

Technical datasheet 3

Fire protection



Why is fire protection important?

Fire can be a major risk to any home or building and the results can be devastating. Many rules, laws and safeguards exist to protect homeowners from the risk of fire, however, accidents can and do happen. They can be caused by any number of reasons, for example; a neglected chip pan, cigarettes, household fires; but when fires do happen it is important the risk posed to human life is limited as much as possible and that the fire and resultant damage can be significantly restricted.



Part B of the Building Regulations aims to safeguard householders from the risk of fire, in summary it requires:

- Safe means of escape from the building
- The stability of a building to be maintained in a fire, both internally and externally
- That the internal finishes of the building will resist the spread of fire and the materials used in the building will not react in a way that contributes to the development of the fire
- Fire and smoke to be prohibited from spreading to concealed spaces in a buildings structure
- The external walls and roof to resist spread of fire to walls and roofs of adjacent buildings
- The building to be easily accessible for fire fighters and their equipment.

Aircrete is one of the best building materials, not only to fire-proof a development, but to be part of all measures taken to protect the investment in the building. The combination of the micro-cellular structure of aircrete blocks and the use of non-combustible raw materials is the key to making them fire resistant.



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How does aircrete stack up?

- Aircrete blocks do not burn. They are classified as non-combustible, having a Euroclass of A1 (the highest possible) and have a "class 0 (zero) surface spread of flame" as described in the National Building Regulations.
- As a result of aircrete's inherent fire resistant properties, the product can be used to contain or prevent the spread of fire within a building. Extensive research has shown aircrete helps maintain the stability and structure of a building in the event of a blaze, whilst, and perhaps more importantly, allowing the occupants vital time to escape.
- By simply using a 100mm aircrete masonry block in the construction, up to 4 hours fire resistance can be achieved on non load-bearing walls, and up to 2 hours on load-bearing walls.
- Where aircrete is used to construct internal walls, partitions and external walls, the resistance to fire is significantly improved as aircrete blocks can resist temperatures of up to 1200°C.
- Even after a fire aircrete walls have been shown to have sufficient strength and robustness to be retained.
- Aircrete does not emit toxic smoke or gases when subjected to fire.
- Aircrete manufacturers work closely with fire researchers in order to maximise fire safety standards and aircrete's fire resistant properties have been proved during testing and real case scenarios.
- Actual case histories have proved aircrete's capability in real fires, not only as a fire-break wall, but also as protective cladding for other forms of construction, for example steel frames.
- Aircrete is non-combustible and there is no risk of the superstructure smouldering after the fire appears to have been extinguished.

Fire resistance tables are available in BS EN 1996-1-2.



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