protection
August 2012

Active and passive fire protection working together

Passive fire protection is based on the principle of containment. Products are built into the fabric of the building, and so rarely obvious to the untrained eye. These products then resist fire or burn at a slow predictable rate to reduce the penetration of a fire for a recommended period of time.

People are more aware of active protection systems, such as alarms, water sprinklers and fire extinguishers. They are visible and it is easy to understand how they work to control a fire. This often leads on to assuming that active systems are the most effective means to increase fire safety in a building. In fact, in many cases active systems assume that passive systems are already part of the building, and are designed to work in combination with them.

The best fire protection plan will have both active and passive fire protection methods working together. By using an early warning system, containing a fire to a small compartment and providing methods of controlling or extinguishing a fire, you have the most effective method of protecting lives and property.

The role of a fire door in passive fire protection

A fire door has a critical role to play in any passive fire protection plan. A doorway is considered a weak point in containing a fire as it represents a break in the fire protection products within the wall. A door also requires a gap between the frame and the leaf and often includes metal components that conduct heat.

A fire door is an engineered safety device that requires all of its components to fulfill their roles for the door to achieve its function. A door closer ensures the door leaf remains shut, while the hinges and latch will hold the door tightly in the frame. Intumescent seals also need to go off when a fire breaks out to close the frame to door leaf gap. Smoke seals can be added where required to restrict the flow of smoke. Apertures cut into fire doors, such as for vision panels, air transfer grilles or for letter boxes are also a potential weak point of a fire door, so it is essential that any glazing or other types of apertures are secured using intumescent sealing systems and that the work is only carried out by a licensed converter.

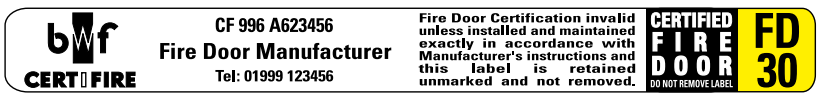
It is vital that these components follow the tested design. For details of which components are required with which door, you will need to refer to the installation instructions attached to each leaf.

Third-party certification of fire doors

To ensure best practices in passive and active fire protection, the BWF recommends the use of third-party certificated products. Through this the customer and enforcement authorities can be confident the goods supplied and installed are fit for purpose. Third-party certification involves the testing of the door as a complete assembly, including door leaf, frame, ironmongery, intumescents seals and glazing. But it goes further than just certification of the door leaf, regular testing and audits are required to complete the certification process and certificates are issued, indicating the scope of the certification. It is these measures which ensure the product supplied to the contractor meets and maintains the guaranteed quality of the original design.

Why insist on BWF-CERTIFIRE fire doors

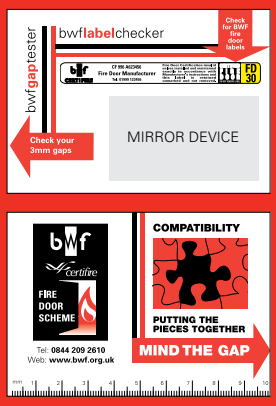
The BWF-CERTIFIRE Fire Door and Doorset Scheme, established by the fire door manufacturing industry, aims to promote the importance of using certificated fire doors as vital component of any passive fire plan. Through the Scheme, members can obtain a guarantee of the product they are using through assessment and certification of the design and production process and regular auditing. The Scheme offers clear and simple methods of tracing a fire door back through all stages of manufacture to ensure the quality of manufacture and maintain the certification. It also acts to bring together fire door manufacturers, their suppliers, door converters, merchants and installers to work in an alliance across the supply chain.



The whole purpose of the Scheme is to give confidence in the quality and performance of fire doors to specifiers, enforcement authorities, building owners and occupiers. The Scheme's certification partner, CERTIFIRE, the fire certification arm of Warrington Certification Ltd, audits, tests and verifies a fire door's design, performance, manufacturing process and the associated procedures, quality assurance, and the audit trail from manufacture to installation. It also checks that the frame and compatible components used in the test are used in the fire door assembly.

Fire door in action

Fire door test certificate



BWF Gap Tester/Label Checker

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