



ENVIROGRAF®



INTUMESCENT SYSTEMS FOR PLASTERBOARD CEILINGS & WALLS

PRODUCTS 53, 84, 96, & 105 DATA SHEET



**UPGRADE LATH-AND-PLASTER CEILINGS AND PLASTERBOARD
CEILINGS / WALLS FOR UP TO 60 MINUTES OF FIRE PROTECTION**



**PROTECTING PROPERTY
PROTECTING LIVES**



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IDENTIFICATION AND DESCRIPTION

ADVANTAGES

- Straightforward to apply
- Environmentally friendly
- Especially effective in refurbishment projects often allowing existing architectural features to remain
- Cost effective

INTRODUCTION

Intumescent Systems Ltd offers a unique range of intumescent products designed to upgrade existing lath-and-plaster walls and ceilings, particularly for restoration work in old listed buildings. All have been tested to the relevant British Standards in UKAS-approved test houses and will upgrade many types of ceilings and walls to a fire rating of 60 minutes. These systems have been extensively used in many building types, including: Alnwick Castle, Buckingham Palace, Cambridge and Chichester Universities, Crewe Hall, Godmersham Park and many others.

SIZES AND ORDERING REFERENCES

UNDER-FLOOR FIRE BARRIER (PRODUCT 53)

UF 60 – 60 minutes of protection

Available in 1800mm lengths and any width

Particularly suitable for standard joist widths, allowing 50mm for fixing (see product details)

Add suffix /S for sound-proof sponge

FB/T Battens for fixing barrier to timber joists or wall fixings are supplied

AVA – anti-vibration acoustic seal for joists (50mm, 60mm, or 80mm widths)

INTUMESCENT PAPER (PRODUCT 84)

Intumescent Paper – 1100mm wide

Adhesive – CA/N (1litre, 2½ litre, and 5 litre tubs)

Stopper – CS (1 litre, 2½ litre, and 5 litre tubs)

ACRYLIC EMULSION COATING (PRODUCT 92)

AEC – Acrylic Emulsion Coating (semi-gloss top coat ONLY)

(can be used with Products 42-HW01, 96, & 105)

FIRE RESISTANT TEXTURE FINISH (PRODUCT 96)

AB – Light grey finish

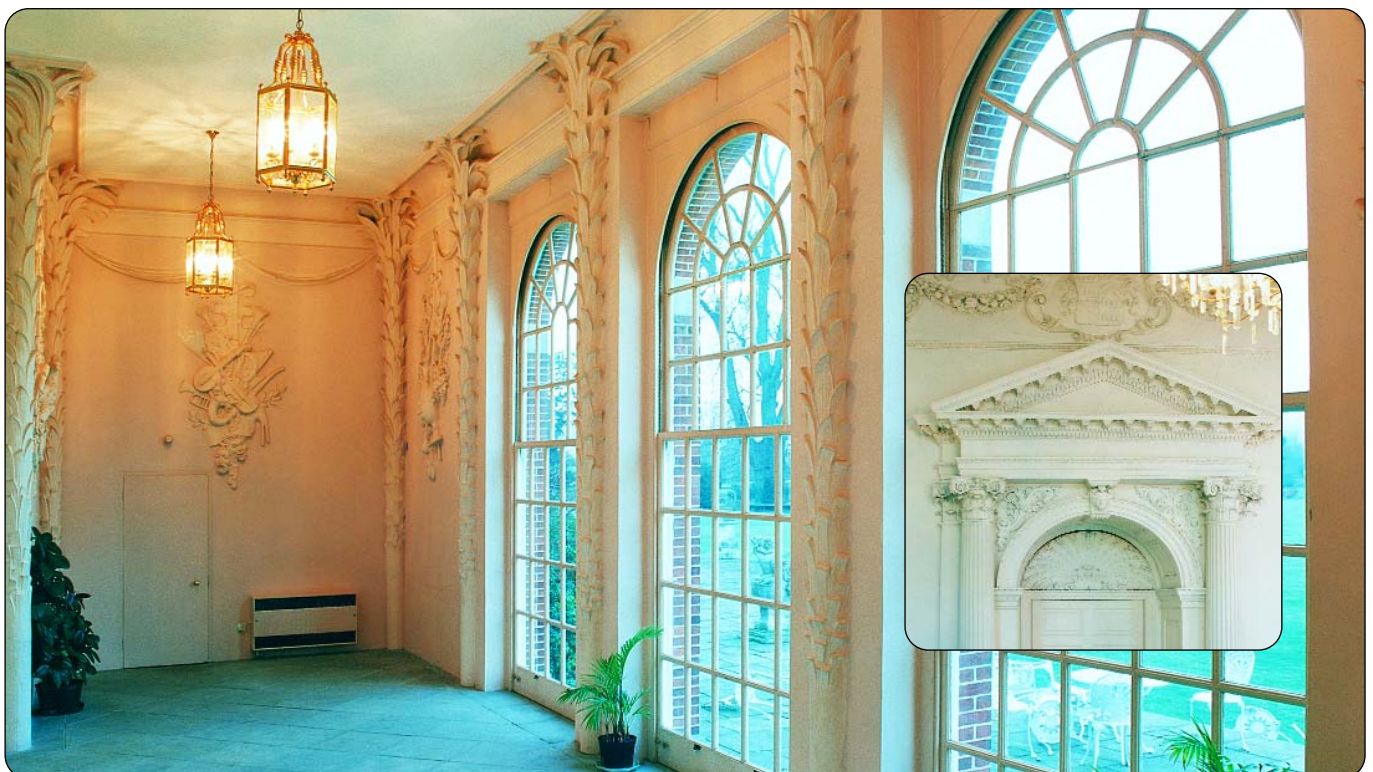
(1 litre, 2½ litre, 5 litre, 10 litre, and 25 litre tubs)

FIRE RESISTANT SMOOTH FINISH (PRODUCT 105)

EP/CP – White finish

EP/CP/T – Top acrylic coat, can be supplied in any BS colour

(1 litre, 2½ litre, 5 litre, 10 litre, and 25 litre tubs)



PRODUCT 53 – UNDERFLOOR 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

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, then fix the barrier to the joists with the supplied rectangular metal plates and 30mm clout nails 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). Overlap adjacent pieces by 50mm and adhere with Envirograf® Product 46 (IA) intumescent adhesive. Once fixed, replace the floor boards. If sound insulation is required, a acoustic fire resistant sponge can be laid over the barrier between the joists (see illustration 1B).

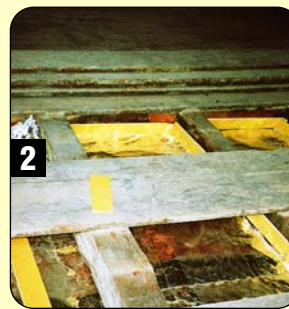
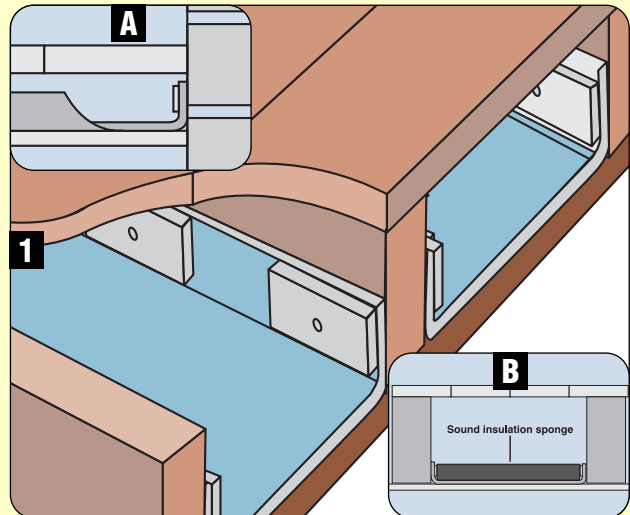
NB: The underfloor fire barrier is supplied to fit a standard 400mm gap between joists, allowing a further 50mm on each side for fixing. Please state if the joist gap differs from 400mm. Skilled tradespeople are required when installing the underfloor fire barrier system. Although the barrier is extremely 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.

FIRE PERFORMANCE

The underfloor 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 2 & 3 opposite show a decorative ceiling upgraded with the use of the under-floor fire barrier system.



PRODUCT 84 – INTUMESCENT PAPER SYSTEM

This intumescent paper system is used to upgrade existing lath-and-plaster ceilings and plasterboard ceilings/walls to 60 minutes fire rating.

APPLICATION

The lath-and-plaster surface must be in extremely good order and should be well fixed (not sagging) to the main structure.

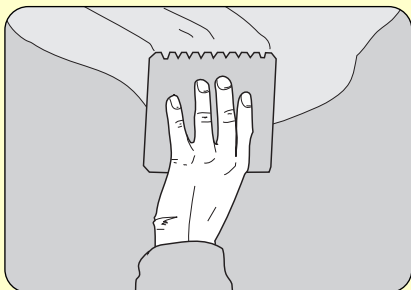
All existing paper must be removed.

Any traces of distemper must also be removed and the surface must then be sealed with Envirograf® Product 93 (Stabond).

All cracks must be filled with Envirograf® Product 61 (CS Stopper).

FIRE PERFORMANCE

A fire resistance test was performed on a 3.25m x 4.2m load-bearing timber floor / lath-and-plaster ceiling construction, in accordance with BS476 Part 21 (1987). A coat of sealing primer and a single sheet of the Envirograf® intumescent paper was adhered to the underside using Envirograf® CA/N adhesive. Three coats of emulsion paint were used to finish. The ceiling/floor achieved an integrity and insulation rating of 59 minutes 40 seconds, but supported the full test load throughout the 60 minutes of testing. Test Number: FR1769.

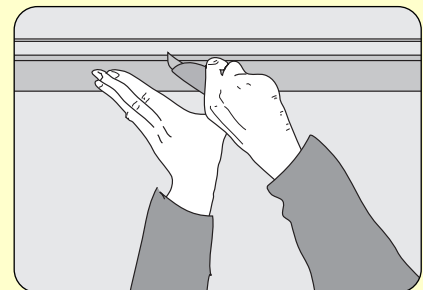


Once the surface has been properly prepared, liberally apply the adhesive (in areas of one square metre at a time) over the surface with a standard comb.

NB: New intumescent ceiling paper with fire card is available.



Application of the paper requires two people. One applies the CA/N adhesive at a coverage of 3m² per litre, whilst the other unrolls the paper and then presses it flat onto the surface using a standard decorator's scraper or rubber roller. Each sheet must overlap the next by 10mm to 15mm. The edges must be trimmed using a sharp knife and a straight edge, then butted together. Apply extra adhesive under the trimmed straight edges and press them flat to finish.



The intumescent paper and adhesive must be completely dry before decorating with either paint or paper. Treat all decorative plaster elements, such as coving and mouldings, with two coats of Envirograf® Product 105 (EP/CP) at 8m² per litre per coat. This can then be painted over with a good quality acrylic paint.

NB: Labels are supplied to indicate to building control officers and fire officers that walls and ceilings have been upgraded.

PRODUCTS 96 & 105 – AB & EP/CP SYSTEMS

The AB texture system and the EP/CP smooth coating system are coating systems for plasterboard ceilings and walls. AB texture can have a combed or stippled finish, and EP/CP coating is smooth finish. Ceilings covered with skimmed 12½ mm plasterboard and partition walls clad with 9mm skimmed plasterboard can be upgraded to one hour of fire protection.

APPLICATION

The skimmed plasterboard surface must be clean, dry, and free from dust, grease, and water-repellent substances. All wallpaper must be removed. If the surface is particularly porous, then a coat of Envirograf® Product 93 (Stabond) should be applied first.

Product 96: AB Textured Coating System

SECOND COATING @ 3 - 4 m²/ l
FIRST COATING @ 8 m²/ l
PLASTERBOARD

The AB texture system is a two-part coating system. Apply the first coating and allow up to 90 minutes to dry, then finish by applying the thick second coating and stipple or comb finish. When completely dry, the AB System can be painted over with Envirograf® acrylic emulsion coating (AEC).

DO NOT USE low-grade trade paint with this system

Product 105: EP/CP Smooth Coating System

SECOND COATING @ 8 m²/ l
FIRST COATING @ 8 m²/ l
PLASTERBOARD

The EP/CP smooth coating system is a two-part coating system. Apply the first coating and allow up to 90 minutes to dry, then finish by applying the second coating. When completely dry, the EP/CP System can be painted over with Envirograf® acrylic emulsion coating (AEC).

DO NOT USE low-grade trade paint with this system

It is important to understand that the quality of the finished job is completely dependent upon the quality of the preparation. Intumescent Systems Ltd do not accept any responsibility for the poor workmanship of others in the use of their products. Identification labels are supplied and should be used to certify upgraded rooms

FIRE PERFORMANCE

A fire resistance test performed on a load bearing timber floor, protected by 12½ mm thick plasterboard coated with EP/CP and AB intumescent coating was tested in accordance with BS476 Part 21 (1987), achieving an insulation and integrity whilst maintaining the load-bearing capacity for 61 minutes. Test Number: RF95003.

A timber-stud plasterboard partition, plastered with finish plaster and coated on the fire side with Envirograf EP/CP and AB intumescent coating was subjected to a fire resistance test in accordance with BS 476: Part 22: 1987 achieving an insulation of 71 minutes and integrity of 72 minutes. Test Number: LPL 159.

Product 105 can be applied by brush, roller, or spray
Add 10% warm water when spraying
High Pressure Sprayer: 1.8mm nozzle @ 3½-4 bar
Airless Sprayer: nozzle 13-15* @ 150 bar
(*0.0013-0.0015 inches)



IMPORTANT CAUTION FOR ALL PRODUCTS IN THIS DATA SHEET

The products mentioned in this data sheet are NOT susceptible to normal degrees of moisture. For the application of the AB textured coating system, it is important that the following conditions are observed prior to and during application and drying periods:

- (1) The substrate must be completely dry immediately prior to application.
- (2) The temperature of the room should be at least 10°C with less than 65% relative humidity.



REGIONAL OFFICE