Promat®

No compromise warehouse fire safety

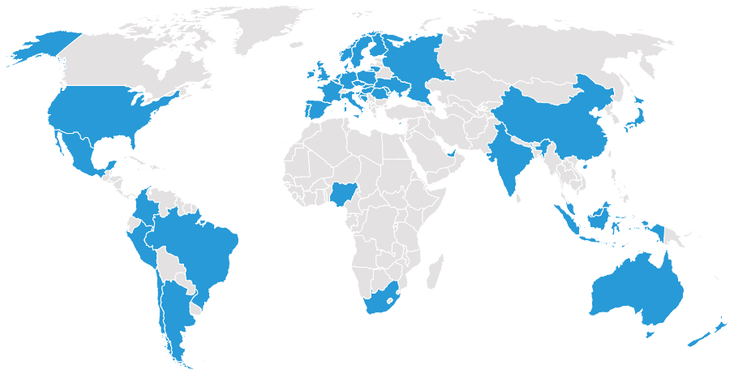
Reducing risk through fire protection

etex inspiring ways of living

Contents

The premium brand for passive fire protection

For more than 60 years, Promat has been designing, testing and manufacturing specialist fire protection systems. This means that our customers benefit from a complete portfolio from which to build a certified fire safety solution that is right for their project.



Promat operates in over 40 countries around the world

Our fire testing culture

Our team of fire test engineers work with certified laboratories across an impressive program of global and local fire tests to guarantee our systems perform at their best.

Our research and development

Our researchers constantly look for solutions to develop new, lightweight fire protection solutions that will help reduce our impact on the planet and contribute to the circular economy.

Our expertise

Our dedicated Technical Support team along with our extensive testing, certification and design support tools enable us to provide a superior level of support at every stage of your project.

Part of the Etex group

We are proud to be part of Etex, playing a key role in its mission to build living spaces that are ever safer, smarter and more sustainable. This means that our customers benefit from the certainty and choice from working with a key global manufacturer of interior and exterior building solutions.

Fire - a growing threat to warehouse operations

As trends such as online shopping continue to grow in popularity, warehouses are becoming an increasingly important part of the UK's supply chain – providing critical space for goods to be received and stored before distribution to consumers.

This has meant both an increase in the number of warehouses being built and the size of these buildings. The efficiency benefit to be gained from larger facilities means that many new warehouses now have undivided floor areas of 2,000m^2 and often have a total floor area exceeding 20,000m^2.

However, with this increased size comes greater dangers. As they typically house a variety of combustible or valuable goods, warehouses are considered by insurers to be at high risk of fire, with that risk increasing where more goods stored creates greater fire loading. This has been acknowledged as a contributory factor to the recent rise in financial losses from fire, with insurer Zurich UK finding that warehouse and bulk storage fires soared by 26% over 2021 – 2022.

So, in order to keep those working in warehouses safe and to help protect the valuable goods stored within them, fire protection is a critical consideration for any project and can make a significant difference to how businesses manage this risk.

But this must be achieved within what are usually tight project schedules, which can mean complex technical or regulatory issues need to be resolved quickly and accurately.

Finding the right suppliers who can provide not only a high quality system but also expert support from the specification stage onwards can make a critical difference.

In this brochure we outline how Promat achieves this – helping to cut complexity and increase project certainty.

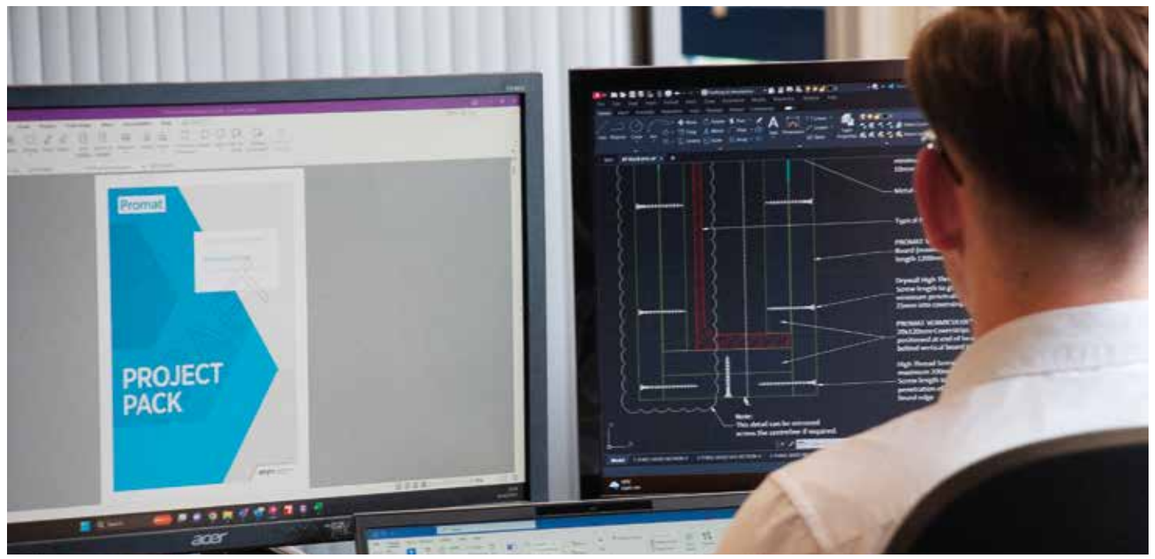
Greater certainty for project schedules and business continuity

Promat provides specialist fire resistant structural and compartmentation solutions for warehouse facilities.

For over 60 years we have helped to protect property from the devastating effects of fire, working with clients from the specification stage onwards to develop the best solutions for their needs. Minimising damage, saving lives and allowing business to continue operating as quickly as possible.

Our systems can withstand the rapid increases in temperature caused by the heavy fire loading typically found in warehouses, and can also stop heat transferring throughout the facility resulting in further damage. This allows for effective escape routes to be created and acts as a life support system for the building until the fire service arrive.

This is backed by the highly experienced Promat team, making our expertise available from the very start of your project to ensure fire protection enhances schedule certainty rather than detract from it.



Designing out fire risks

Ensuring fire protection is considered at the project specification stage will not only help to get the best end result for the building, it can also avoid fire protection becoming a lag on schedules later down the line. But this demands specialist expertise to get right.

As warehouses grow in size, they require more technical detailing to ensure fire protection offers the correct performance. This must consider not only how to prevent the spread of flames, but also preventing heat radiation causing spontaneous combustion, as well as protecting the load bearing capacity of steelwork from extreme heat.

A comprehensive system is required to deliver this, which must be aligned closely with the wider building design to ensure compliance with relevant regulations.

Promat offers a full specification package for building designers, including detailed clauses. This provides a turnkey solution to ensuring each and every warehouse design has optimal fire protection adapted to individual project needs.

"OUR TEAM HAS BEEN PROVIDING SPECIFICATION SERVICES FOR MANY YEARS, WHICH MEANS WE UNDERSTAND THE CHALLENGES THAT BUILDING DESIGNERS CAN FACE AND HOW THESE CAN BE SOLVED EFFICIENTLY AND WITH MINIMAL IMPACT TO A PROJECT'S CRITICAL PATH."

JOSH SLACK – PROMAT COMMERCIAL DIRECTOR

Warehouse applications

1 Application: Mezzanine Floor

Promat Board: PROMATECT®-250

Specifically tested to provide up to 120 minutes of fire protection to mezzanine floors supported by hot and cold rolled steel sections.

2 Application: Structural Steelwork

Promat Boards: PROMATECT®-XW & VERMICULUX®-S

System: PROMATECT®-XW: Up to 60 minutes fire protection of structural steelwork with up to six months exposed, providing a fast install and simple specification

System: VERMICULUX®-S: Up to 240 minutes of fire protection of structural steelwork that is easy to maintain and repair

3 Application: Protected Zones

Promat Board: SUPALUX®

System: Up to 240 minutes fire protection underneath the roof, extending out from either side of the compartment wall

Promat systems by application

Optimal fire protection for warehouses isn't about individual products – it's about how these can work together to provide a comprehensive system.

This is how Promat systems are designed, and when backed with a full specification package this means that installers can complete fit-out to a high standard as efficiently as possible.

At the global Promat Research and Technology Center, we perform more than 200 fire tests a year to ensure our products and systems will comply with the most stringent international standards and regulations. This is supplemented by local testing at our UKAS accredited test facility in Heywood, Manchester. Where possible, our fire test lab methods go beyond what is demanded by regulations and replicate the real-life context where our products can be installed. When a Promat system passes the required series of testing, we have 3rd-party certification or classification reports to provide evidence that our systems perform as stated and meet the appropriate standards.

Protected zones

The risk of fire spreading to adjoining compartments through the area where an internal wall meets the roof must be carefully managed. To achieve this, Approved Document B of the Building Regulations requires a protected zone to be created 1500mm either side of the compartment wall, whilst for more onerous circumstances the FPA design guide suggests that is increased to between 2500mm and 5000mm depending on the orientation of the ridge and whether a sprinkler system is to be used. SUPALUX® boards can be fixed to a steel grid system hung from the roof structure to create protected zones of any size. Its long service life means it can be installed in unheated, high moisture environments without suffering degradation – making it ideal for warehouse applications.

Mezzanine floors

For most locations, warehouse mezzanine floors will need to be designed with fire protection in mind in order to meet the relevant Building Regulations and standards. The solution selected must carefully balance the required level of fire protection performance whilst minimising the use of valuable space.

PROMATECT®-250 board offers a space-saving solution, specifically tested for use in protecting mezzanine floors supported by hot and cold rolled steel sections. Thinner and requiring only single or double layer direct fix boarding, it provides high levels of passive fire protection.

Structural steel

The heat generated by a fire can have a devastating effect on the structure of a building, and without the right protection can drastically shorten the time available to save it. So it is critical that the fire protection design of warehouses ensures that the dimensional stability of structural steel, and therefore its loadbearing capacity, can be maintained for as long as possible.

PROMATECT®-XW is designed to protect structural steel, requiring only a single layer to provide 60 minutes fire protection whilst minimising installation time and space needed within the building. VERMICULUX®-S is intended for use where a longer duration of fire protection of up to 240 minutes is required and can be used to create one, two, three or four sided encasements.

Both PROMATECT®-XW and VERMICULUX®-S are moisture resistant, helping to shorten build schedules by allowing for installation before the building is weathertight.

Promat systems by application

Partitions and Walls

All of our systems offer high dimensional stability with exceptional moisture resistance as well as being able to meet specified acoustic, wind load, impact and in some cases blast performance. This combination of properties makes them ideal for use in the most demanding applications.

Compartmentation ceilings

Promat offers a number of ceiling systems that are designed to provide high performance as well as design flexibility to maximise available space. This includes both suspended and self-supporting ceilings.

Our ceiling systems are suitable for use in semi-exposed environments such as unheated or high humidity areas, with some capable of providing fire protection from both above and below the ceiling.

Service Enclosures

In the event of a fire, it may be vital to the safety of the building occupants that certain services remain functioning until all personnel have escaped. Such systems will therefore require protection from fire for a specified period of time.

Promat can also offer solutions where there are particularly onerous conditions, such as where high impact strength is required or for use in aggressive environments.

Getting warehouses up and running safely and quickly

Promat understands that as the owner of a warehouse facility it's critical to you that it performs as efficiently as possible. That includes optimising the build schedule and the time it takes to have the warehouse operational, as well as performance when in use.

Because we have specialist experience in supporting warehouse projects for many years, we know how this balance can best be struck. We are experienced in working with warehouse architects to support accurate, bespoke fire protection design – right down to providing a comprehensive specification package that aligns with the broader build program. This covers a full fire protection system for your whole building, not simply isolated products that offer partial coverage.

This detailed support means that when the project reaches site, your contractors have the information they need to deliver a dependable and compliant installation. Helping to ensure your building is safe and ready to use as soon as possible – and for tenants to benefit from having fire risks designed out before they have even arrived.

For more information contact
warehouses@promat.co.uk

WE PROVIDE FULL PASSIVE FIRE PROTECTION SYSTEMS FOR YOUR WHOLE BUILDING, NOT SIMPLY ISOLATED PRODUCTS THAT OFFER PARTIAL COVERAGE.

CASE STUDY

Overcoming design complexities to keep G-Park project on track

The construction of GLP's new 132,000sq. ft. unit at its G-Park facility in Northampton required a 240-minutes fire resistance solution.

But design complexities meant that this was not a straightforward project. Intumescent paint was not able to meet the period of fire resistance needed, whilst challenges including fixing to both the structural steel and cladding rails ruled out the use of most traditional boards.

Neville White, Business Development Director at Promat distributor Encon explains:

"This was a challenging project for all involved. The technical detailing needed sorting quickly and accurately, the products were needed on site within a very short time frame and sub-contractor FAA needed to install while other elements of the building were still being erected, namely the frame and the flooring."

Bespoke solution with detailed technical support

Given off-the-shelf products would not meet the fire resistance requirements, Promat worked closely with FAA from the project design stage to ensure a high level of specialist technical support. Harvey Brown at Promat:

"After looking at the specification requirements and discussions with FAA, it was clear that a tailored solution was needed, using our VERMICULUX®-S boards."

We then helped to design a solution that included 3-sided steel encasement details as the basis for the design, together with an adapted design solution for where the beams on the roof level met with the steel columns.

"This included making recommendations to FAA on how they should go about installing interface detail for the two systems in line with their own test data and guidance given by the Association of Fire Protection Specialists (ASFP)."

On schedule

With the solution provided within just three days of Promat being contacted, the end result was that FAA had the products and technical detailing to undertake the fire protection scope to the standards required and without delays to the project schedule.

"THIS WAS A CHALLENGING PROJECT FOR ALL INVOLVED. THE TECHNICAL DETAILING NEEDED SORTING QUICKLY AND ACCURATELY, THE PRODUCTS WERE NEEDED ON SITE WITHIN A VERY SHORT TIME FRAME AND SUB-CONTRACTOR FAA NEEDED TO INSTALL WHILE OTHER ELEMENTS OF THE BUILDING WERE STILL BEING ERECTED, NAMELY THE FRAME AND THE FLOORING."

NEVILLE WHITE, BUSINESS DEVELOPMENT DIRECTOR AT PROMAT DISTRIBUTOR ENCON

CASE STUDY

Promat puts D Interiors in the fast lane for high quality fire protection

"WE WERE REALLY PLEASED NOT ONLY WITH THE PRODUCT QUALITY FROM PROMAT BUT ALSO THE LEVEL OF TECHNICAL SUPPORT AND TRAINING WE RECEIVED. HAVING TECHNICAL DETAILING PROVIDED BY THE MANUFACTURER, BACKED BY TRAINING WHERE REQUIRED, IS SO IMPORTANT AND ENSURES THAT THE PRODUCTS THAT OUR EXPERTS ARE FITTING WILL PERFORM AS REQUIRED."

DEAN NEWMAN, MANAGING DIRECTOR AT DRYLINING CONTRACTOR D INTERIORS LTD

When one of the leading premium car dealerships in the Southwest, Dick Lovett, was planning its new, high-profile BMW showroom in Somerset, it demanded the very best in fire protection. With its tight timeframe, D Interiors turned to Promat for help with both premium products and expert advice.

There are several potential fire hazards in a car showroom environment. With highly flammable fuels such as petrol, solvents, paints, and engine oils on site, there is a high risk of these igniting because of electrical or mechanical issues.

There's the additional risk due to the types of flammable materials in the cars themselves, such as leather and plastics. Without adequate fire protection, a fire could spread quickly and cause significant damage to the cars and the showroom itself. To mitigate these risks, it's essential to have effective fire protection systems specified and installed.

With a tight deadline for the new showroom to open, an expert approach was needed to identify the most suitable systems and products throughout the facility, that would ensure work could be completed on time and without compromising quality.

Site visits help identify best approach

The first step for the Promat team was to understand the full scope of fire protection required in line with the technical detailing in the building design.

Through discussions with D Interiors, reviewing building plans and several site visits, the Promat team identified the critical parts of the structure that required specific attention, concerning both detailing of the fire protection system and how it was to be installed.

Given the high level of protection required, PROMATECT®-XW was recommended for key parts of the building.

The high-performance fire board used for the protection of structural steel is A1 non-combustible, fully tested at limiting steel temperatures from 300°C to 650°C and gives up to 60 minutes fire protection. The board is also moisture resistant, allowing installation before the building is weathertight, making it ideal for this project because of its restricted timeframe.

Installation training and technical detailing

To ensure D Interiors had the full capabilities to complete installation efficiently and to the high standard demanded, Promat implemented a product training programme led by its experts - this included guidance on how best to skim and paint some of the fascia boards, which were an integral part of the customer showroom design.

Before installation, Promat also ensured that D Interiors had access to accurate technical detailing specific to the building design and clear solutions to tackling previously installed cladding. Dean Newman, Managing Director at drylining contractor D Interiors Ltd: "We were really pleased not only with the product quality from Promat but also the level of technical support and training we received. Having technical detailing provided by the manufacturer, backed by training where required, is so important and ensures that the products that our experts are fitting will perform as required. Ultimately, this meant we could complete our work within the tight schedule without holding up the opening of the new showroom."

CASE STUDY

Shurgard calls in technical experts for reassurance on passive fire protection

"BEING ABLE TO RELY ON THE KNOWLEDGE THE PROMAT TEAM OFFERS WAS A BIG HELP IN MAKING SURE THE PFP SCOPE WAS NOT ONLY SAFE AND COMPLIANT, BUT IT ALSO HELPED US TO KEEP THE SCHEDULE TO A MINIMUM AND MAXIMISE THE AMOUNT OF LETTABLE SPACE SHURGARD CAN BENEFIT FROM.

"THE SPECIFICATION PACKS PROVIDED BY THE PROMAT TEAM HAVE PLAYED A CRITICAL ROLE IN THIS AND CAN ALSO BE PASSED ON TO THE CLIENT AS PART OF THE FIRE SAFETY INFORMATION USED DURING OPERATION OF THE BUILDING."

DOUGLAS ALLAN,
PROJECT ARCHITECT AT THREESIXTY

Promat's technical expertise in passive fire protection was instrumental in ensuring Shurgard's two new UK self-storage facilities at Chiswick and Chadwell Heath in London had the most stringent system installed whilst adhering to tight build schedules.

Both projects were subject to ambitious build schedules and all aspects of the building design needed to allow for maximum letting potential of the space.

This meant identifying the most effective approach for the application of PFP systems utilising the minimal amount of space possible.

Douglas Allan, Project Architect at Threesixty Architecture explains: "Working with main contractor Appian, we supported Shurgard in the delivery of their new units to ensure projects were delivered within an efficient lean design philosophy. Since 2017 we have worked in partnership with Promat on the PFP scope.

Key to this is ensuring we achieve the right level of protection, backed by fire testing and certification without negatively impacting other elements of the schedule or design.

"We've developed well-established solutions that align with what Shurgard needs, but each project still requires its own specialised approach."

Early design collaboration for the best results

Promat specialists were involved early on in the design process thanks to the established partnership with Threesixty and Appian. This meant that the broadest range of PFP solutions could be considered. The mezzanine floor system design on both projects had been changed in line with updated EN testing for steelwork.

This meant that the PFP specification needed to be revised in accordance with this. 15,000m^2 of PROMATECT®-250 was specified to ensure the mezzanine floors were compliant with easy installation as well as maximising lettable space.

Another key design consideration was the presence of electric vehicle charging points - 850m^2 of Promat SUPALUX® offered a lightweight and space efficient way to provide the required level of fire protection.

It could also be installed before the building was made weather tight.

Full specification pack helps make installation straightforward

Details of the product's installation were included in a comprehensive specification pack produced by Promat for both sites.

This contained all relevant technical information and testing performance in order for installation to be carried out as efficiently as possible.

Promat®

GB Orderline
For placing orders, delivery enquiries and local stockists etc.
0800 373 636 (Select option 1)
sales.construction@promat.co.uk

Customer Support
For any problems with invoices or deliveries
0800 373 636 (Select option 2)
customersupport@promat.co.uk

Technical Services
For technical support and advice
0800 145 6033 (Select option 2)
technical@promat.co.uk

For more information contact
warehouses@promat.co.uk

Etex Building Performance Limited
Marsh Lane, Easton-in-Gordano,
Bristol, BS20 0NE
01275 377 773

promat.com

0672-PRO V1(a)/02/2023