



Envirograf[®]
Protecting the irreplaceable

IS-53-06-23

PRODUCT INFORMATION

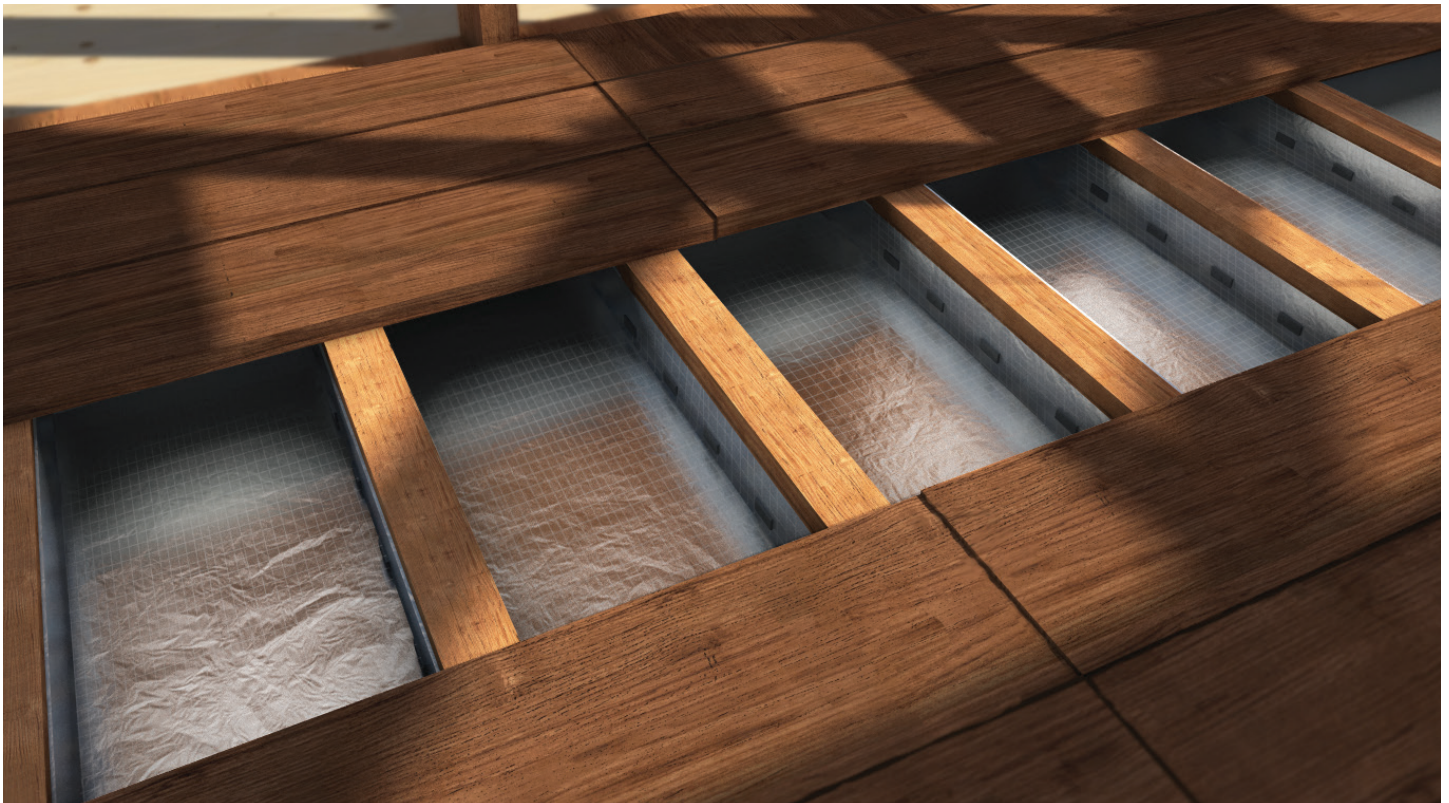
Innovators - Developers - Manufacturers

Passive Fire Prevention Products

UNDER-FLOOR FIRE BARRIER

PROVIDING UP TO 104 MINUTES FIRE PROTECTION

PRODUCT 53

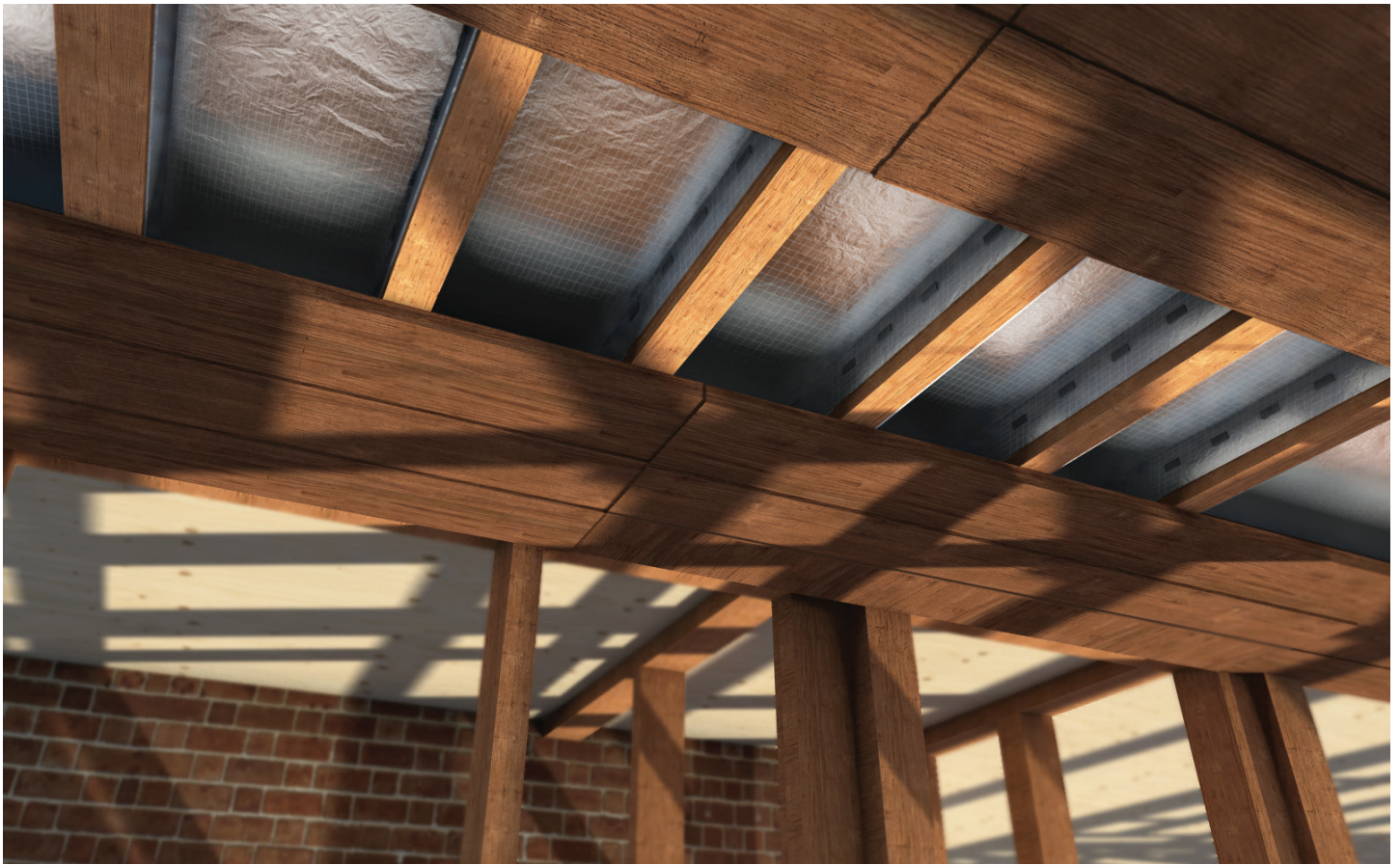


Advantages

- Provides necessary fire protection to the ceiling/floor where either the decorated ceiling or lath and plaster ceiling cannot be fireproofed or if access below is not available
- UF104 was tested to BS476 Part 21 (1987), achieving 104 minutes integrity, insulation, and load-bearing
- Acoustic performance tested to BS EN ISO 140-3 1995 achieving :
Airborne 44 (-4 ; -9) dB Impact 74 (-1) dB

Head Office : Intumescent Systems Ltd, Envirograf House, Barfrestone, Dover, Kent, CT15 7JG, United Kingdom

Contact our Technical Team for more information: sales@envirograf.com or visit www.envirograf.com



Our underfloor fire barrier is also suitable for use in ceilings

Description:

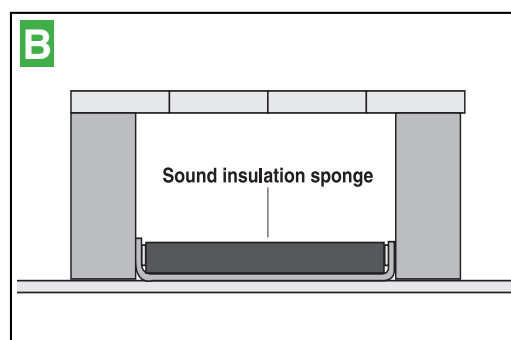
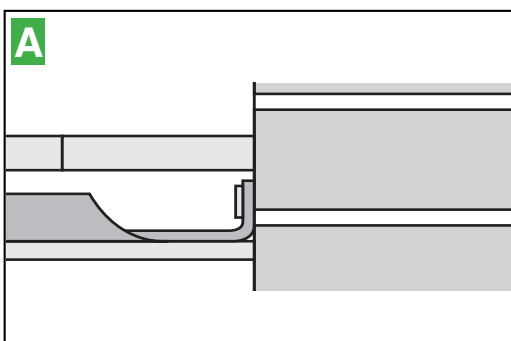
Under floor fire barrier UF60 is made from graphite impregnated cloth covered with a reinforced craft paper, giving 60 minutes fire and insulation protection. UF104 has wire mesh inside as added support. If sound insulation is required 40mm thick soundproofing sponge can be ordered to suit.

Use:

The under floor barrier is designed for use where either the decorated ceiling or lath and plaster ceiling cannot be fireproofed or if access below is not available (Note: should you be able to fireproof from below then look at our Product 105)

Application:

To install the barrier, lift three floorboards 2100mm apart, slide the barrier under the floor, bend 50mm of the barrier up each side of the joists, and then fix the barrier to the joists using the supplied rectangular metal plates and 30mm clout nails (nails not supplied) at the factory-marked positions on the barrier. Where the barrier touches the wall, bend it upwards and fix it to the wall with the supplied rectangular metal plates and 30mm clout nails (see illustration 1A). Once fixed replace the floor boards. If sound insulation is required an acoustic fire resistant sponge can be laid over the barrier between the joists (see illustration 1B).



CASE HISTORY



The Grade 1 star listed Porch House in Swan Hill, Shrewsbury, dating from 1628, has been delightfully converted into two luxury apartments, one five-bedroom and one three-bedroom. The front of the building retains the original Tudor-beamed look, but the rear of the property has more Edwardian characteristics.

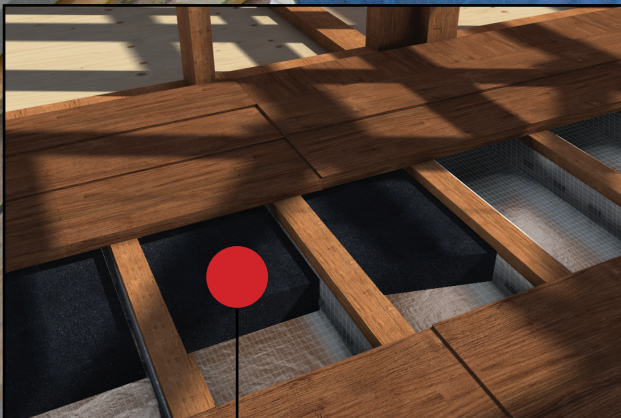
The restoration task was undertaken by Everlasting Estates, a subsidiary of MM Hotels. Steve Perry, their spokesman, explained how every minute detail of this historic building was considered. Complying with current building regulations and strict English Heritage demands was certainly a

challenge but, to ensure the building could meet stringent fire regulations with the minimum of disruption and a number of Envirograf® products have been supplied to assist in this compliance.

The photographs opposite show how the Envirograf® under-floor fire barrier and acoustic sponge insulation being used between the two apartments. The barrier was chosen for its outstanding fire protection performance figure of 104 minutes integrity with insulation and sound absorption qualities.

The previous owners had modernised the fireplaces in the 70's and the replacement units were not in keeping with the age and look of the property, so the fireplaces had to be lovingly restored to their previous glory.

The wood panelling, which is reputed to be around 300 years old and originally brought from Europe via the River Severn, has also been treated with Envirograf® fire prevention coatings.



THE 104 MINUTE ACOUSTIC
AND FIRE PROTECTION - ALL
IN ONE BARRIER



FIRE TEST PERFORMANCE

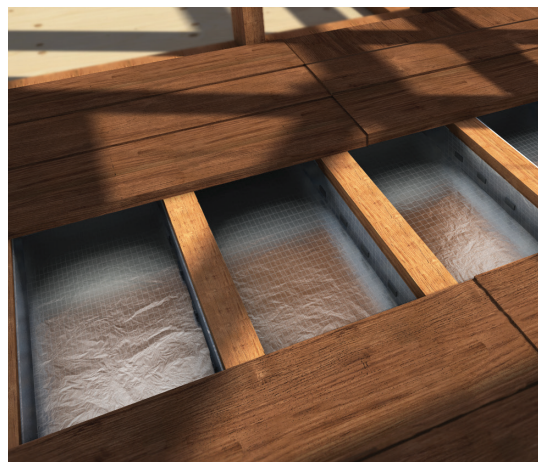
BS476 Part 22 (1987)	104 mins integrity & load bearing, 100 mins insulation
EN1365-2 (2014)	71 mins integrity, insulation and load bearing

Performance:

The UF104 under-floor barrier was installed in a ceiling/floor without any plasterboard or lath-and-plaster (just the barrier itself) and tested to BS476 Part 21 (1987), achieving 104 minutes integrity, insulation, and load-bearing. UF60 tested to BS476 Part 21, achieved 62 minutes.

Acoustic performance tested to BS EN ISO 140-3 1995 achieving Airborne 44 (-4 ; -9) dB Impact 74 (-1) dB

NB: The underfloor fire barrier is supplied to fit a standard 400mm gap between joists, allowing a further 50mm on each side for fixing. Please state if the joist gap differs from 400mm. Skilled tradespeople are required when installing the underfloor fire barrier system. Although the barrier is extremely durable, care must be taken not to tear the barrier during installation. All of the supplied metal plates must be used when fixing the barrier in position.



ORDERING REFERENCES - 104 MINUTES FIRE PROTECTION

Ref	Size
UF104/300	300mm x 1800mm
UF104/350	350mm x 1800mm
UF104/400	400mm x 1800mm
UF104/450	450mm x 1800mm
UF104/500	500mm x 1800mm
UF104/600	600mm x 1800mm

ORDERING REFERENCES - 71 MINUTES FIRE PROTECTION

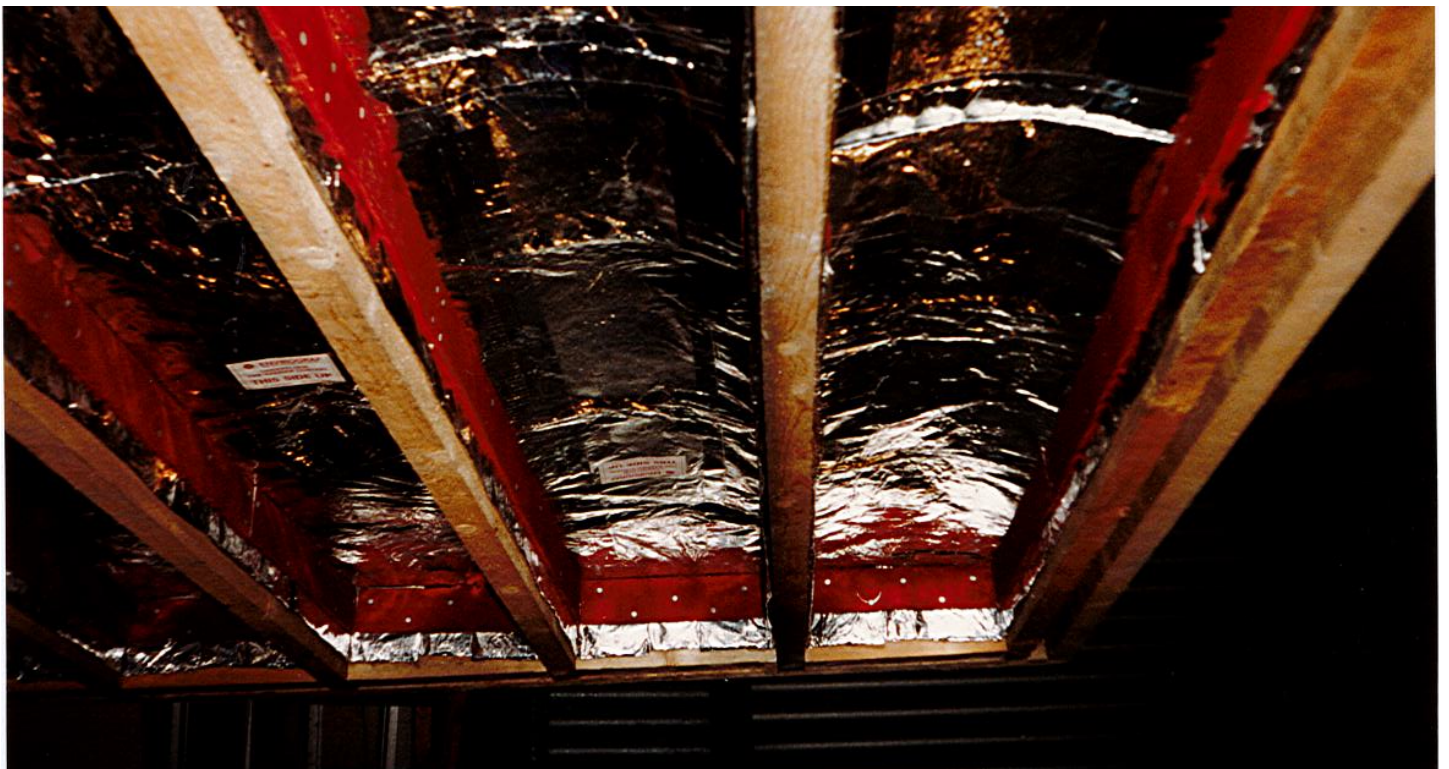
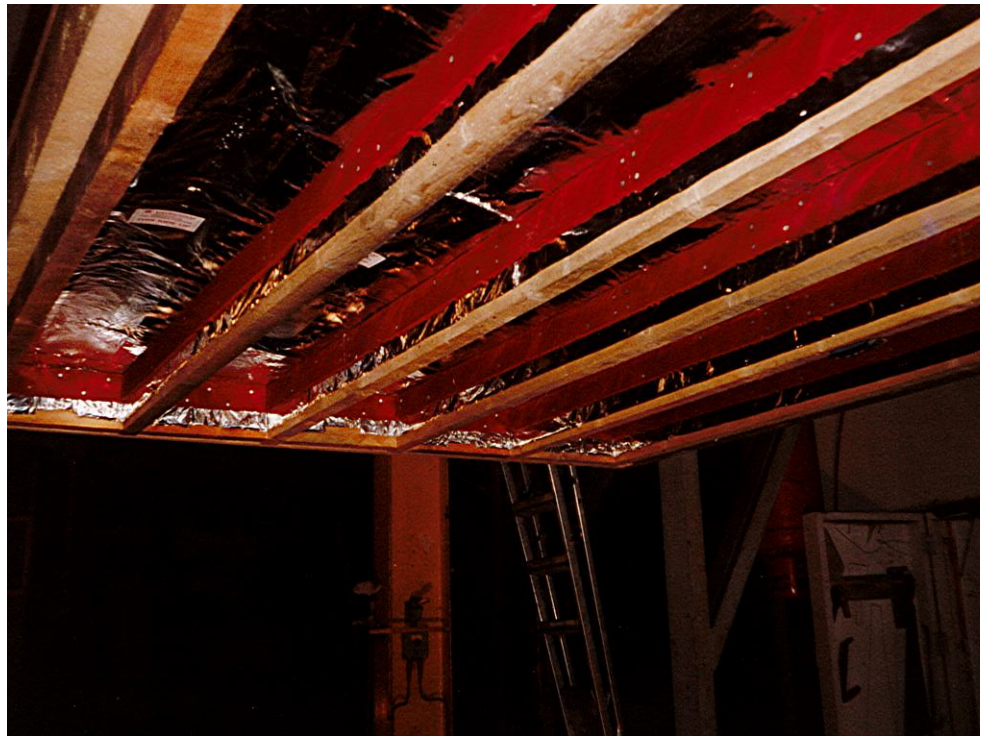
Ref	Size
UF60/300	300mm x 1800mm
UF60/350	350mm x 1800mm
UF60/400	400mm x 1800mm
UF60/450	450mm x 1800mm
UF60/500	500mm x 1800mm
UF60/600	600mm x 1800mm

See Product 131 for floor impact sound protection strips

These photos are relating to **Trada RF95002 fire test** report. This is showing that the barrier has been installed between timbers.

To demonstrate an open floor joist situation with no plasterboard below, the construction was flipped causing the barrier to become a "n" shape rather than the usual "u" install. It was mounted directly on to the top of the furnace as a lid, with the exposed open floor joists facing down into the furnace.

The test achieved 100 minutes insulation, 104 minutes integrity and load bearing.





UNDER-FLOOR FIRE/ ACOUSTIC BARRIER

Fire and acoustic protection for
heritage ceilings
and floors

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demands was certainly a challenge but, to ensure the building could meet stringent fire regulations with minimum disruption and a number of Envirograf® products have been supplied to assist in this compliance.

The photographs above show how the Envirograf® under-floor fire barrier and acoustic sponge insulation was used between two apartments. The barrier was chosen for its fire protection performance of 104mins integrity with insulation and sound absorption.

PRODUCT 53 – UNDER-FLOOR FIRE BARRIER

INTRODUCTION

This product is used to upgrade existing ornate lath-and-plaster ceilings to 60 minutes fire rating, by simply fastening a fire barrier under the floor above and leaving the ceiling undisturbed.

APPLICATION

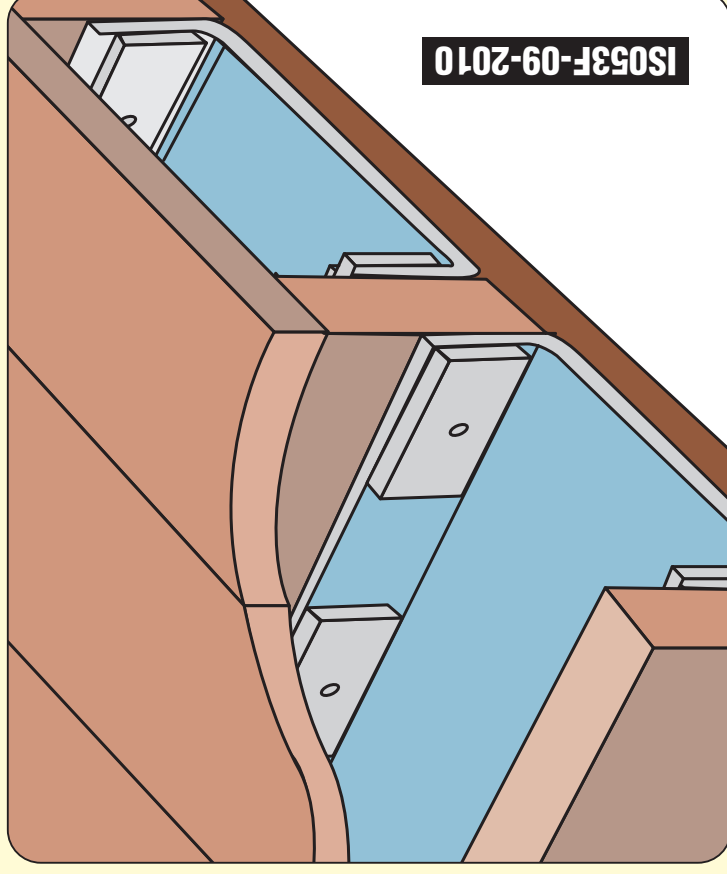
- 1: Lift three floorboards by the wall and three more 2100mm into the room.
- 2: The fire barrier is 1800mm long and its width should be the width between the joists plus 100mm. Each of the long sides should be bent up by 50mm, with the grey cloth side up against the joists.
- 3: Slide the barrier under the floorboards and, where it reaches the wall, bend up the barrier by 50mm.
- 4: Small metal fixing plates with pre-drilled holes are supplied for fixing the barrier to the joists and the walls. Use one fixing plate at the wall end of the barrier and fasten the barrier to the wall using 30mm galvanised large-head clout nails. Then nail a fixing plate into the joists at intervals of 400mm along each upturned side of the barrier.
- 5: Re-fix the floorboards you previously lifted beside the wall.
- 6: Lift three more floorboards, 2100mm away from those already up.
- 7: Repeat as in step 2, but overlap each new piece onto the previous piece by 50mm and continue like this over the whole floor area.
- 8: If you have to cut the barrier, self-adhesive-backed Kraft tape is provided to re-seal the cut ends.
- 9: The barrier can be laid on top of cables. If you need to push a cable or pipe through the barrier, then this can be done by making a hole with a screwdriver. Small holes for cables or pipes have no detrimental effect on the barrier, as the intumescent material will seal off the holes in a fire. If necessary, you can seal puncture holes with Envirograf® Product 58 AM intumescent mastic.

FIRE PERFORMANCE

The under-floor fire barrier, fixed in a typical floor section, was tested in a full size rig 4m x 3m, with load-bearing capacity of 1.5kN/m² in accordance with BS476 Part 22 (1987), achieving 104 minutes insulation, 104 minutes integrity, and load-bearing capacity of 104 minutes during test RF95002.

The illustrations top right show a typical barrier installation.

The illustrations and opposite show a decorative ceiling being upgraded with the use of the Envirograf® under-floor fire barrier system.





Envirograf[®]

Protecting the irreplaceable



We manufacture the largest range of passive fire products

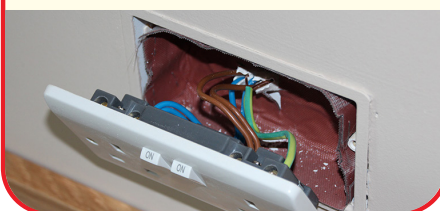
FIRE BARRIERS

Up to 240 minutes fire protection for all types of cladding systems



ELECTRICAL & PLUMBING

Fire protection for cables, pipes, services, lights, ECUs, trunking and sockets



FIREPROOF COATINGS

Intumescent paint, wallpaper and sprays suitable for a range of materials



FIRE DOORS

Kits, seals and accessories to upgrade existing doors to fire rated doors



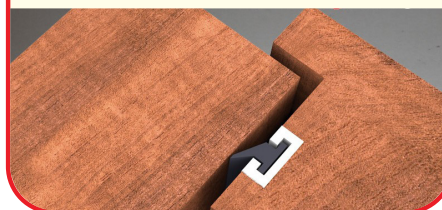
VENTILATION

Fireproof ventilation protection for both internal and external purposes



SMOKE & ACOUSTIC SEALS

Protection against fire, smoke, noise, pollution, weather and draughts



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The Catalonia
Institute of Construction
Technology

We are currently in the process of
obtaining ETA certification for our products