

# kuhn odice



Your vital partner  
for fire safety



# kuhnodice

## KuhnOdice has been at the forefront of intumescent seal technology for 50 years

Add unrivalled experience and expertise from a dedicated team offering wide-ranging technical support and true worldwide capability and it's easy to see why KuhnOdice is synonymous with intumescent technology at its best.

Today from our Aldershot home, we design, manufacture, supply and install a comprehensive range of fire, smoke and acoustic seals to meet industry requirements and our customers needs and specifications. To ensure the safe compliance on all fire doors and also to develop our product range, we work closely with door manufacturers, glass manufacturers and hardware manufacturers on a regular basis. Every product is subjected to rigorous quality control and most importantly independent third-party evaluation and testing to various national and international standards which is vital to our success.



KuhnOdice is part of the SAVERTO group of companies.

### Intumescent Fire, Smoke and Acoustic Door Seals

Our Pyrostrip range of products includes standard PVC sheathed intumescent along with brush and elastomeric co-extruded fins. We also manufacture them for specialist applications.

### Acoustic Seals

Our co-extruded Flexifin seals provide a combined solution for fire, cold smoke and acoustic insulation. For smoke and acoustic sealing our Perimeter Seals are highly effective and simple to install. Drop down threshold seals complete the range.

### Intumescent Ironmongery Protection

We manufacture a comprehensive range of intumescent seals and gaskets for virtually all aspects of door ironmongery. Providing pre-cut kits for all leading manufacturers of hinges, door closers, locks and latches.

### Glazing Protection

Providing up to 90 minutes protection, Pyroglaze products are used globally in glazed doors, screens and partitions. Kerafix® can be used in both timber and glazed steel door sets.

### Fire Protection

The Fire Protection range includes Pyrogrille air transfer grilles in rectangular and circular configurations. Pyromas intumescent sealing mastic. Palusol® SW laminated boards for use in raised and fielded or flat panelled doors.

### Fire Stopping

Wherever plumbing, electrical, heating and ventilation services penetrate through fire separating structures KuhnOdice supply a range of products ideally suited to protect from the spread of fire and smoke.

## Leading from the front – looking to the future

Ever since its foundation KuhnOdice (formerly Mann McGowan), has been one of the principal pioneers in intumescent technology – developing a whole series of ground-breaking products, providing an unrivalled range of specialist services and forging lasting working partnerships with construction professionals around the world.

### Advanced manufacturing processes and new innovative intumescent products

Today, we're making a fresh commitment to our customers – with major investment in advanced equipment and increased production, an on-going programme of innovation to introduce new intumescent solutions and further extending our skills and expertise in order to offer the most comprehensive service in the industry.

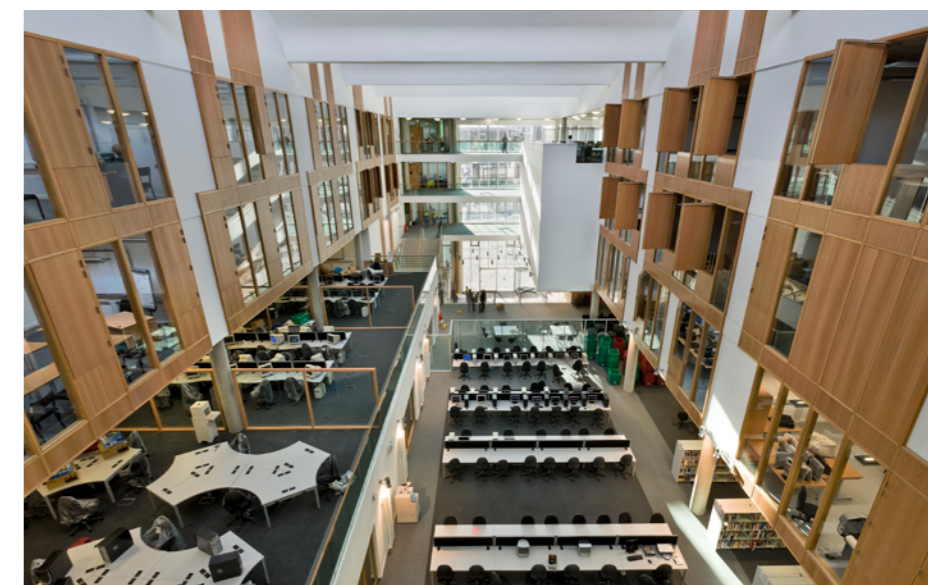
### One-stop solution for fire, smoke and acoustic seals

We're still one of the only companies, that not only supplies intumescent products, but also has the capability to design, manufacture and install in virtually any situation. In other words, a single tried and trusted source of everything involved in intumescent technology.

### A leading global supplier

We've established distribution partnerships with companies in India and the Middle East to give us a true global reach.

So whether you're thinking about fire resistance, noise reduction or environmental protection, the answer is always KuhnOdice.



### Design

We were the first company to encapsulate intumescent into a PVC sleeve. We have continued to design new innovative products including our own specially formulated graphite intumescent used throughout the range.



### Manufacture

Nearly all our products are manufactured in-house at our factory in Aldershot. Thousands of metres of extruded intumescent strips leave for destinations across the world on a daily basis. From schools to sports stadiums.



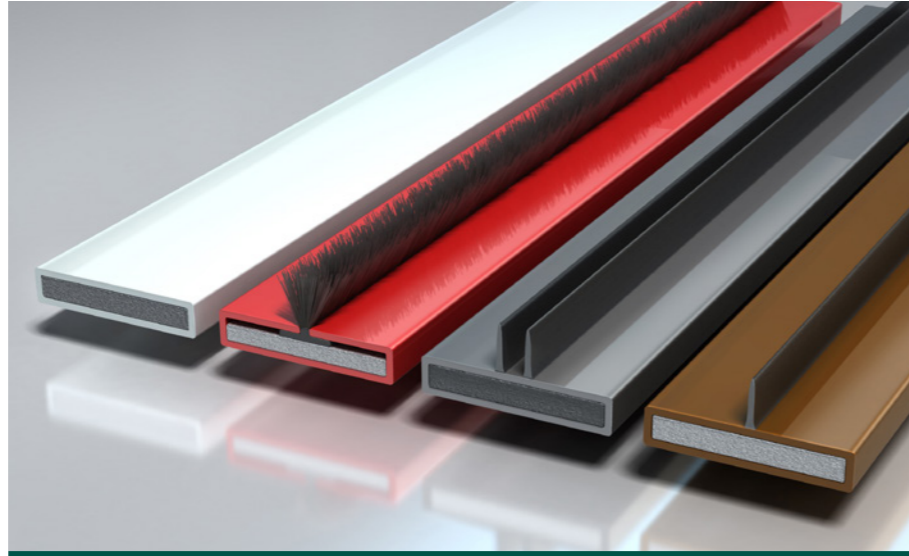
### Test

We have always been among the few companies who have their products regularly tested. We can provide up-to-date independent test evidence that provides installers and construction companies peace of mind.

## Intumescent Fire, Smoke and Acoustic Door Seals

Pyrostrip is a high-performance fire seal incorporating either a graphite or Palusol® based intumescent in a purpose designed uPVC sleeve. A range of proven intumescent seals that dependant on specification, can provide performance ratings from 30-120 minutes fire integrity.

- Wide range of sizes, colours and shapes for specialist applications
- Available with brush smoke seal controlling the spread of fire and smoke in a building
- Flexifin incorporates co-extruded elastomeric fins, providing smoke, acoustic and environmental protection
- Graphite material available as cut sheets or rolls with self-adhesive tape applied
- Fully tested to UK and international standards
- Successfully installed in doorsets all around the world

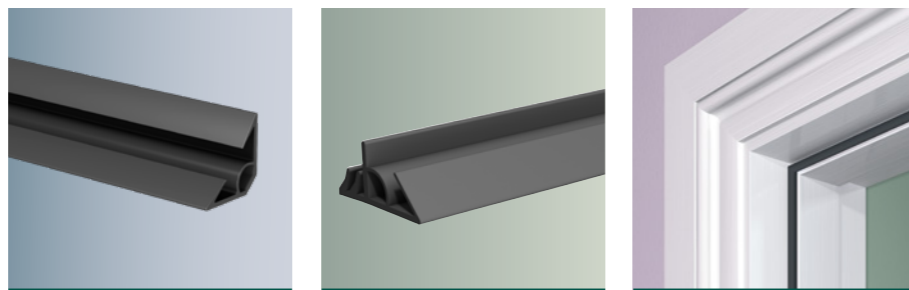


## Acoustic Seals

KuhnOdice has a highly successful range of acoustic sealing products, offering complete acoustic, smoke, dust and ambient weather seals. Importantly, these seals can be used in conjunction with our intumescent fire seals providing complete protection.

- Fully adjustable drop down seals with excellent noise-reducing performance
- Pyrostrip combined fire and acoustic perimeter seals
- Surface mounted smoke and acoustic perimeter seals
- Range of easy to install compression seals offering sound, draft and buffer sealing

Used in combination, our acoustic seals cut heat loss and eliminate cold draughts – measurably reducing energy usage – and prevent the ingress of smoke, airborne dust and insects.

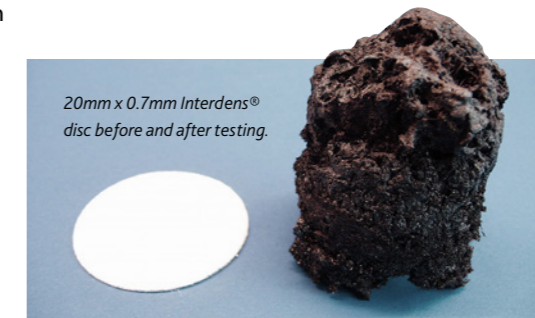
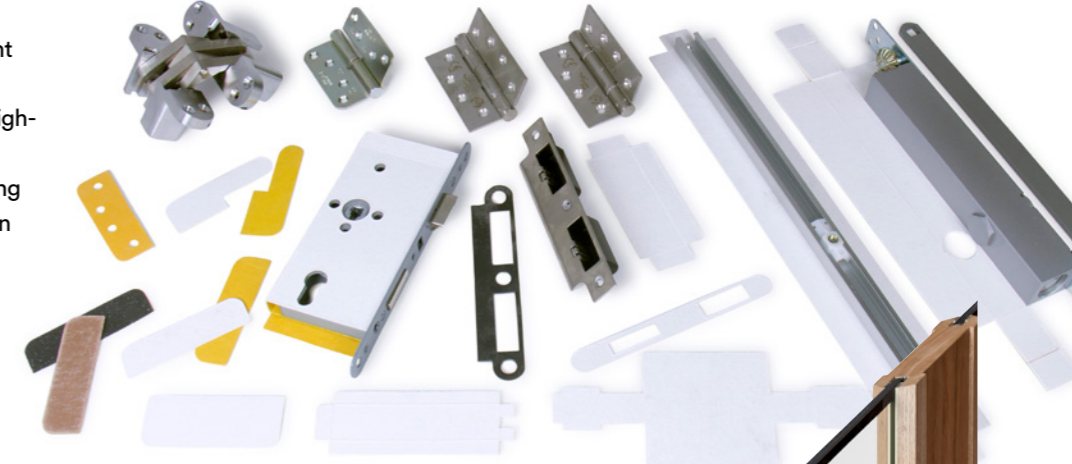


## Intumescent Ironmongery Protection

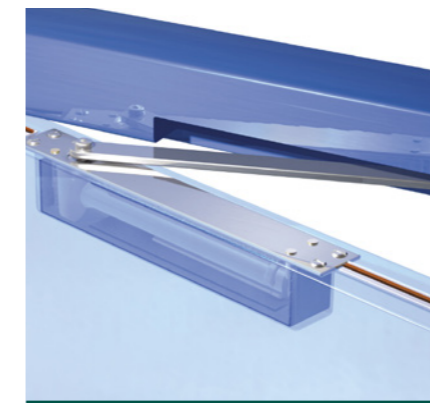
KuhnOdice manufactures a comprehensive range of intumescent seals and gaskets for virtually all aspects of door ironmongery. Our high-performance intumescent insulates the timber, slowing down the charring process and providing fire protection from 30 minutes to over an hour.

- The UK's licensed converter of Interdens®
- Convenient, easy-to-fit, pre-cut intumescent kits for all leading brands of door closers, hinges, locks and catches
- We can also custom cut to your own specification or supplied CAD files
- Also available in our own formulated flexible graphite intumescent material with self-adhesive backing in 1 or 2mm thickness.

**Always refer to hardware manufacturers test evidence.**



### Pyrocloser

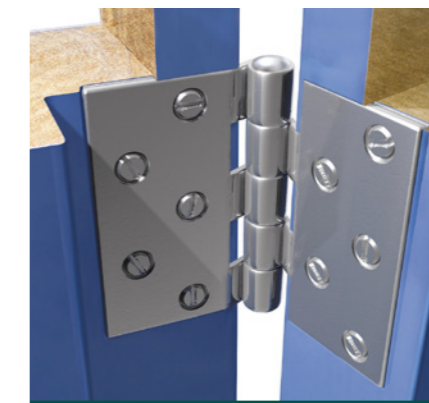


Concealed door closer mechanisms are an obvious weak point in any timber door and in the event of a fire, they can have a seriously detrimental effect on the integrity of both door and frame.

Pyrocloser intumescent kits provide proven fire performance for a minimum of 30 minutes when installed as part of an approved fire door system.

- Wide choice of templates, easily cut to size and fitted to both external and internal closers
- Supplied in 1mm and 2mm Interdens® (M.A.P.) or Graphite

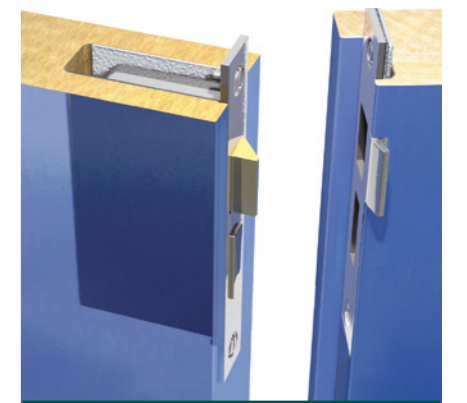
### Pyrohinge



With proven fire resistance for a minimum of 30 minutes, Pyrohinge is easily fitted to virtually any make or style of hinge. Supplied in pre-cut sheets with either rounded or square cut corners.

- Standard widths – 29mm, 30mm, 32mm, 35mm, 36mm, 48mm
- Complete hinge and seal combination kits available
- Available in White, Brown and Black finishes
- Supplied in 1mm and 2mm Interdens® (M.A.P.) or Graphite

### Pyrolock



As with all our ironmongery products, Pyrolock provides proven fire resistance combined with ease-of-use and convenience for the installer. We hold a massive library of templates to match locks and catches from all leading brands. Non-standard kits are available on request.

- Available in White, Brown and Black finishes
- Self-adhesive pre-cut kits are very easy to assemble and fit
- Supplied in 1mm and 2mm Interdens® (M.A.P.) or Graphite

# Glazing Protection

KuhnOdice manufacture a comprehensive range of glazing seals for 30, 60, 90 and 120 minutes fire resistance for timber and steel systems. Easily applied between fire resisting glass and untreated timber glazing beads, Pyroglaze's self adhesive semi-rigid PVC encapsulated strips are quick and easy to install and need no cleaning down after installation.

- Pyroglaze products used in hundreds of high-profile locations around the world
- Tested in conjunction with a wide variety of glasses
- Can be used with either softwood or hardwood systems
- Available as Interdens® in sheet form or cut to size
- We also supply a range of self-adhesive tapes for shaped apertures in timber or steel doors



## Pyroglaze 30



Pyroglaze 30 is manufactured in one size of 10 x 3mm and available in the standard range of KuhnOdice Colours as below.

- Successfully assessed by UK and International testing centres
- Supplied in standard lengths of 2100mm and 3M on request.
- Suitable for any shape of aperture as well as larger glazed panels and partition systems

### Standard colours Pyroglaze 30/60:



## Pyroglaze 60



Pyroglaze 60 is manufactured in two sizes of 25 x 3mm or 25 x 4mm and available in the standard range of KuhnOdice Colours as below.

When used in conjunction with FD60 doors all glazed apertures should be fully lined with Pyrostrip 52mm x 2mm 100ECSA, prior to fixing the glazing beads, as shown in the image above.

- All features and benefits similar to Pyroglaze 30

## Pyroglaze 90



Pyroglaze 90 is manufactured in one size of 30 x 8mm. It combines two types of intumescent: Interdens MAP and our own unique glazing grade of graphite based material to provide fire protection in excess of 90 minutes.

Pyroglaze 90 requires the use of Palusol® at 63mm x 2mm to line all four sides of the glazed aperture.

- Features and benefits similar to Pyroglaze 30 and 60

### Standard colours Pyroglaze 90:



# Glazing Protection

## Pyroglaze Compression



**New for 2026** Pyroglaze Compression is a compressible graphite intumescent seal, suitable for use in glazed apertures.

It provides up to 2mm compression per side of glass, allowing accommodation of tolerances between door, bead and thickness of glass. Available in two sizes providing 30 and 60 minute protection.

In the event of fire, the intumescent swells to provide an effective seal within the glazing pocket and reduces the risk of premature ignition of the glazing beads on the protected face.

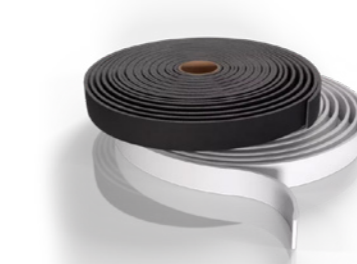
## Pyroglaze Interdens



Pyrostrip Interdens® is a phosphate based (MAP) intumescent system providing a minimum of 30 minutes protection for a wide variety of fire resistant glass.

Standard thickness Type 36 – 2mm in white, black or brown finishes.

## KERAFIX® 2000



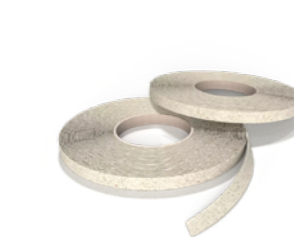
KERAFIX® 2000 is a high-performance, flexible and heat-resistant insulating material designed specially for applications that require both thermal insulation and fire protection. Produced from soluble mineral fibres, it offers a safe and environmentally friendly alternative to traditional ceramic fibres, as it is asbestos-free and does not contain irritant fibres. The material is extremely lightweight and easy to handle and can be cut, punched or bent into a variety of shapes to meet complex requirements.

## KERAFIX® FXL200



KERAFIX® FXL 200 is a flexible, intumescent material that expands without pressure when exposed to fire, forming a solid, heat-resistant foam. It has a high level of fire resistance and can be adapted to a multitude of different applications. The material comes in thickness's of 1 or 2 mm, and the width can be adapted to specific requirements ensuring a precise fit. Suitable for use in fire-rated glazing systems, door and window systems, facade constructions and lock case insulation. Easy to cut to shape and fit.

## KERAFIX® Flexlit



KERAFIX® Flexlit is a flexible fire protection product designed especially for use in the construction industry. It comes in a thickness of 2 mm or 5 mm and becomes intumescent at roughly 350 °C, expanding to multiple times its original volume. KERAFIX® Flexlit is used to prevent the spread of fire and smoke in a huge number of applications, including fire-rated glazing systems, doors and windows.

## KERAFIX® Flexpan 200



KERAFIX® Flexpan 200 is an intumescent material for use in fire protection doors made from steel, aluminium and wood. It is also ideal for facades, safety storage cabinets, control cabinets and various dry lining applications. The material is based on halogen-free, foaming expandable graphite. KERAFIX® Flexpan 200 reacts from a temperature of around 200 °C, at which point it expands significantly to form an isolating barrier. The material is largely insensitive to moisture and is available in a number of different variants and dimensions.

**KuhnOdice supply a wide range of glazing tapes and glazing accessories, for full details go to our website**

# Fire Stopping

Wherever plumbing, electrical, heating and ventilation services penetrate through fire separating structures, the integrity of these elements must be maintained. KuhnOdice and Flamro manufacture and supply a range of products that enhance building safety, preventing the spread of fire, smoke and heat, protecting people, property and premises.

The Flamro product range includes:

- Endless Collar
- FSC 4 Collars
- Cable Tubes
- Cable Wrap System DGCR 0.7
- Firebreather Cavity Barrier
- Mortar

All products are independently tested to the highest European and worldwide standards. All products are CE Marked and have ETA's.



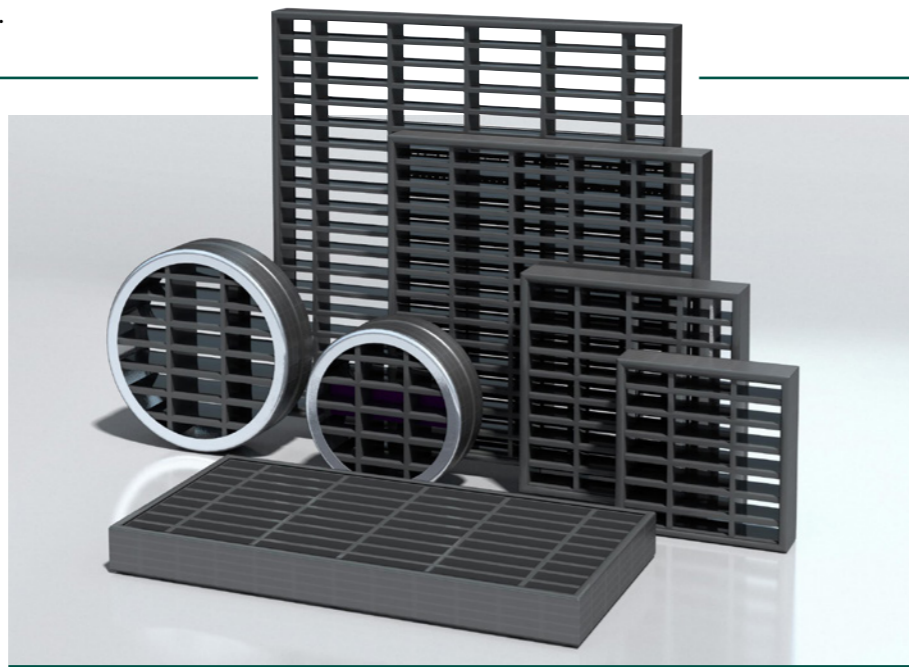
The Fire Protection range available through KuhnOdice includes our hugely successful Pyrogrille air transfer grilles in rectangular and circular configurations. Pyromas intumescent sealing mastic. Palusol® SW laminated boards for use in raised and fielded or flat panelled doors, see page 10.

## Pyrogrille

- Pyrogrille ATGs for multiple applications, slim design of either 25mm or 38mm thick. A wide range of aesthetic covers are available

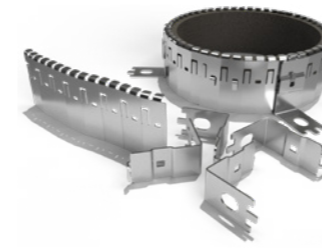
## Pyromas A

- Pyromas A Intumescent Acrylic Sealant for sealing joints up to 35mm wide. Ideal for permanent sealing of low movement joints, dry lining and partitions



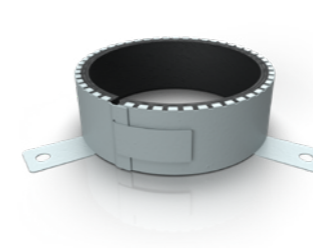
# Passive Fire Protection Products

## EC Endless Collar



The Flamro Endless Collar incorporates a space saving design ideal for use in restricted areas in both flexible and solid walls as well as solid floor constructions. Used to protect combustible pipes, multilayer composite pipes and insulated non-combustible pipes it delivers proven certified fire performance across a wide range of applications.

## FSC 4 Collar



The FSC 4 fire protection collar consists of a steel sheet housing that is fitted with a multilayer inlay of intumescent building material. This foams up under thermal influence and forms a solid foam body. It is suitable for the fire-resistant sealing of plastic pipes and combustible pipes up to max. Ø 160 mm.

## AWM II Collar



The AWM II is a fire pipe collar consisting of a steel sheet housing with an intumescent inlay. It is suitable for sealing combustible pipes up to 400mm diameter with and without sound insulation or FEF insulation.

## NOVASIT BM



NOVASIT BM firestop compound is a fibre-free special mortar with particularly high adhesive strength, stability, and low formwork effort. It is suitable as a firestop sealing mortar for cable, pipe, and mixed penetration seals.

## Cable Tube CT

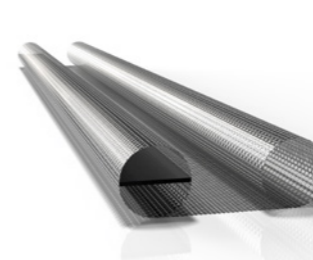


Cable Tube CT consists of two half shells with an inner lining made of intumescent fire protection fabric with full-surface adhesion. A soft foam plug set intended for the system is also available.

Cable Tubes ML are used as a firestop tubing for cable penetration seals and also available as one half shell for fire stop sealing beneath system floors.



## Firebreather®



The Firebreather® Cavity Barrier is an efficient preventative fire protection solution for mounted rear-ventilated facades. The cavity barrier consists of a stainless-steel mesh and intumescent material that expands in the event of fire, immediately sealing cavities behind facades or in roof areas. It is maintenance-free, easy to install and provides fire resistance classes up to EI90.

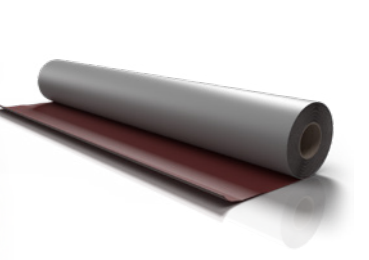
It is used as a cavity barrier in ventilated facade systems to prevent flames and smoke from rising to higher floors.

## Flammotect Boards



Flammotect Boards are a mixed penetration seal made of a layer of mineral fibre boards with ablative fire protection coating for pipes, cables, and cable bundles. These can be used in most types of construction including timber and also provide good insulation against sound. In case of fire, the system remains fire-resistant for 90 minutes. Flamro offers a wide range of cost-effective fire protection penetration seals in different sizes that can be configured for any requirement.

## DG-CR 0.7



The DG-CR 0.7 fire protection tape is made of flexible and tear-resistant glass filament fabric composite building material with an intumescent inner coating.

The fire protection fabric is used to wrap cables and cable support systems to prevent the spread of fire.



Flamro manufacture a wide range of passive fire protection products. To see the whole range go to [www.flamro.com](http://www.flamro.com)

# Palusol® SW Fire Resistant Panelled Doors



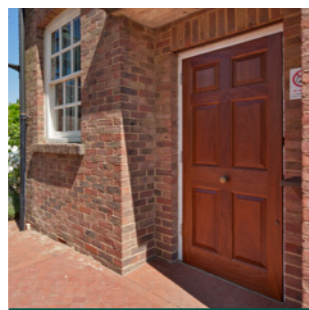
Palusol® SW is a ready-made laminate board that can be used to manufacture raised-and-fielded and flat panel fire resisting doors.

The 10mm panels are supplied with all necessary intumescent components, including seals for hinges, locks and other ironmongery, as well as fire-resistant glazing systems if required.

By utilising Palusol® SW, manufacturers can produce high quality fire resistant doors in virtually any design, while saving considerable time and cost on fire testing and production.

In a joint development between KuhnOdice and BASF SE, fire resistance tests have been successfully conducted on both 30 and 60 minute door constructions.

- Standard board dimensions – 2160mm x 1110mm x 10mm
- Option for double layer construction using commercially available adhesives
- Easily cut to size and processed using standard woodworking machinery
- Up to 10 panels per door leaf can be accommodated



KuhnOdice have supplied Palusol® boards for many listed buildings where the construction of the doors has been sympathetically matched to the original historical features.

# Fire Testing and Certification

Fire testing is the most critical part of our product R&D. We have continually invested in the testing and certification of our products to ensure that wherever KuhnOdice products are used and correctly installed they are providing the correct level of protection, whether it's from fire and smoke or acoustic and environment.

When testing products used with fire doors we always test an entire fire door system. Each component is specified for use with the other as part of the tested system, changing manufacturer or product in the final installation can invalidate the test certificate.

The complete Doorset is built into a furnace and tested to destruction, the interaction and breakdown of each component timed and monitored.

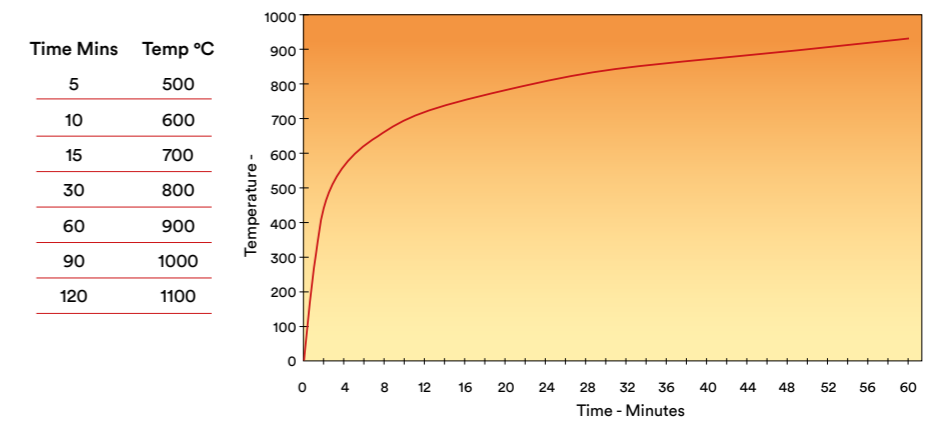
The two standards that the UK market will test to are:  
**BS 476-Part 20-22 or BS-EN 1634-1** – both standards have two main test criteria:

**Integrity** – the ability of the sample to resist flaming and/or erosion to the non-fire side.

**Insulation** – a measure of the radiated heat passing through the sample.

There is a very rapid rise in temperature from ambient to 600 degrees C in the first 10 mins. See diagram top right. At this temperature the aluminium bodies to any surface mounted self-closing mechanism will be getting close to melting and the intumescent door edge seals will be expanding and applying a positive sealing pressure to help hold the door shut and limit distortion. As well as the rise in temperature a positive pressure is also applied inside the furnace to replicate the pressure build up and turbulence that would occur in a typical building fire.

Time Temperature Curve used in BS and EN Tests



A successful test for 30 minutes has been achieved here for these 30 minute doors fitted with KuhnOdice's Pyrostrip, Pyrohinge, Pyrolock, Pyrocloser and Pyroglaze products.



This FD60 test with a large Pyrogrille ATG has already clocked up over an hour and is still going strong.



These fire doors achieved 98 minutes on a 90 minute fire test.



Thermocouples monitor the temperature on the non fire side to establish if the insulation criteria is achieved.



Interdens expanded around door hinge.



Expanded graphite in the gap between doorleaf and frame.



Expanded Pyrolock graphite intumescent before and after.

# kuhn odice

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## Online resources



**Website**



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