

TENMAT GROUP BUILT TO PROTECT



A CENTURY OF MATERIALS SCIENCE IS HELPING TENMAT GROUP DEVELOP THE NEXT GENERATION OF PASSIVE FIRE PROTECTION.

Built to Protect

PROJECT MANAGED BY: LISA POBEREZHNIUK

Fire protection is often at its most important when nobody notices it. Hidden within walls, ceilings, façades and service openings, passive fire protection products can sit untouched for years before being called upon to perform in the most demanding circumstances imaginable.

For Tenmat Group, understanding that responsibility has been the foundation of the business since 1914.

Established in Trafford Park, Greater Manchester, the company has evolved from a specialist materials manufacturer into an international passive fire protection group. Its expertise centres on intumescent – highly engineered materials that react to heat by expanding and sealing gaps, helping to prevent the spread of fire and smoke.

The business now manufactures cavity fire barriers, fire rated light covers, ventilation fire protection systems and specialist fire-stopping products. Its solutions are used across construction, marine environments and specialist high-temperature

industrial applications, with more than one million fire rated light covers sold annually and around 1.2 million metres of cavity barriers supplied each year.

Those figures give an indication of Tenmat's reach, but the company's proposition begins with something more fundamental than manufacturing capacity. Unlike businesses that simply assemble or convert products, Tenmat develops, formulates and manufactures the intumescent materials itself.

"Tenmat is a materials science business at heart," begins CEO Kapil Chopra. "Our roots are in the development and manufacture of intumescent."

The purpose behind the science is equally direct. Passive fire protection is ultimately about giving people more time and preventing fire and smoke from moving through a building. >>

>>
Kapil Chopra,
CEO,
Tenmat Group.



“At the heart of everything we do is a passion for saving lives in the event of a fire, driving both our products and our purpose,” says Kapil. “We enable design and construction professionals to create a safer environment.”

SCIENCE THAT STARTS AT THE SOURCE

Tenmat’s integrated model brings research, material formulation, manufacturing, testing and technical support together. The company believes that arrangement gives it a degree of control over performance, consistency and innovation that is difficult to replicate.

A customer approaching Tenmat with a complex technical problem can therefore engage with people who understand not only the finished product, but also the material from which it is made.

“When customers come to us with a complex challenge, we can move quickly from concept

to prototype to certified solution,” Kapil explains. “Our in-house D-Lab research facility and Fire-Lab testing centre create an exceptionally short feedback loop, allowing us to innovate faster and validate performance with real-world testing.”

Decades of test data add another layer to the proposition. Passive fire protection is an evidence-led discipline, and Tenmat has built up a substantial body of technical knowledge through years of product development and testing.

Unlike many conventional intumescent materials that rely on rubber-based organic binders, Tenmat’s proprietary formulation is built around mineral fibres, clays and expandable graphite. This low-organic approach delivers a cleaner, more stable intumescent material with lower smoke generation, zero-halogen performance and

highly controlled, unidirectional expansion in fire conditions. It also contributes to exceptional long-term durability, with Tenmat’s flagship intumescent product ranges engineered for a minimum 60-year service life to support the growing focus on whole-life building performance.

Kapil sums up the company’s position in six words: “Not all intumescent materials are the same.”

The statement points directly to what Tenmat regards as one of its most important advantages. Understanding the behaviour and formulation of the material gives the business a level of technical insight that extends beyond the finished product.

That expertise also shapes Tenmat’s relationship with customers. Technical teams spend time understanding the application, building design and intended use before recommending a solution. The objective is not simply to match a product with a specification, but to establish whether the proposed approach is actually appropriate. >>



"We're not afraid to challenge assumptions when the evidence tells us something different. In some cases, we may even disagree with the proposed approach because we have the test data, manufacturing knowledge and historical expertise to know where risks exist."

"Fire safety isn't an area where guesswork is acceptable," Kapil adds. "Quite often, customers come to us believing they need one solution, only to discover through our evaluation process that a different approach is necessary."

TESTING IS PART OF THE PRODUCT

Confidence in passive fire protection has to be earned.

Architects, contractors, specifiers and fire engineers increasingly need detailed evidence before choosing products, particularly as regulatory requirements become more stringent and scrutiny of building safety increases.

Tenmat has invested heavily in the infrastructure needed to provide that evidence. More than 100 fire tests are carried out through its Fire-Lab each year. Alongside that work, the D-Lab continues to develop and refine intumescent technologies, contributing to a portfolio of proprietary formulations, patents and trademarks.

"WE'RE NOT AFRAID TO CHALLENGE ASSUMPTIONS WHEN THE EVIDENCE TELLS US SOMETHING DIFFERENT."

Around 20 per cent of Tenmat's revenue comes from products developed in recent years, underlining the commercial importance of its research and development activity. Internal testing, however, is not treated as the final word.

"We have a strong commitment to independent third-party testing and certification because absolute compliance and product

performance are non-negotiable for us," Kapil asserts. "A combination of internal research and external validation gives customers a stronger basis for making decisions."

Tenmat can use its own facilities to investigate problems and accelerate development, while independent certification provides additional assurance that products meet and exceed the required standards.

At the same time, the company has opened its facilities to customers and industry professionals through site tours, furnace demonstrations and hands-on training. More than 50 companies and over 400 individuals visited in 2025 for tours and training sessions, with further growth expected.

There is a clear educational purpose behind these visits. Seeing the journey from raw material formulation through manufacturing and testing gives visitors a practical understanding of the processes behind the products they specify or install.

Tenmat also delivers RIBA-accredited CPD seminars, technical training and toolbox talks for installers. Its quality framework includes full batch traceability and internal approval processes.

For a passive fire protection manufacturer, the work does not finish when a product leaves the factory. Specification, installation and understanding all have a bearing on how a system ultimately performs.

UP TO **60x** EXPANSION



Tenmat intumescent expands rapidly in a controlled direction to quickly and effectively close off cavity gaps in the event of a fire.

Cavity Barriers



FIRE SAFETY IS CHANGING

The market Tenmat operates in has undergone significant change.

Major fire tragedies, including Grenfell in the UK, the Address Tower fire in Dubai and the Valencia apartment fire in Spain, have contributed to tighter regulations and greater scrutiny of fire safety across international markets. Regulation is now the biggest driver of demand for the company.

"Fire safety requirements have tightened significantly across our markets," Kapil says, "and that's fuelling strong underlying growth in passive fire protection – particularly in cavity barriers."

Cavity barriers are an established part of Tenmat's portfolio, but the opportunity is expanding geographically. Mainland Europe is becoming increasingly important, with France, Italy and Spain among the markets showing greater momentum for ventilated fire barrier solutions.



The UK has been using such approaches for longer, giving Tenmat experience that can be applied as European markets develop.

The United States presents another set of opportunities.

"Wildfire risk in the US is creating rapid growth in demand for fire-rated vents, an area served by our BrandGuard Vents business in California. Those products received an unusually powerful real-world demonstration during the 2025 Palisades Fire in Malibu.

"BrandGuard vents had been installed in 240 homes in the Big Rock community prior to the fire. Up to 223 of those homes were saved, withstanding the spread of the fire despite wind gusts of up to 100mph."

BrandGuard's performance under pressure has had a direct commercial impact, driving a significant increase in orders for the business. More importantly, it provided evidence of how fire-rated vents can contribute to wildfire resilience under extreme conditions. >>

Tenmat's position in the US has also been strengthened by events in New York. The company received Department of Buildings approval for its cavity barrier system for ventilated rainscreen façades and says it is currently the only approved solution of its kind.

Approval is particularly valuable in a market where the process can take around two years. Securing that position gives Tenmat an important first-mover advantage and creates a barrier for competitors seeking to follow.

FROM SPECIFICATION TO SOLUTION

The growing importance of passive fire protection means architects, fire consultants and façade contractors are increasingly looking for detailed technical guidance at the design stage rather than choosing a fire barrier as a late-stage requirement.

That suits a business whose strength lies in technical engagement. Tenmat engineers can become involved while a project is still being designed, examining the application and working through the available evidence before a solution is specified.

The process can also expose problems that might otherwise have remained hidden until construction. The relationship between customer problems and product development is therefore an important part of Tenmat's innovation model.

"New applications are already opening up significant opportunities," Kapil reports. "Data centres are one example. Their combination of electrical infrastructure, mechanical systems and high-value equipment creates multiple fire risks within a single facility. We have a range of products

capable of addressing several of those applications, supported by specialist technical advice."

The opportunity also illustrates the breadth of the company's materials expertise. Tenmat is not dependent on one construction method or a single category of building. Its understanding of intumescent can be applied wherever fire and smoke need to be controlled. >>

**"NEW APPLICATIONS ARE
ALREADY OPENING UP
SIGNIFICANT OPPORTUNITIES,
DATA CENTRES ARE
ONE EXAMPLE."**





INVESTING IN PEOPLE & PLACE

Tenmat's international ambitions have not weakened its commitment to Greater Manchester.

The company opened its Manufacturing & Innovation Centre in Irlam in 2023, creating a modern base for manufacturing, research and development. More than 200 people now work at the facility across round-the-clock operations.

The site has become a significant part of the company's identity. Prime Minister Andy Burnham unveiled Tenmat's Fire Laboratory in 2024, while Her Royal Highness The Princess



Royal officially opened the Manufacturing & Innovation Centre in 2026.

Investment in the facility is matched by investment in the people working there.

Kapil's own career demonstrates the opportunities available within the organisation. He joined Tenmat as a graduate in 2008 after completing a PhD focused on 3D-printed bone

implants using bioactive glass. Since then, he has worked across development science, manufacturing and operations before becoming Chief Technical Officer and eventually CEO.

"Over the last 18 years, the business has given me opportunities to learn, grow and take on new challenges," Kapil says. "I have risen from Development Scientist to CEO,

and more than half of our senior leadership team have enjoyed similarly long careers within the company. For a business built around specialised technical knowledge, that continuity is valuable."

Materials science, fire testing and passive protection require experience that cannot be developed through a short induction. Tenmat therefore places considerable emphasis on qualifications, training and long-term development.

Graduate and apprenticeship programmes provide routes into advanced manufacturing and fire protection, helping the company develop the technical skills it will need in the years ahead.

"For me, it's not about balancing people and technology," says Kapil. "The reality is recognising that one only succeeds because of the other."

INNOVATION NEEDS BOTH

Tenmat's investment in technology is substantial.

Additive manufacturing is being used to produce prototypes rapidly and develop bespoke solutions for customer-specific applications. The ability to move quickly from an idea to a physical prototype can reduce development times and give engineers a practical way to evaluate new concepts.

The Fire-Lab and D-Lab provide another advantage by allowing research and testing to happen within the organisation itself.

At the same time, the company's investment in people creates a stronger connection between research and manufacturing. Scientists understand the practical realities of production, while manufacturing teams are able to feed their experience back into product development.

The result is an organisation designed to keep technical knowledge moving through the business. It is an important advantage at a time when >>



F-Lab

Training Academy

Passive Fire Protection
Training Courses

Fire Test Centre



passive fire protection is becoming more technically demanding.

“New building designs, changing regulations and emerging risks require manufacturers to do more than maintain an existing product range; they need us to understand why products work and how that knowledge can be applied to new problems.”

SUSTAINABILITY BEYOND THE PRODUCT

Environmental performance is becoming another element of the specification process.

Tenmat has responded with practical changes across its manufacturing operations, including the use of green electricity, extensive recycling initiatives and investment in water treatment and recycling systems.

The company is also developing Environmental Product Declarations across its portfolio. EPDs provide independently verified information about the environmental performance of construction products, helping specifiers make decisions based on evidence rather than broad claims.

For Tenmat, the work fits naturally with the long service life of its products.

“The products we manufacture are designed to protect buildings for decades, so it’s only right that we think just as carefully about how they’re made,” Kapil declares. “Reducing waste and improving resource efficiency sit alongside our core requirement for product performance.”

There is little room for compromise in fire protection. Sustainability improvements have to be achieved while maintaining the characteristics that allow products to perform in extreme conditions. Tenmat’s approach is to address both areas through investment and better information.

A WIDER INTERNATIONAL FOOTPRINT

The next phase of Tenmat’s development is centred on international expansion.

The UK remains the foundation of the business, but the company is now applying its established model in markets where regulations and fire risks are creating new demand.



In the United States, façade fire protection and BrandGuard’s wildfire resilience products are key areas of focus. New York approval gives the company an important platform from which to expand its façade business, while the experience of the Palisades Fire has strengthened BrandGuard’s market position.

Europe is another priority. France, Italy and Spain are seeing increasing demand for ventilated fire barrier solutions, and Tenmat is investing to support that growth.

The company is also broadening its routes to market through distributors, OEM partnerships and direct customer relationships.

That expansion is being supported by continued product development. Tenmat has a pipeline of intumescent-based products in development, while its investment in a new fire testing facility is designed to increase testing capacity and accelerate

both product development and certification.

“More testing capacity will allow us to generate additional performance data while reducing the time required to bring new solutions to market,” Kapil points out. “Technical evidence is becoming increasingly important, and we intend to have the infrastructure needed to produce it.”

SUPPORTING SAFER BUILDINGS

In the UK, the remediation of higher-risk residential buildings is creating demand for tested passive fire protection products, and Tenmat has already supplied solutions for remediation projects.

Working with housing providers, fire engineers and local authorities, the company is contributing to efforts to address legacy building safety issues. That work is closely aligned with the purpose Kapil describes at the heart of the business.

“Our role is to provide a solution supported by material science, testing, manufacturing knowledge and technical guidance.”

For buildings requiring remediation, that evidence is particularly important. Existing structures can present complicated conditions, making it essential to understand how a product will perform in the specific application.

Tenmat’s experience across development, testing and technical support allows it to engage with those challenges.

THE NEXT CENTURY

There is a striking consistency between Tenmat’s origins and its ambitions for the future.

The business was established more than 100 years ago around specialist materials expertise. Today, that same foundation is being used to develop products for new markets, new building types and new fire risks.

The difference is the scale of the opportunity.

Regulatory change is driving demand for passive fire protection across established and emerging markets. Data centres are creating new applications. Wildfire risk is accelerating demand for fire-rated vents in the United States. European markets are adopting solutions that have been familiar in the UK for years.

At the same time, customers are demanding more evidence, greater technical support and clearer information about environmental performance.

Tenmat has spent years building capabilities that address those requirements. Its materials are developed in-house, its laboratories support research and testing, its manufacturing operations remain under company control, technical teams work directly with customers, and products are independently tested and certified.

Tenmat is now investing further in all key areas of the operation, but Kapil believes the ingredients for the next phase of growth are already in place.

“We have the technology, the people, the manufacturing capability and the innovation pipeline to achieve that goal,” he says. “Ultimately, our ambition is straightforward: to become the world’s leading intumescent-based passive fire protection business.” ☺

“OUR AMBITION IS STRAIGHTFORWARD: TO BECOME THE WORLD’S LEADING INTUMESCENT-BASED PASSIVE FIRE PROTECTION BUSINESS.”



TENMAT GROUP

WWW.TENMAT.COM



PRODUCED BY:

