

Advice Leaflet 25 Doors – Upgrading Fire Resistance of Existing Doors

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West Yorkshire Fire & Rescue Service
Fire Safety Group
Oakroyd Hall
Birkenshaw
West Yorkshire
BD11 2DY

Tel: 01274 682311
Fax: 01274 655888

INTRODUCTION

Increasing the fire resistance of existing doors is not normally acceptable and it will usually be more cost effective to install a new door set conforming with British Standard 476: Part 22: 1987 or BS EN 1634-1 :2000. However, in certain instances, it may be necessary to retain an existing door (e.g.) in a listed building. Where the reasons are considered valid by an enforcing Authority, it may be appropriate to modify the doors in order to provide an improved standard of fire resistance.

APPLYING FIRE RESISTANCE

Guidance on how to improve the fire resistance of existing timber doors can be found in:

Building Research Establishment Information Paper 8/82 "Increasing the fire resistance of existing timber doors" and the Timber Research and Development Association's Wood Information Sheet, 1-32, "Fire Resisting Doorsets by Upgrading.

NB:

- a) An existing timber door can only have its fire resistance improved to a maximum of 30 minutes.
- b) It is unwise to flush over one face of a door leaf with a sheet of fire resisting material because this puts an uneven load on the door, which can cause it to distort out of its frame, affecting its potential fire resistance.
- c) It may be possible to upgrade a door by applying an intumescent coating to the door, providing that the manufacturer's instructions for applying the coating are followed precisely. Such coatings need careful maintenance following application.
- d) Not all doors can be upgraded. Possible upgrading depends on the strength and construction of the door. The following doors are unsuitable for upgrading:
 - Unframed, hollow core, flush type.
 - Ledged and braced type.
- e) The door should be a good fit in its frame (gaps not exceeding 3mm and an intumescent seal should be fitted (with a flexible cold smoke seal if smoke control is required).
- f) Any architraves should be removed to check that there are no gaps between the doorframe and the surrounding structure.
- g) Hardware used on fire doors should have a melting point in excess of 800 8C. Letterboxes should be of a proprietary fire resisting type.

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- h) The door should be marked "FIRE DOOR - KEEP SHUT" on each face unless it is a door to a store room in which case it should be marked "FIRE DOOR - KEEP LOCKED SHUT" on the outer face. The size, shape and colouring of the notice should comply with BS 5499 Part 1: 1990 for "Mandatory Signs".
- i) An assessment of likely performance should be obtained from a test laboratory, which is registered with NAMAS (National Measurement Accreditation Service).

BIBLIOGRAPHY

Detailed guidance on how to upgrade fire doors may be obtained from the following bibliography.

Listed alongside each document is the organisation from which it may be obtained.

TITLE	AVAILABLE FROM
Building Regulations 2006 Approved Document B	TSO
BS 476: Part 20: 1987 AMD 1 Fire tests on building materials and structures. Part 20: Method for determination of the fire resistance of elements of construction (general principles) (AMD 6487) dated 30 April 1990	BSI
BS 476: Part 22: Methods for Determination of the Fire Resistance of Non-Load Bearing Elements of Construction	BSI
BS 5499: Part 1: 1990 Mandatory Signs	BSI
Building Research Establishment Information paper IP 8/82: Increasing the Fire Resistance of Existing Timber Doors	BRE
Timber Research and Development Association Wood Information Sheet 1-32: Fire Resisting Doorsets by Upgrading	TRADA

The above publications are current at the time of preparation of this Public Advice Note.