

The Envirograf® guide to fire door protection

Introduction

The role of the fire door is one of the most important elements of fire protection in a building. It's effectiveness resisting flames and smoke helps stop a fire from spreading, saving property and allowing time for occupants to escape, thereby saving lives. **This is particularly important in multiple occupancy housing, retirement homes, maisonettes, flats etc.**

The fitting of a fire door is more complex than it seems. For example a fire door must have intumescent around either the door edge or the frame. And, as smoke is the main killer in any fire, smoke seals must be fitted. Door furniture must also provide fire protection.

Despite new British Standards which clearly state the required specifications for a fire door

set, Fire Officers are constantly finding doors with items fitted that have no fire protection qualities, completely removing the doors fire integrity, e.g. Letter boxes, hinges, locks, and more recently cat and dog flaps.

If a fire was to occur these doors would be ineffective, and could lead to the loss of life.

Environmental Seals Limited have produced a range of products designed to maintain the integrity of the fire door, particularly doors located in houses of multiple occupancy.

They have all been produced with cost effectiveness and ease of installation in mind.

**Envirograf® fire door protection products
- keeping fire doors effective!**

**A FIRE DOOR IS NOT A FIRE DOOR
WITHOUT INTUMESCENT**

1. Fire & smoke seals
2. Glazing protection
3. Lock protection
4. Ventilation grilles
5. Door closure protection
6. Door flap protector
7. Fire & smoke protection letter boxes & fireboxes
8. Hinge & lock protection



Environmental Seals Ltd



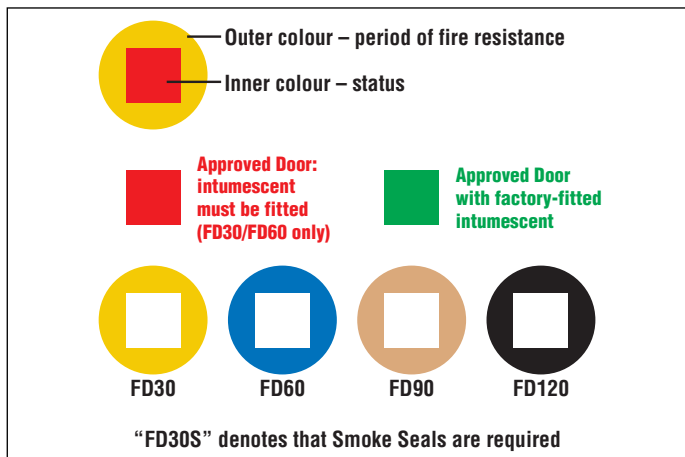
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Envirograf Product Information

1 CHOOSING THE RIGHT SEAL

All fire doors must have intumescent and smoke seals. Fire doors have a colour coding system that states the seal requirements, see table below.



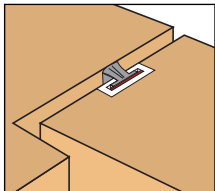
SURFACE FITTING REQUIRED
Seals can be fitted either into the edge of the door or into the frame, shown by the red line in the adjacent illustration.

GAPS REQUIRED
Grooved in seals : 4 - 4½mm to allow for neoprene seals or brushes which are 5 - 5½mm in length.

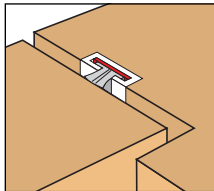
Surface mounted seals: 3mm upwards as this seal can be provided with a smoke seal up to 15mm in length.

APPLICATIONS

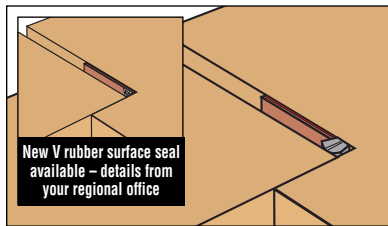
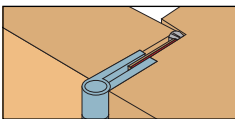
Seals can be fitted into the door edge



Seals can be fitted into the frame



Envirograf® surface mounted seals are fitted onto the frame and provide hinge protection

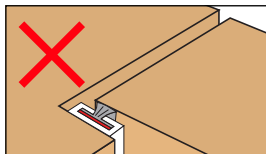


New V rubber surface seal available - details from your regional office

Intumescent seals must **never** be fitted to the door stop. In a fire they will push the door open.

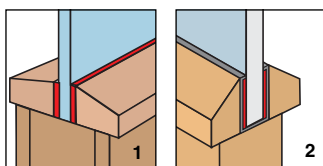
DOOR STOPS

For Fire doors with up to 185 minutes rating, stops can be 12mm or less and only need to be pinned - not glued.



2 GLAZING

All glazing panels must have protection installed on both sides of the glass panels. NEVER use mastic or putty as correct amounts are impossible to achieve and could prove fatal.

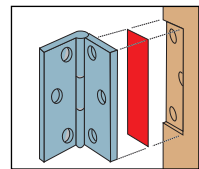


Use intumescent glazing strips, beading (1) or the flexible intumescent channel (2).

When using glazing beads it is important to use the correct fixings. Half hour beads must be fixed with panel pins of a minimum length of 32mm. One hour beads must be fixed with 50mm No.8 steel or plated screws.

3 HINGE & LOCK PROTECTION

All rebated locks and hinges must be fully protected. Again it is important not to use mastic or putty. The intumescent paper is laid behind the hinges and around locks whilst being installed.



4 VENTILATION SYSTEMS

All ventilation systems must be protected. Intumescent grilles are the ideal answer. Environmental Seals Ltd offer a comprehensive range including smoke protection if required.

5 DOOR CLOSURE

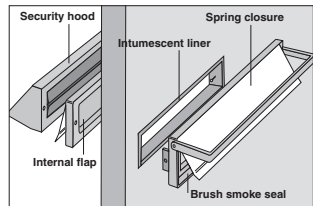
Door closures must also have protection. Intumescent paper should be used, placed between the door and closure device during installation.

6 PET FLAPS

If a cat or dog flap is required in a fire door, Environmental Seals Ltd have designed and now manufacture intumescent units to be used with conventional pet flaps.

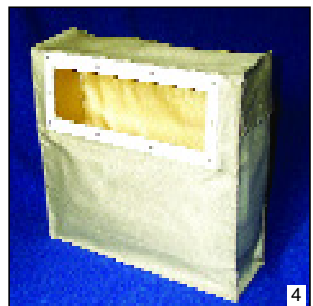
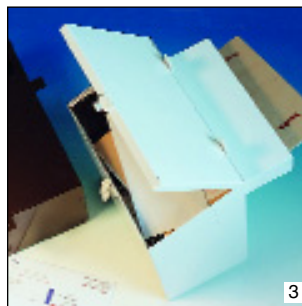
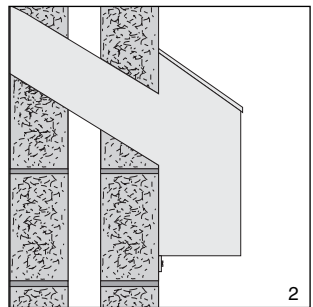
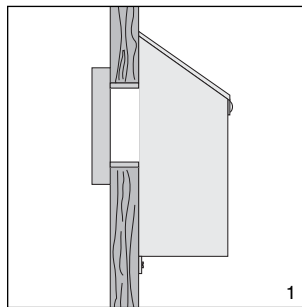
7 LETTERBOX PROTECTION

All fire doors that are front doors must have an intumescent letterbox liner or a complete fire and smoke protection letter box. Environmental Seals Ltd offer liners or complete units with a range of optional extras: numbered flaps, door knockers and security hoods which prevent break in through the letterbox.



8 FIREBOX PROTECTION

Fire boxes can also be supplied for areas susceptible to arson and vandalism.



N.B. Envirograf® fire boxes can be supplied as a flush fitting unit (1), with a spout for penetration through walls (2) or as a flexible glass-cloth bag with intumescent properties for applications with limited space (4).

UPGRADING SYSTEMS FOR PANELLED AND RAISED-AND-FIELDED DOORS

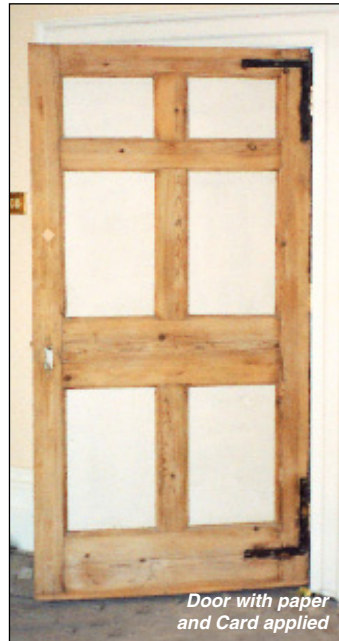
Environmental Seals Ltd have designed a unique range of passive fire protection systems for upgrading existing:

PANELLED DOORS

Environmental Seals Ltd have designed an door upgrading system for panel doors comprising intumescent paper faced with fire card, veneer, or ply (which is applied to the panels) and an intumescent coating system for the beads. The stiles, rails and muntins may also need coating depending on the system (see data sheet). The paper and card can be painted with a good grade acrylic based paint to finish or veneer can be applied to maintain the original wood finish of the door if required. Intumescent paper for manufacturing new doors.

ADVANTAGES

- Maintains the original character of the door
- Cost effective
- Straightforward to install
- Envirograf® Product 42 HW coating range can be applied over existing paint or varnish - no stripping required.
- Veneer can be adhered to the treated panel, maintaining the original natural feature of the door
- Economical
- Identification labels are supplied for the Building Control Officer to show the door has been upgraded.
- Applies as normal paint/varnish. See data sheet.



RAISED & FIELDDED DOORS

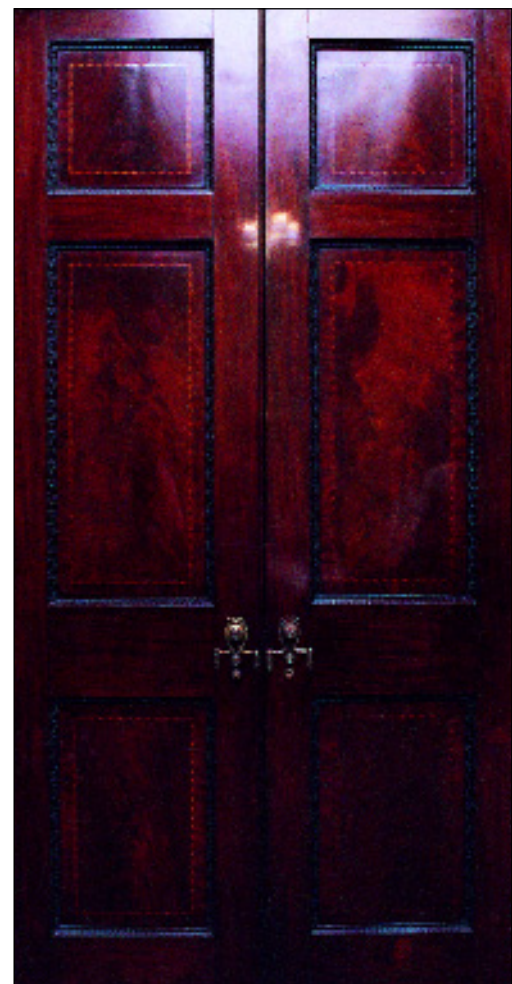
Environmental Seals Ltd offer an intumescent coating system for upgrading raised and fielded doors:

The ES/RFC System is designed to upgrade raised and fielded doors which is particularly ideal for refurbishment projects by enhancing the fire protection qualities of doors in listed buildings.

The ES/RFC system has been applied to a number of doors which were tested in accordance with BS476 Part 22 aiding the doors to achieve an integrity of 50mins.

ADVANTAGES

- Straightforward to apply.
- Environmentally friendly.
- Especially effective in refurbishment projects often allowing existing doors with architectural features to remain.
- Coatings are available in matt, satin and gloss.
- Can be applied over existing paints.
- Applies as normal paint/varnish. See data sheet.

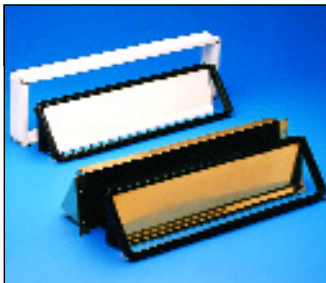


FOR FURTHER TECHNICAL INFORMATION

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THE LETTERBOX RANGE

- The letterbox houses intumescent and offers half or one hour's protection
- Fits doors of thicknesses from 38mm to 70mm.
- The letter box has internal smoke seals and magnets on inside and outside flaps to hold it shut.
- Optional door knockers and security hoods can be supplied.
- An economy model is also available and consists of two sections, one for each side of the door.

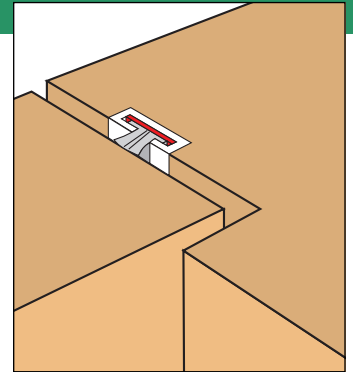
An intumescent liner housed in a plastic strip is supplied to fit into the hole in the door giving both half or one hour's protection. Again optional door knocker and security hood can be supplied if required.

HINGE, LOCK AND DOOR CLOSER PROTECTION

- This is a 1mm thick flexible strip which is unaffected by moisture and offers one hours fire protection.
- The strip is cut to size and applied into the hinge rebate on the frame, behind the door closure fitting, and wrap around the lock section.

INTUMESCENT SEALS - GROOVED IN OR SURFACE MOUNTED

- Smoke seals have been tested to BS476 Part 31/1.
- Product 68 – An intumescent seal designed to be grooved into the door or frame.
- Product 69 – Surface mounted fire and smoke seals. These seals are ideal for areas where rebating is inconvenient. They are designed for doors with gap sizes of between 3.5mm - 12mm.
- Product 76 – An aluminium holder containing intumescent and a variety of brush or neoprene seals giving both fire and smoke protection.
- Product 100 – A plastic or aluminium holder containing intumescent, which can also be used with a variety of brush or neoprene seals. This seal is especially useful for new door installations and can be surface mounted or grooved in, depending on the door gap size. This seal can be provided as a fire protection seal only or with smoke protection.



VENTILATION GRILLES FOR DOORS

- A range of ventilation grilles offering fire protection is available from Environmental Seals Ltd:-
- The MG grille is slotted to give maximum ventilation.
- The MGL grille is louvred, offering ventilation and privacy.
- The block grille is a self cleaning grille offering 90% free ventilation.



- The TJ grille system offers both fire and smoke protection. This grille is designed to shut automatically when activated by a smoke detector. It can be supplied with its own detector system, or can be wired in to an existing smoke/fire alarm circuit.
- The smoke protection grille has lightweight louvres offering extremely efficient free ventilation. If a fire was to occur the pressure from the cold smoke would automatically hold the shutters closed preventing smoke penetrating to the escape routes.
- Designed for areas where houses of multiple occupancy are at risk of arson or vandalism.

TJ AUTOMATIC FIRE AND SMOKE SHUTTER GRILLES

- 24V controlled smoke & vent grille.
- Four re-setting options
 - (a) With manual re-set
 - (b) With automatic re-set
 - (c) Non electric grille with thermal link
 - (d) With memory spring.



DOOR FLAP PROTECTOR

- Dogs and particularly cats are popular pets for many people. Residents of multiple occupancy homes often fix their own standard dog/cat flap not realising that they are destroying the integrity of the fire door. This sort of installation increases the risk of a fire spreading throughout a building, particularly the halls and landings vital for escape. The Envirograf® door flap protector is a metal box unit containing intumescent material covered in foil, both of which are of no harm to the pet. A hole is cut to the size of the Envirograf® unit. The unit then slides into the hole and is fixed into position with screws. The original pet flap, purchased at any pet shop is then simply screwed to the unit and operates in the normal way. This unit gives up to one hour's fire protection and allows pet flaps to be fitted to fire rated doors without jeopardising the fire rated integrity.