



Envirograf[®]

Protecting the irreplaceable

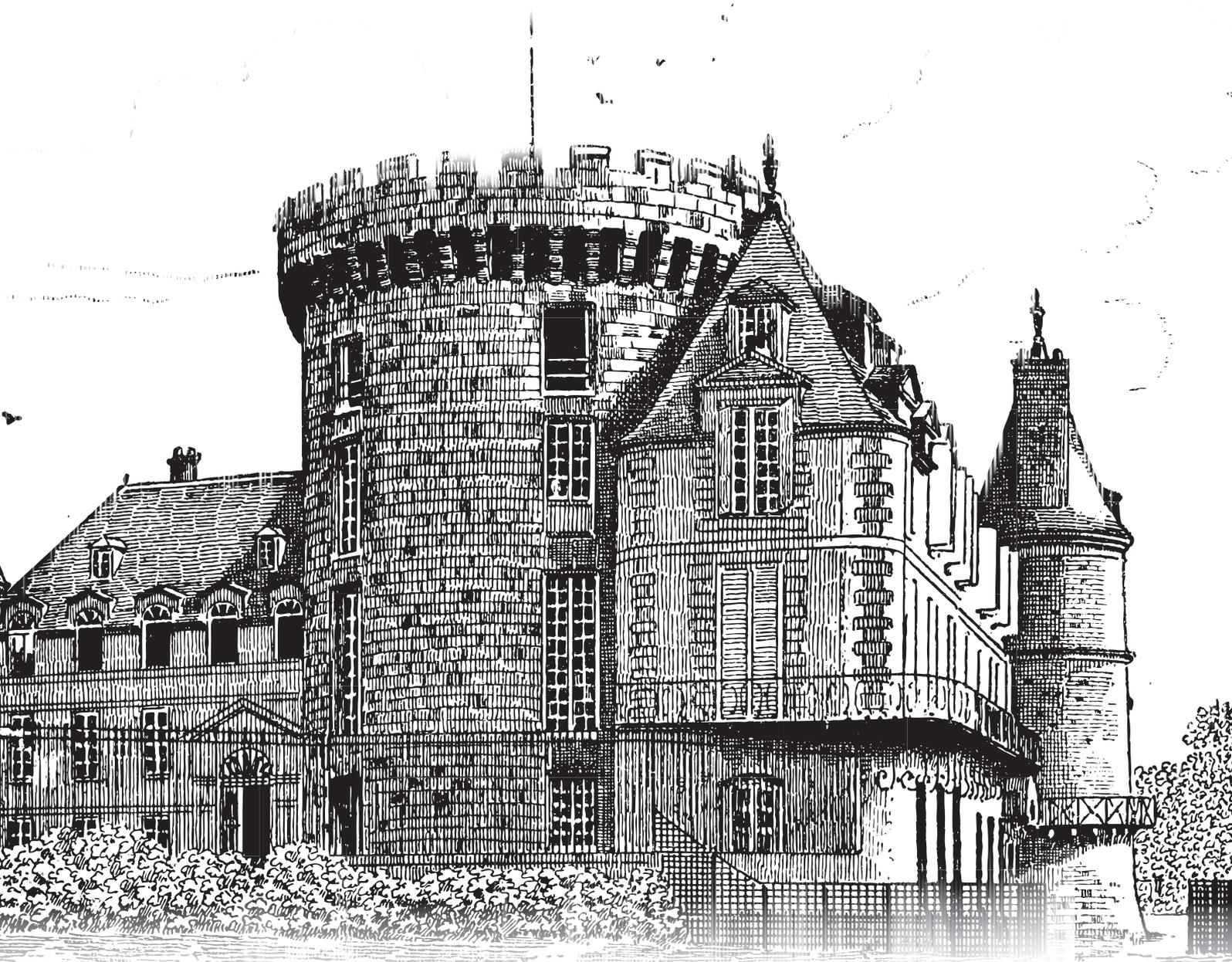
PRODUCT INFORMATION

Innovators - Developers - Manufacturers

Passive Fire Prevention Products

PROTECTING HISTORIC BUILDINGS AGAINST FIRE SPREAD

GUIDANCE NOTES FOR OWNERS, ARCHITECTS AND CONSERVATION OFFICERS



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Recently there have been many fires devastating historic & listed buildings. We cannot afford to lose our Countries Heritage.

Once fire hits, restoration is costly and never the same.



We realise cost comes into all these projects, but over a 4 year period of applying Envirograf® products of which many do not need special trades, can be applied or fitted by caretakers or handymen. By slowly working on area to area, Envirograf® products can stop the fire happening or reduce the damage to just one room or in an area saving the property. This could be spread over a 4 year period. All products have been tested to either British Standard or EN European Standards. Envirograf® have been designing, developing passive fire products for 36 years. Our M.D. Mr Derek Ward has been developing passive fire products for over 45 years.

CONSUMER UNIT FIRE PROTECTION

The fire at Clandon Park Marble Hall was caused by a consumer unit. Whether it is a plastic, steel, wooden consumer unit or fuse boards, all cables and most conduits are plastic or VIR which all burn.

To address this we have made two products:

CONSUMER UNIT COVER

Envirograf® have been working hard to provide you with a solution that will allow for quick and easy access to the consumer unit, whilst providing the fire protection necessary to satisfy the new regulations.



Our metal cover boxes with flexible Intumescent round all 4 sides, so can be cut over conduits or cables, but will seal up in a fire sealing off the flames and stifling the fire.

ECU Unit during the test



During the fire test the unit prevented from spread of fire, completely sealing the unit all round. After the test was stopped, you can see that the PVC unit has been completely destroyed by fire.



PVC CONSUMER UNIT

During an indicative fire test the unit started to burn very vigorously which resulted in a thick black smoke. All cables and conduits were on fire in 4 minutes.



The lid can either be lifted or open downwards.

Envirograf® ECU units are made in different sizes to suit your consumer unit & distribution board. The units are lined with Envirograf® fireproof paper covered with a PVC material. This product is designed to prevent fire damage and more importantly to allow evacuation from the flat or building, saving lives.

ENVIROBURST TUBE

FIRE PROTECTION FOR PLASTIC & METAL CONSUMER UNITS

Existing plastic consumer units will be in use for many years, but keep catching on fire.

Should the amount of room be insufficient for fitting of our consumer unit cover, or the amount of consumer units exceed the average, an alternative Product 20, Enviroburst can be deployed instead.

The installation couldn't be simpler. Turn off the power, take off or open the cover, drill holes at high level and fit Enviroburst tube (harmless product), but once the flame touches the tube this bursts extinguishing the fire. **In large fuse boxes, it may require 2 or 3 tubes, but they are easy to fit and does what it meant to do, putting out the fire.**

The cover was replaced by clear perspex.



Tested at Efectis, Netherlands to EN standard



Fire in the consumer unit just before tube bursting, extinguishing in 40 seconds



Plastic Consumer unit extinguished by Enviroburst. In most cases could be cleaned remake off cables and find out what caused fire.

Installation



Unscrew the lid



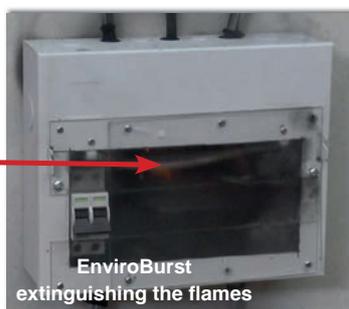
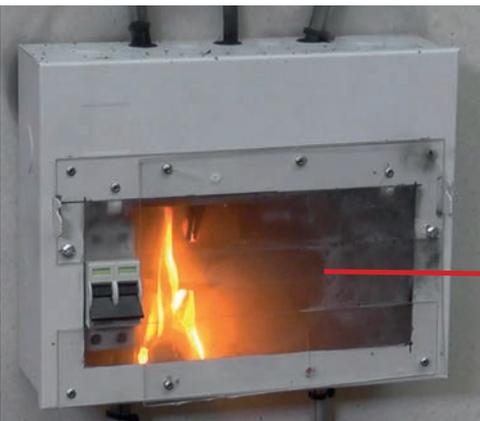
Drill 2 holes for fixing bolts at high level on cover



Fix clips round tube (do not bend). Fasten nuts inside cover



The front was replaced by clear perspex.



EnviroBurst tube fitted in the lid will kill the fire, saving lives and property.

EBU0	150mm long
EBU1	195mm long
EBU2	300mm long
EBU3	505mm long

ELECTRICAL SOCKETS AND SWITCHES PROTECTION

Recently, an elderly man died due to cables in a socket outlet catching fire. The toxic smoke & fumes killed him. All this can be avoided. Under the New European Regulations all socket outlets, switches, cooker units etc. should be fitted with an Intumescent gasket. In a fire the Intumescent expands putting out the fire and sealing off cables, stopping fire extending up conduit or walls. Envirograf® gaskets have been tested, achieving 90 minutes fire protection to BS/EN 1364-1:2015 Requirements. All gaskets are easy to fit. Turn off the fuse, unscrew socket etc. peel off adhesive back and adhere into box, re-screw back again. Full instructions with gaskets.

Cost per socket & switch £0.40 or £0.65p approximately each.



ELECTRICAL SWITCHES AND SOCKETS

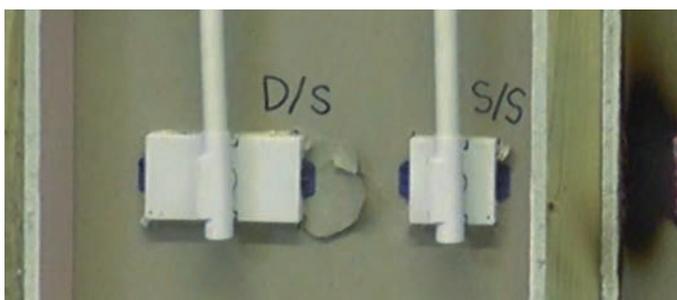
Electrical boxes without gaskets will burn away in less than 4 minutes into the fire, allowing fire to spread through the wall to another room.



Gasket In Metal Box



Gasket In Plastic Box



Protected boxes during a fire test



Unprotected boxes during a fire test a 3min 40 sec



FATAL HOUSE FIRE WAS CAUSED BY AN ELECTRICAL FAULT IN THE WALL, INQUEST HEARD

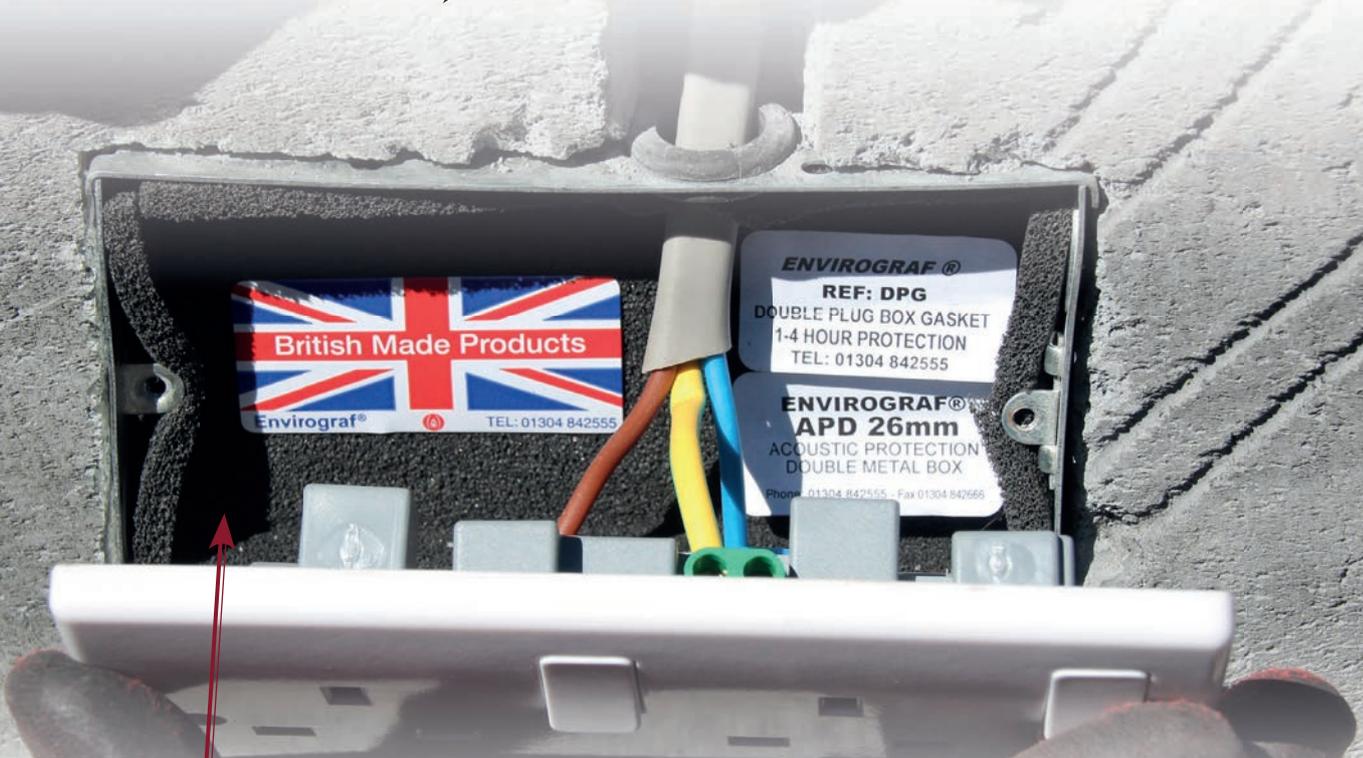
The house fire in which a 90-year-old man died was caused by an electrical fault in the wall, an inquest has heard. The victim was alone in the house when a socket started to smoulder, filling the house with smoke before bursting into flames early the next morning.

PROTECT AGAINST FIRE, WHILST PROVIDING ACOUSTIC PROTECTION

PROTECTION FOR PLASTIC BOXES



USE ACOUSTIC FIRE PROTECTION GASKETS



PROTECTION FOR METAL BOXES

THE CLARENCE HOTEL EXETER

At Exeter the cause of fire was heat originating from a burning wooden art gallery next door, which extended into the roof space of Clarence Hotel. This one and situations akin to them can be prevented with the use of our Product 154: Timber Frame Fire Coat. With the application of 2 coats at 10m², and its 10 minute drying time, it offers 30 & 60 minute protection from fire for the timbers treated. It's also safe to apply with no prior preparation due to its safe, odourless, water based construction.

The recent devastation of the Clarence Hotel, Exeter was caused by a fire in an art gallery next door, hot burning embers fell onto the roof of the hotel, penetrating inside starting the fire in the loft.

THIS SHOULD NEVER HAPPEN

Years ago no roofing felt were used, so a fire could get under or between the tiles. If roofing felt was used, this would be highly inflammable as it is a tar based product. Envirograf® can coat this with an intumescent coating to retard it from burning.

ENVIROGRAF MAKE PRODUCTS TO STOP THIS

A coating that can be applied to the rafters and joists up in the roof, product number 145 this coating is water based and odourless.

Should the flames get into the roof space, there is a high risk of the fire spreading as a result of burning debris dropping onto the ceilings below, utilising dust etc as fuel.



COAT ALL TRUSSESS WITH PRODUCT 145 - TIMBER FRAME FIRE COAT



WATER BASED, NO ODOUR, HARMLESS TO APPLY



ALL FELT BEING COATED



COATING THE TRUSSES



JOISTS TO THE CEILING BELOW ARE BEING COATED



ALL TRUSSES COATED WITH PRODUCT 145 - TIMBER FRAME FIRE COAT

FIRE BARRIER CURTAIN FOR ROOF PROTECTION

If there is felt, then the same coating can be applied to the underside of the felt, 2 coats dries in 10 minutes. If there is no felt then Envirograf FB fire protection cloth can be used, adhered between the trusses. Fully tested at TRADA. FB was fitted in the roof at Peterborough Greyhound Stadium which saved half the stand due to a fire that lasted 2 hours.

Where there is no felt under the tiles, Envirograf® FB Fire Barrier curtain can be fitted between rafters, forming a fire and weather seal if needed.

Another product available to meet the fire safety requirements in the roof space is FB30 fire barrier curtains. Fitted between the joists, the FB30 curtains can be fitted without our own IA adhesive. This will protect the ceiling from above in case of a fire. FB30 has been used in properties all over United Kingdom and has even contributed towards holding off Peterborough Dog Track fire from spreading for 2 hours.



CEILING JOISTS BELOW BEING COATED



A ROOF TRUSS HAVING FB BETWEEN TOP TRUSS



APPLYING THE NEXT SECTION OF FB BARRIER TO GO DOWN TO BOTTOM OF ROOF , NO WASTAGE

FIRE BARRIER CURTAIN FITTED BETWEEN ROOF JOISTS TO PROTECT CEILING BELOW

Should flames get into the roof, just like Exeter, the burning embers will drop onto the top of the ceiling below, which in many cases have dust etc. which all burns.

The joist to the ceiling below would be painted with \Product 154.

To stop the fire burning through the ceiling over the tops of the lath & plaster ceiling adhere our FB Curtain between joists with our IA Intumescent Adhesive, water based & odourless. Once dry, is not affected by water this would also stop fire penetrating below and give extra protection from a fire into the room below.

This is the same curtain as the Peterborough Dog Track.

This curtain will also give thermal insulation.



FB30 BETWEEN JOISTS



OVERLAP JOINT



PRESSING FB30 AGAIN ADHESION JOIST

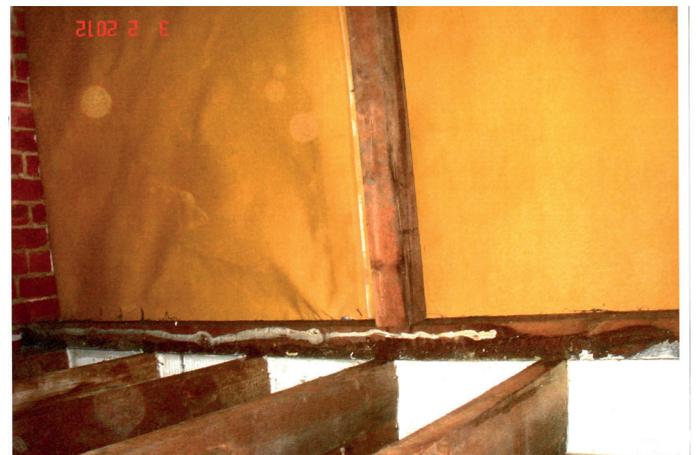


FINISHED SECTION ROOF

Should you wish to compartment your roof our FBC curtain can be fitted. Should you have bats we make fire shutters for bats to fly through that drops in a fire, no harm to bats. Your roof is now fire protected. Rooms below the roof all can be safely fire protected without changing any of the existing appearance.



SEPARATING ROOF SPACES



CURTAIN FITTING ON TOP OF JOISTS WITH OUR COATED SLAB BETWEEN JOISTS



FIRE OPENING FOR BATS TO FLY THROUGH

COATED SLABS BETWEEN JOISTS

PROTECTION FOR WORKS OF ART



ART DECO & MEDIÆVAL PALACE

Eltham Palace is situated in south-east London, and it hosts a fascinating home which blends opulent art deco style with a mediæval palace. The palace became the home of Stephen and Virginia Courtauld in 1933, when they created this unique residence. The property has been lovingly restored by English Heritage and is open to visitors. The 15th century Great Hall is now used for functions such as weddings.

A CONSIDERABLE RISK OF FIRE

With the very large number of visitors passing through the building daily, the risk of fire is considerable, so many of the valuable artefacts contained in the Great Hall and house must be protected from fire, smoke, and water damage.



WATER, WATER, EVERYWHERE!

Many insurance companies and restorers felt that the fire at Windsor Castle in recent years identified the need for important art treasures to be protected from the devastation of fire, smoke, and water (from fire brigade hoses). Both the fire-fighting water and the handling damage during the Windsor Castle fire are thought to have contributed greatly to the destruction of many of the priceless artefacts.

PROTECTING CAPTAIN SCOTT'S UNIQUE HERITAGE BIRCH CARVING

The main fireproof materials used in the fire protection cabinet were Envirograf® fireproof sponge, intumescent paper, and intumescent seals. The intumescent seals were used to prevent the passage of fire and smoke into the cabinet, and the intumescent paper and fireproof sponge were used to insulate against heat and reduce the risk of any charring from flames surrounding the cabinet.



PROTECTION FOR THATCHED ROOFS



Many listed buildings have open fires. Some with thatch roofs. Some may fit new type log stoves which the metal chimney near the top inside the roof reaches 600 C radiating this heat through any holes in the coarse cement.

ENVIROGRAF® CAN OVERCOME THESE PROBLEMS.

Envirograf® FB30 fire barrier curtain can be fitted under the roof trusses giving protection to the roof from an internal fire.

Should you be considering a new thatched roof out thatch barrier can be fitted there are two types:

FB70

Giving 81 minutes fire protection as shown in pictures Cottenham Cambridge.





Because some fires are caused by flame or heat in the chimney & over many years the mortar between brick open up allowing heat or sparks getting to the thatch roof use STB91.

STB/91 A 6mm coated board that can be adhered using IA adhesive round chimney breasts up to the height of the thatch, or can be fitted round chimneys in existing thatched roofs where brick courses have opened liable to allow fire & heat to get to the thatch.

Envirograf® make a metal cutter to push down between the thatch & the side of the chimney to make the 6mm gap. You then slide the board down the cut area making a fire barrier. Run a bead of Envirograf® fire proof silicone over top edge of board push thatch back up to the brick work & push back flashing the board (STB/91) will give up to 1200°C fire protection.



3-2-1 fireproof liquid sprayed on thatch under the doors & windows.

TH70F

TH70F Similar to FB70 but white graphite coating one side & foiled finished the other side giving complete waterproof & thermal insulation used a shown in photo at Mosey's Barn, Bury St Edmunds. This is used on the roof. If also required, can be used vertically for under the board FB70GRA/W forming moisture & fire barrier. With Product 57 Fire Barrier in vertical position under the boarding.



FB70GRA/W white barrier also used under the boarding on the side

Also our FB30 fire barrier curtain use on Holiday Houses roofs with thatch on top at Sizewell Hall, a Christian Conference Centre.





The FB30 in a fire at Peterborough dog track lasted 6 hours & FB30 saved half the building.

The roof at Cottenham all thatch around the doors & windows was sprayed with Envirograf® 3-2-1 Fireproof liquid



Moseleys Barn wanted more insulation under the roof so fitted Envirograf® Product 54 Yellow thermal insulation fire curtain.

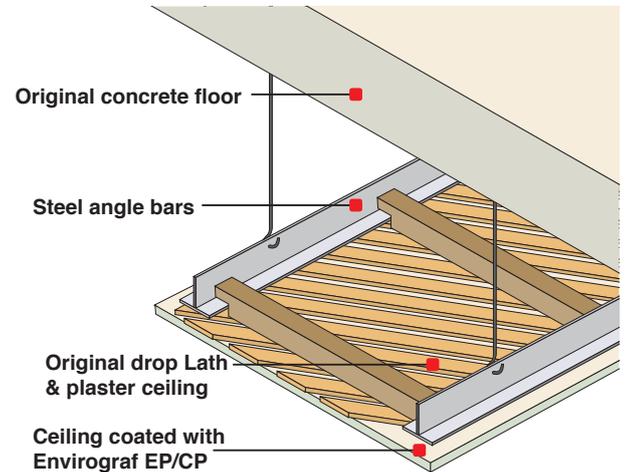
WE NOW NEED TO PROTECT THE REST OF THE PROPERTY

Envirograf® Product 105 EP/CP. Upgrades 9mm, 12.5mm plasterboard and lath and plaster ceilings and walls to over 1 hour. Just like applying emulsion paint, 2 coats at 8m² per litre per coat, dries in 20 minutes, no odours, in white or coloured. This being applied will give full protection. If at some time you strip wallpaper off the walls, then apply EP/CP and then can repaper over the walls, still giving the 1 hour protection.

In the test by Warrington for St. Pancras Chambers 25mm above the lathes were angle irons they were worried about heat to them 62 minute protection to lathe & plaster & **no heat to the steel.**



THIS WAS ON A NON LOAD-BEARING CEILING, TESTED AT EXOVA WARRINGTON, FOR ST PANCRAS CHAMBERS



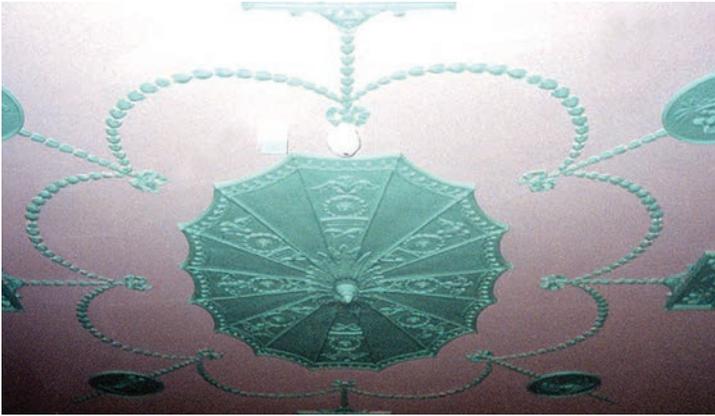
A FULLY LOADED FIRE TEST ON A LATH & PLASTER CEILING



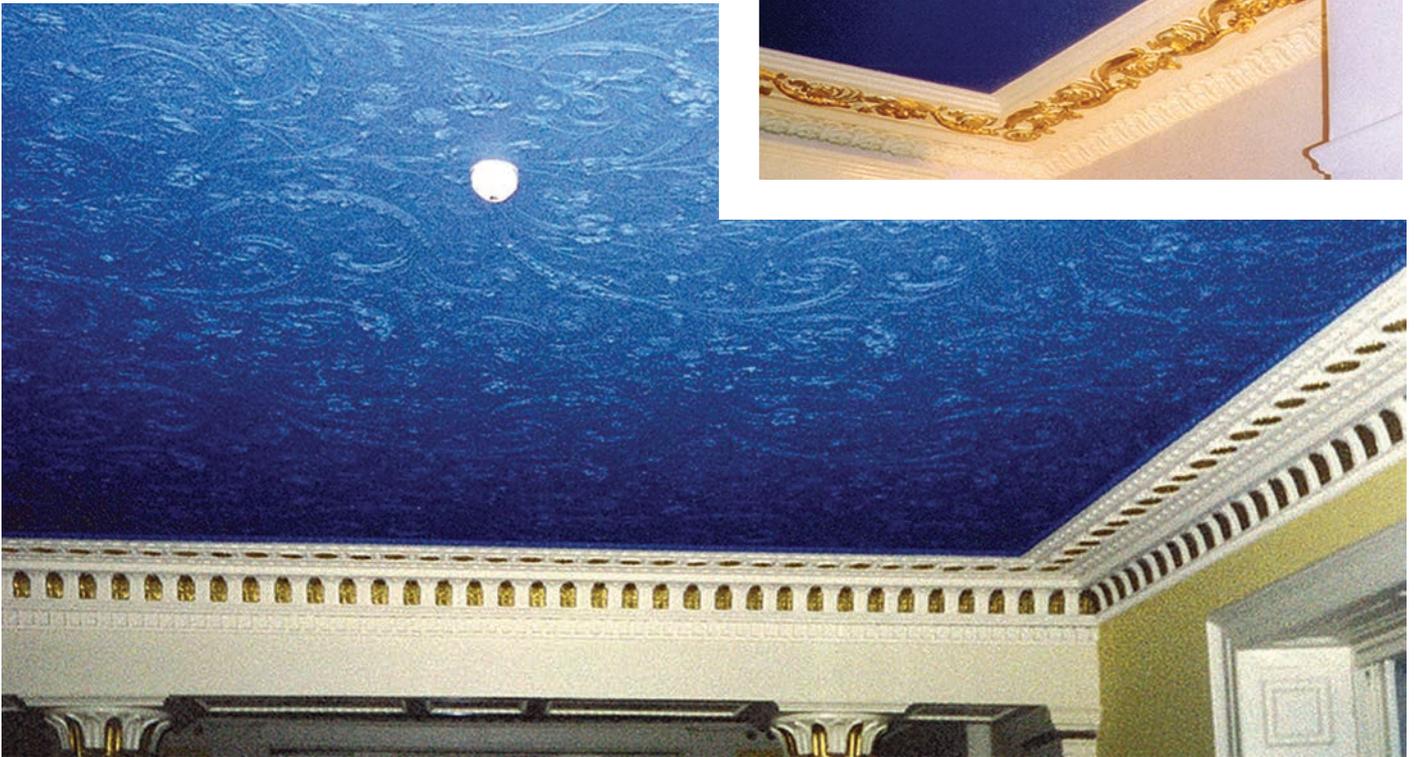
THIS WAS A FULLY LOADED CEILING

A full size ceiling at BTC achieved 42 minutes, but some of the floorboards were showing signs of deterioration from the exposure to the temperatures reaching 180°C, so the test had to be terminated. The ceiling was then lowered onto the floor. We removed some of the floorboards, showing the lath & plaster was still intact. As the photo shows, this ceiling would have lasted 55 to 60 minutes.





SPECIAL COLOUR SCHEME DESIGNED FOR NATIONAL TRUST



RENOVATION OF A FORMER ANTIQUES BUSINESS TO A MUSEUM

BETWEEN JOISTS COATED WITH EP/CP: JOISTS COATED WITH HW02/E



LARGE CEILING WITH EP/CP





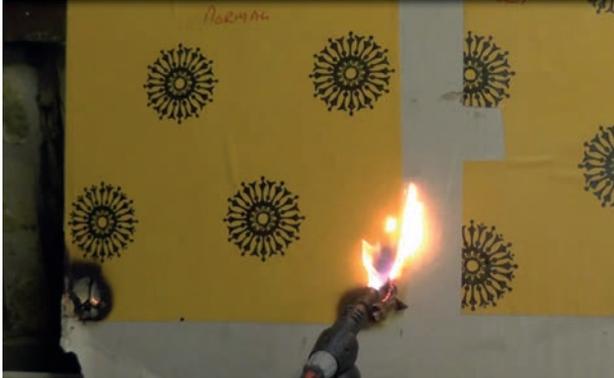
Lath and Plaster ceiling coated with EP/CP coating. Wooden panelling treated with ES/VFR



Lath and Plaster ceilings and walls were all coated with EP/CP coating, achieving 1 hour fire protection.

WALL & CEILING PAPER

Naturally where rooms are wallpapered these may not be required for many years. Envirograf® make a product 3-2-1 spray on to the face of the wallpaper (ensure testing a small corner is colour fast). Then just a light spray over the paper enough to dampen it & the paper in a fire wont burn, just goes black so stopping fire travelling round the room. Also stopping the heat getting to the plaster.



3-2-1 also a fireproof liquid with no smell, just like water. Fire proofs curtains, drapes, upholstery, carpets etc. to Crib 5 and Class 1&0



TEST 27033/12/96

UNTREATED FOAM AND COVERS SEPARATELY - FAILED



TEST 27033/12/96 B, E & F

TREATED WITH 321/W SEPARATELY TESTED, MET BS STANDARD AND PASSED CIGARETTE AND MATCH TEST, AND CRIB 5 SOURCE 5 TEST



TEST 27033/12/96/H
WASH AND SOAK TEST 321/W ON MATERIAL



MATRESS TEST 27758/4/96/F

PASSED - 321/W SPRING INTERIOR FIBRE AND PROBABLY ANIMAL HAIR



MATRESS TEST 27758/4/96/C

PASSED - 321/W POLYURETHANE AND MATERIAL INFILL



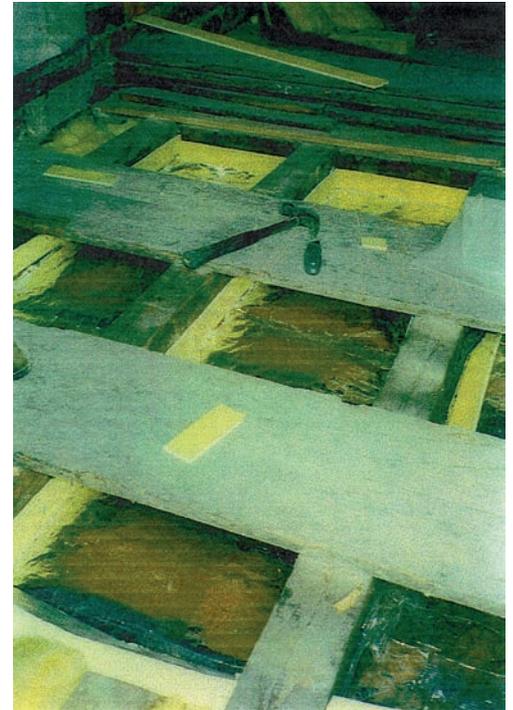
MATRESS TEST 27758/4/96/B

PASSED - 321/W POLYURETHANE AND MATERIAL INFILL

UNDER-FLOOR FIRE BARRIER

Should you not wish to coat ceilings or walls with EP/CP coating, Envirograf make an under-floor fire barrier easy to install. It just means lifting 3 floor boards across the room at 2.1m or 7ft lift up another 3 floor boards.

The under-floor fire barrier is only 8mm thick and very light weight. So if between the joists it is 400mm the barrier will be 500mm to fold up push under the floor boards. Bend up against wall by 50mm & up the side of the joist by 50mm. We have small 3" 75mm long metal plates with holes in to screw or nail through the barrier into the joists.



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

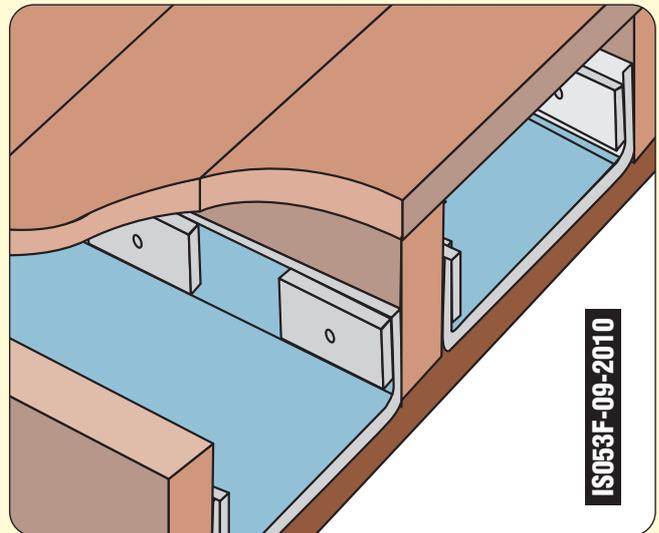
- 1: Lift three floorboards by the wall and three more 2100mm into the room.
- 2: The fire barrier is 1800mm long and its width should be the width between the joists plus 100mm. Each of the long sides should be bent up by 50mm, with the grey cloth side up against the joists.
- 3: Slide the barrier under 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.





Under-floor being pushed underneath the floorboards



Fixing the fixing plates

Should you require acoustic protection to the room below, Envirograf® make a 40mm acoustic sponge, cut to the size between the joists and can be pushed in over the top of the fire barrier.



Under-floor fire barrier offers 60 minutes fire protection or 104 minutes fire protection.



UNDER-FLOOR FIRE/ ACOUSTIC BARRIER

**Fire and acoustic protection
for heritage ceilings
and floors**

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.

Underfloor fire barrier - recently Installed In Stowe Inn

The Envirograf® under-floor fire barrier (UF60) is made of reinforced foil-clad intumescent material, internally reinforced with wire mesh. It is supplied as a 5mm thick x 1800mm long barrier in standard widths of 400mm, 450mm, and 500mm, to suit joist openings of between 300mm, 350mm, and 400mm respectively. Other sizes can be made to special order.

If acoustic protection is required a unique acoustic sponge slab (UFS) 40mm thick x 2½m long can be cut to size to fit over the fire barrier, enabling you to meet the requirements of UK Building Regulations Document E (H in Scotland) for airborne and impact sound acoustic protection and to provide a 'U' value to the ceiling/floor. UF60 can be used under load-bearing or non-load-bearing floors.

Stowe Inn floors and ceilings upgraded with Envirograf® heritage building solutions

This project includes the complete restoration of the Stowe Inn which was originally commissioned by the Temple family in 1717, the new Inn was the original starting point for a visit to Stowe Landscape Gardens. One would take a gentle walk through Bell Gate to be greeted by a breathtaking view of Stowe House across Octagon Lake.

This beautiful historic building was officially on the Heritage at Risk Register, needing urgent attention. The initial work has already begun but it will take months of skilled and careful craftsmanship to complete. Some of the immediate problems facing the project included re-roofing, new cobble paving and replacing the windows and exterior doors. One of the main challenges was ensuring the building meets the current fire regulations



which included upgrading the original ceilings and floors to the appropriate fire rating. Because the building's heritage status the ceilings and original beams had to remain intact creating a challenge to source a solution that would satisfy the building regulations whilst remaining sensitive to the original historical features.

Envirograf® was approached due to its extensive experience in offering effective passive fire solutions in the heritage building sector. The underfloor fire barrier has been used in many similar situations and was offered as the perfect solution for the Stowe Inn project. Offering up to 104 minutes protection the barrier is simply installed from above the ceiling. Floor boards are carefully lifted and the barrier is fixed between floor joists from above using fixing lugs and clout nails, if acoustic protection is needed a layer of acoustic fire rated sponge can be added. One of our Technical Fire Consultants said "The project was a great success, it's been very satisfying for Envirograf® to have made another successful contribution to a National Trust Heritage building, ensuring fire safety whilst maintaining the natural features of such a beautiful building"



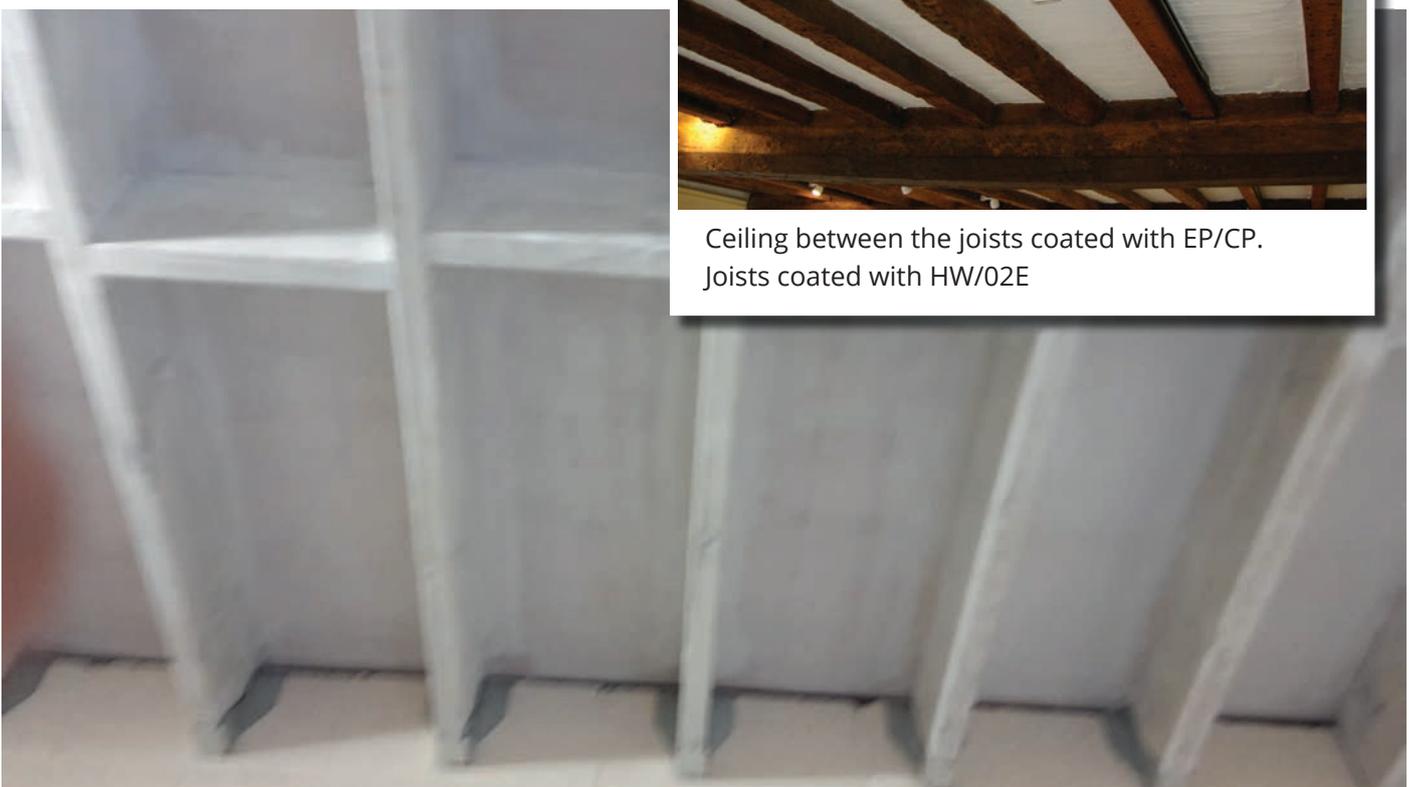
OPEN JOISTS & FLOOR BOARDS

In many listed buildings you will find the basement ceiling are open joists and floorboards. As you can see below, these could be protected with our HW01 White intumescent . The floors can be loadbearing.

Under-floor ceiling in basement coated with 2 coats HW01 White intumescent



Ceiling between the joists coated with EP/CP.
Joists coated with HW/02E



ENVIROGRAF® FIRE TEST ON A FULLY LOADED FLOOR

Envirograf® have had many Fire Tests to prove our HW Range Product 42 can give 30 and 60 minutes fire protection from old raised and fielded doors, ledged and braced doors, wall panelling, 3mx4m soft wood, spruce shiplap 19mm down to 12mm, 66 minutes etc.

A floor test at Chiltern Fire Test No. IF98078 with integrity, insulation and load bearing went for 58 minutes 40 seconds with 2 coats HW02 at 12m² per litre per coat. With 3 coats at 8m² per litre per coat it would have achieved 60 minutes plus.

This test was carried out for Franklin Street, Belfast for a 4 storey high Theme Pub, all open joist and floor boards with vats for brewing beer on the top floor, so 3 coats at 8m² per litre were applied and accepted for the building.



TIMBER CEILING AT CLIFTON HILL HOUSE, UNIVERSITY OF BRISTOL



To keep the appearances and to be able to use upper floors at University of Bristol, the open joists and floor boards were again coated with 3 coats of HW02/E at 8m² per litre per coat and brown AM mastic between joints which had shrunk over the years, giving 60 minutes integrity, insulation and load bearing.

There have been hundreds of these type of floor structures treated to give the 60/60/60 requirement to BS 476 Part 21 1987.

Specification on the image:
60 minutes fire integrity to BS476 Part 21 (1987)

1 coat clear primer

3 coats HW02/E

1 coat HW03/UV clear matt

AM mastic (brown) in joints between floor boards

EXISTING WOOD PANELLING

These can be easily be upgraded to give fire protection. The coating when finished will look exactly as it was originally. Water based, odourless, dries in 20/30 minutes. In most cases fire officers and Building Control ask for BS 476 Parts 6 & 7 Class 0 & 1 & now EN European Standard SBI B-s1-d0. The following coating will give this protection. This application is first a coat clear primer, dries in 10 minutes. Q/VFR is a 2 coat system, all at 12m² per litre per coat, either in clear or white. With finish in matt, 30% sheen, satin or gloss. All dry in approx. 20 minutes. The coating can be applied over existing polish, varnish, paint & French polish.

We also have the same coating for external application.



Ball room of historic hotel in Ireland



Wood panelling of a historic building.



Historic Building in Tonbridge, all wood panelling and beading upgraded with HW/01 coating.



Historic Building, wood panelling, doors and wood casing all treated with HW/02 coating.



EXISTING WOOD PANELLING FOR 30 & 60 MINUTES FIRE PROTECTION

Corridors, passage ways, escape routes & entrance halls are all means of escape.

Any wood panelling in these areas need to have either 30 or 60 minutes fire protection.

Product 42 HW02/N Clear or HW01 white Intumescent coating. Again can be coated over existing polished, varnished, paint or French polish.

This application would be as follows:

For clear application

1. Coat HWAP Clear water based Primer, odourless, at 12m² per litre, dries in 10 minutes.
- 2 coats of HW02/N clear at 8m² per litre per coat, dries in 20 minutes, odourless.
- 1 coat HW Excel clear top coat, matt, satin or gloss.

For white application

- 1 coat HWAP clear primer
- 2 coats HW01 white Intumescent coating at 8m² per litre per coat, odourless.
- 1 coat HW04/S white under coat. Then any type of top coat can be applied.



This brings up timber panelling to 30 or 60 minutes protection, according to thickness and type.

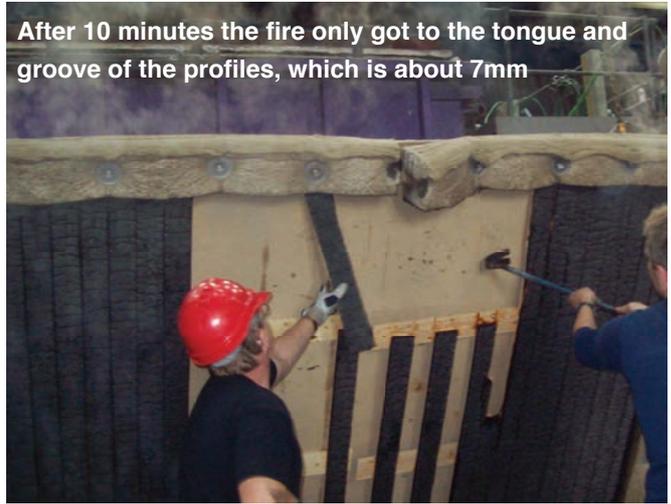


Tests have been carried out in the UK for open joists and floor boards for 60 minutes, 9mm panelling to 43 minutes fire protection. For Norway, Sweden & Denmark we had to have a 4m x 4m wall of softwood spruce timber, 20mm down to 12mm with 2 coats of HW gave 66 minutes fire protection, integrity, insulation and load bearing.



All timber and walls treated with HW01 and handrail with HW02

In 2013 because all ceilings in Scandinavian countries are mainly all timber, we had a special test in Denmark. On a wooden ceiling 4m x 4m chipboard with 10mm softwood battens. We only tested 15mm softwood T&G match board with 2 coats HW02 at 8m² per litre and a top coat. The test house were amazed that we were only testing 15mm thick timber. The test consist of putting the specimen on top of the furnace and immediately blasting it with 700°C upwards for 10 minutes. Then bring down and standing up, then crowbarred off T&G planks. There mustn't be a scorch mark on the chipboard, not only didn't we have any scorching, but the T&G were still white plain timber. We now supply all these countries.



Cape Cod Timber cladding coated with HW/01 was spared extensive damage in a fire



It was later fully restored back to it's previous state

A 3 storey terrace house, the bin store set on fire the plastic window, soffit boards & gutter all melted. The timber charred but was sanded down and recoated with our HW01 & top coat.



Wooden panelling treated with HW02



Staircase treated with HW02

TIMBER BARN CONVERSION GAINS THE ENVIROGRAF® ADVANTAGE



Barns converted into office units are a very popular environment for many companies to relocate their businesses into. The office units are carefully divided to take full advantage of the internal structure. A stylish example of a quality conversion is Wakes Hall Business Centre, Colchester, Essex. This has been meticulously designed to take full advantage of the attractive open timberwork. David Bloomfield is managing the project for Rose Builders Ltd of Manningtree, Essex, and he was briefed to combine a pleasant, modern working environment with a traditional setting. To ensure that both the open timberwork and the walls would conform to current fire regulations, David enlisted the help of fire consultant Vic Lewis of Fire Prevention Products (Essex & Suffolk). Vic suggested the use of Envirograf® Product 42 (HW02 clear intumescent coating) for up to 60 minutes of protection for the timber, together with Envirograf® Product 105 (EP/CP fire-resistant smooth coating) for the wall areas. In strict independent fire tests, both products have exceeded expectations and are currently used extensively on many projects around the country. The tough, robust, quality Envirograf® finish to the timber and walls will help to protect the building for many years to come.





Timber coated with HW02 Clear Intumescent coating, Plaster walls coated with EP/CP coating. Both giving up to 60 minutes fire protection.



DOOR TO BE UPGRADED TO FIRE DOORS

A door left open allows fire to escape it is most important that door is kept shut.

Naturally doors in Historic Buildings won't be fire doors, Envirograf® can upgrade doors with product 42 our HW Range. Easily applied after application the door will not change appearance. Over HW coating can be applied over existing paint, varnish, french polish etc. Room doors are only treated on the room side risk side. Unless they are a door separating a corridor, or separating one room from the next. Over the course of 30 years many doors have been treated to bring up to fire doors.

Doors from 30mm thick stiles & rails up to 44mm, can be upgraded to 30 minutes doors. 45 mm upwards to 60 minutes doors. Should doors be less than 30mm these can be brought up to a 20 minutes doors.

In test carried out it was found the larger rooms the temperature in a fire is lower, so doors are not exposed to the British Standard furnace test.

Naturally this is determined by fuel load near the door. All fire doors must have door closer mechanism.

Must have cold smoke seals (smoke kills) intumescent seals sealing the perimeter gap in a fire helping to give stability to the door.

Envirograf® can help with all these without taking door off.



Firstly **Envirograf® door closer hinges** in many different finishes. Just remove one hinge at a time, our hinge will fit into your existing cutout once all three hinges are fitted, should you not have a 3rd hinge on your door it is easily in situ to cut out and fit 3rd hinge with no damage. This has been done many times. The hinge has a stainless steel spring inside. An allen key is supplied to tighten it up & fit the pin. Do this to all hinges, they can be adjusted to any speed or strength.



Smoke and intumescent seals.

Our surface mounted seals fit onto the door frame facing the edge of the door, so no alteration to the door. Finishes in white, brown, black or real veneer to match the door frame.

TO UPGRADE THE DOOR TO A FIRE DOOR IS AS FOLLOWS:

For natural wood finished door or decorative door

- 1 coat HWAP clear primer at 12m² per litre
- 2 coats HW02/N clear intumescent coating at 8m² per litre per coat
- 1 clear top coat matt, satin, gloss, 10m² per litre.

For painted door the same application can be made so the clear goes over the coloured.

Otherwise

- 1 coat HWAP clear primer at 12m² per litre
- 2 coats HW01 white intumescent coating at 8m² per litre per coat
- 1 coat undercoat
- 1 coat any type of top coat

With these systems there are no odours & dry in approx. 30 minutes.

The following pictures shows door treated



Door treated, waiting to dry



Door completed with top coat



Doors coated over gold leaf and have our hinges fitted



Doors and frames treated with HW02 Clear coating and fitted with our hinges



Doors and frame treated with HW02 clear coating

PERFECT PARTNERS

Door fire protection products used at Gosfield Hall

The elegant Gosfield Hall, Essex is considered by many to be an ideal setting for a wedding reception, anniversary party, or formal party. The sumptuous refurbished suites and impressive entrance hall are a constant reminder of the tasteful restoration to its original condition.

The venue is operated by County House Weddings of Ross-on-Wye. With a high volume of guests in the hall every year, the local authority had to ensure that every effort had been made to protect occupants in the event of a fire. This involved fireproofing the glazed areas and upgrading many original doors.



Architect Rob Wood contacted local fire consultant Vic Lewis of Envirograf® to find a cost-effective solution to fire protection of exit doors to comply with current fire regulations, without the nuisance and expense of replacement.



For the glazed corridor areas of the hall, Vic suggested the use of Envirograf® Product 79 (softwood intumescent glazing beads offering up to 30 minutes of fire protection). The old doors were upgraded to fire-rated doors with a combination of Envirograf® Product 38 (firecard and intumescent sheet) and Product 42 (HW coatings system).

Envirograf® Product 69 (surfacemounted fire/smoke seals) were used for flexibility on uneven door frames and to avoid the need for rebating. Envirograf® Product 13 (intumescent pipe collars) were also used where door handles were recessed into wooden wall panels.

SINGING THE PRAISES OF EXCELLENCE

Doors upgraded at Westminster Choir School

In the shadow of the great abbey is Westminster Choir School, dating back to 1170. The school is renowned for its choral excellence, and it has followed centuries of traditional values in education. The present boarding school in Dean's Yard dates back to 1915 and it currently houses 38 people (choristers and staff). The school recently underwent an extensive internal refurbishment programme. In order to provide fire protection and retain the original character and elegance of the woodwork, Fire Prevention Products (London) Ltd (telephone 01322 228270) were consulted.



As most of the wood is very old and possibly contains layers of polish, FPP recommended the use of Envirograf® Product 42 HWAP adhesion primer to provide a solid foundation to the surface. The contractors needed an acceptable level of fire protection to Class 0 and Class 1 spread of flame, so the Envirograf® Product 92 ES/VFR coating system was used. This was subsequently coated over with the strong and resilient protective top coat Envirograf® Product 42 HW05, which will give the surfaces many years of tough protection.

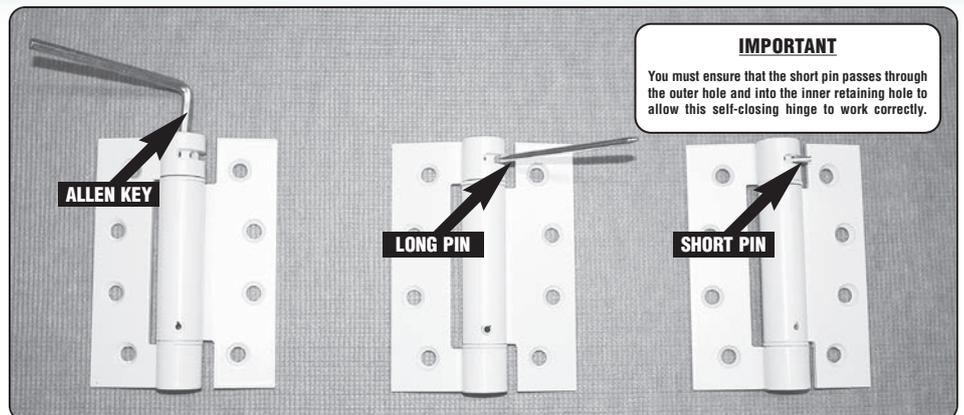


HINGES PROTECTION



Benefits:

- Discreet door closer
- Quick & easy installation
- Set of 3 hinges per door
- Ideal for Conservation Areas
- 6 Finishes available
- CE Approval
- Each Hinge fully adjustable



PROTECTING A RURAL COTTAGE IN WALES



REFURBISHMENT HINGES ON ENVIROGRAF PRODUCTS

FIRE STOPPING PRODUCTS



Over many years tradesmen have worked on the building without securing for fire.

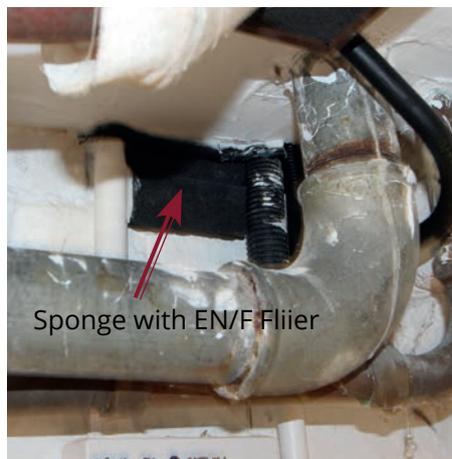
Many holes in walls & ceilings can be filled with our fireproof sponge and Intumescent mastic.

Envirograf® make all easy to fit or install products stopping fire, smoke and in many cases acoustic protection.

BLACK SPONGE AND EN/F FILLER



Sponge with EN/F Filler



Sponge with EN/F Flier

In a fire plastic pipe & cable burn allowing fire into the next room or floor above. Steel & copper pipe track the heat to another area, all these must be stopped.

Our EN/F1 mastic in a tube can be pumped in between small plastic copper & steel pipes & cables, this expands in a fire filling the void, our EN/F2 is white Intumescent mastic, so can be decorated over.

INTUMESCENT SLEEVE FOR SERVICES

Where pipes over 50mm and large bunches of cables go through plasterboard or lath & plaster walls or ceilings our product 110 IWS opens up, and wraps round the services. Then push into wall or ceiling so level with the face of wall or floor. This only crushes inwards not outwards, so crushing and filling void for 2 hour protection. Can be fitted round existing services. Square & oblong shaped to go round PVC electrical trunking and cable trays.



OTHER TYPES OF PRODUCTS TO GO ROUND SERVICES

Product 13 WPCS metal collar, fit round service, screw to wall or ceiling.



Product 16 square and oblong metal collars to fit round one or more services with fire rated smoke seal.



Product 18 Saddle for over services, that are tight to walls, passing through wall or ceiling.



For larger holes in floors or walls such as opening in a cupboard in the hall where services come up from basement to upper floors. According to size of opening, if no one is going to stand in the cupboard our product 4, Intumescent coated slab or product 5 Intumescent coated sponge slab.

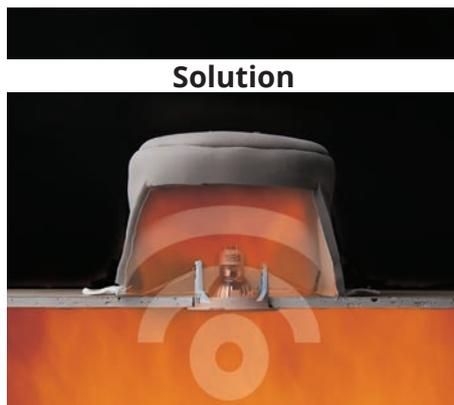


For areas where there could be a person standing on the floor, fit wire mesh first with one or two of our support bars, then fit product 4 or 5 on top.

All the suggestions are easy to fit or install.



Problem



Solution

Finally, should you have down lighter fittings recessed into your ceiling, our down lighter covers must be fitted to stop fire penetrations, easy to fit from below.

AS WE MENTIONED FROM THE BEGINNING THIS IS A LOT TO MAKE A HISTORIC BUILDING SAFE. THIS COULD ALL BE DONE OVER 4 YEARS, AT LEAST THEN YOUR BUILDING WILL BE THERE FOR MANY GENERATIONS.