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# Fire resistance and regulation

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# Capacity to complexity

**Falling rates and abundant capacity continue to benefit UK commercial property buyers in 2026. However, insurers are sharpening their focus on risk quality as new exposures reshape the underwriting landscape**

The UK commercial property insurance market continues to favour buyers in early 2026, although the pace of softening is beginning to moderate. According to *Marsh's Global Insurance Market Index*, global commercial insurance rates fell by 5% in Q1 2026, marking the seventh consecutive quarterly decline. UK rates decreased by approximately 8%, with property insurance leading the trend through reductions of around 10%.

This aligns with findings from Aon, which reported that during Q4 2025 many UK property insurance buyers achieved reductions of between 11% and 20%, with well-managed risks seeing decreases approaching 30%. Aon attributes this to strong insurer competition, favourable reinsurance conditions and a relatively benign natural catastrophe year.

Despite these favourable pricing conditions, both brokers emphasise that underwriting discipline remains firmly in place. Insurers are not indiscriminately reducing rates; instead, they are targeting high-quality risks and maintaining a clear focus on exposure management. Insurers expect comprehensive, high-quality data on exposures, controls and risk improvements.

## Key growth areas

The UK logistics and industrial sector remains a key area of focus for property insurers. According to the BNP Paribas *UK Logistics Market Review Q4 2025*, demand for large-scale industrial units exceeded 30 million sq ft over the year, reaching 31.7 million sq ft – up 16% y-o-y. Logistics transactions accounted for approximately 70% of all big-box deals in Q4 2025, underlining the sector's dominance, with the Midlands, Yorkshire and the Humber and the South West seeing particularly strong growth.

The expansion of datacentres represents one of the most significant structural shifts in commercial property risk. According to analysis from Allianz Commercial, global investment in datacentre infrastructure could reach up to US$7 trillion by 2030, driven largely by demand for artificial intelligence and cloud computing.

Allianz notes that these facilities introduce highly specialised risks that differ markedly from traditional property assets. These include significant and continuous power demand, which can strain existing grid infrastructure; construction complexity, requiring bespoke design and engineering; fire and heat risks associated with dense server environments; and heavy water usage for cooling, with large facilities consuming up to 19m litres a day.

To mitigate power-related risks, operators are increasingly investing in on-site energy generation, including renewable and alternative energy sources. However, Allianz highlights that this adds further complexity to both construction and operational risk profiles. From an insurance perspective, datacentres often require tailored, project-specific policies due to their scale and unique exposures. Insurers are also mindful of potential overinvestment risks and the possibility of stranded assets if demand projections change.

## Persistent property risks

A rapidly growing concern for UK property insurers is the rise in lithium-ion battery fires. According to data collected by QBE Insurance from UK fire services, incidents increased by 93% between 2022 and 2024.

The data shows that UK fire brigades are now responding to at least three lithium-ion battery fires per day. E-bikes were responsible for nearly a third of all incidents in 2024, with 362 recorded fires – double the figure from 2022. QBE also reports significant increases in fires involving electric vehicles (up 77%) and electric scooters (up 32%).

## Outlook

Looking ahead, the UK commercial property insurance market is expected to remain broadly favourable for buyers throughout 2026. Marsh indicates that abundant capacity and strong competition will continue to support competitive pricing, although the rate of decline may slow.

In this environment, businesses that combine robust risk management with proactive market engagement will be best positioned to secure optimal insurance outcomes while preparing for future market shifts.

# When is fire resistance important?

**Rapid growth in large-scale logistics facilities is reshaping construction priorities. As buildings scale, fire resistance strategies are in sharper focus. Aisling Sands, technical director at Kingspan writes**

In recent years, one of the few property sectors to have maintained growth is logistics and warehousing, with demand for industrial units showing a 16% rise yearly, according to a report from real estate specialists BNP Paribas. Increasingly, these buildings are being created on a larger scale, with spaces over 100,000 sq ft representing 65% of all existing stock, and an additional 6.5m sq ft of developments due to complete in 2026.

With the increased scale, these buildings present different levels of risk from a potential fire load perspective. Additionally, the rise in robotic automation and AI-driven warehousing, along with initiatives such as battery storage for solar power, adds to the risk of fire events from electrical faults.

The question of when and to what degree the building envelope needs to be fire-resistant, therefore, is a crucial one.

## Fire resistance is not the same as non-combustibility

Before looking at both the regulatory requirements and current guidance, it is important to clarify that reaction to fire and fire resistance are very different performance criteria.

Construction products are currently characterised for reaction to fire under the Euroclass system (EN 13501-1), rating their combustibility from A1 (non-combustible) to F (easily flammable). A2 is also considered non-combustible but may issue a limited amount of smoke or droplets, which are denominated by an 's' and a 'd'. For example, A2, s1-d0 is non-combustible with low smoke emissions and zero droplets. A 'B' rating indicates very limited contribution to fire, so a product with a B, s1-d0 rating is characterised as combustible, but with very minimal impact on fire spread or propagation.

Things get more complicated when looking at a building's fire resistance. The simple route would be to use A1/A2-rated, non-combustible materials. However, some materials, such as glass mineral fibre, are classed as non-combustible, but in a fire, their structural integrity alters. This means that a wall classed as fire-resistant could become severely compromised, allowing fire to pass through and spread, even though the materials themselves are not involved in the fire. By comparison, some B-rated 'combustible' materials, such as advanced PIR, can provide high levels of fire resistance and readily meet the test requirements for a fire-resistant structure.

## When do you need a fire-resistant wall?

Fire resistance means preventing the spread of fire to other buildings or between parts of the building. The majority of the building envelope doesn't need to be fire resistant, so other performance criteria, such as thermal efficiency, durability, and sustainability, may take precedence, once the fire performance requirements have been met. However, there are two key areas where fire resistance may be required. The first is internal compartmentation for managing potential fire spread, the second relates to proximity to other buildings – the 'Relevant Boundary'.

## What is a Relevant Boundary?

Every building has a Relevant Boundary adjacent to its external walls, but this can take several forms. It can be the legal boundary of the site, a public highway, railway or waterway, or it can be a notional boundary with another building on the same site. The requirement for fire resistance depends on the distance between the Relevant Boundary and the external wall. If the distance is great enough that a fire breaking through the external wall would not spread across the Relevant Boundary, then the external wall can be specified as 100% unprotected area (100% UPA).

If the Relevant Boundary is 1 metre or less, the external façade needs to be 100% protected (0% UPA). In between, there is a wide range of degrees of protection that may be required.

If the external wall is part of the supporting structure for floors, it needs to be protected to maintain the structural integrity of the building. If there is no or limited internal compartmentation, the external walls may also need to be protected.

The next step is to understand what tests and standards should be used to assess fire resistance.

# Regulations, tests and standards – what's new?

**As fire safety standards evolve, understanding how fire resistance is defined, tested and regulated is vital for compliance, performance and practicality. Aisling Sands, technical director at Kingspan writes**

We've looked at fire resistance and when it might be needed, but how is it measured and what are the current requirements in regulatory terms? Part B of the Building Regulations, England sets out the overall imperatives for the fire performance of buildings, and Approved Document B2 provides detailed guidance on how to comply with those requirements for non-domestic buildings. It is important to note that Scotland, Wales and Northern Ireland each have their own set of standards, although they follow the same general principles, and Wales, in particular, closely follows the guidance in England.

The regulatory guidance has been under review for a number of years, with regular updates being published, so it is essential to check that the latest version is being adhered to. For example, the current version of Approved Document B, which was published in 2025 (at the time of writing), includes colour coded amendments that are being introduced in 2026 and 2029. A further consultation is due to be concluded in July 2026. Whereas Part B of the Building Regulations is mandatory, the Approved Documents are not, and alternative routes to compliance may be sought following a fire engineering approach, provided it can be evidenced that the objectives of the regulations have been met.

From the point of view of fire resistance, a significant change that is coming into play from 1 September 2029 is that the long-established British Standard, BS 476-22:1987 will no longer be an acceptable route to demonstrate fire resistance capability in building materials and constructions for non-loadbearing walls. Instead, the requirements of European standard BS EN 13501-2: 2016 must be met, which involves a different set of tests, including BS EN 1364-1:2015. Consequently, some products and materials that have previously passed the BS476 tests may not be capable of meeting the performance requirements of BS EN 13501-2, although there are many similarities between the two test methodologies.

## How is fire resistance measured?

Whichever test standard is being used, the fire resistance of a product or system is measured in minutes and expressed in two parts – integrity and insulation. Integrity (E) is the ability of the specimen being tested to prevent fire breaking through for a minimum period of time, and insulation (I) is its ability when exposed to a fire on one side to prevent the transfer of heat through to the other side. So, a non-loadbearing wall that has a fire resistance rating of EI 30 can achieve 30 minutes Integrity and Insulation. Under BS EN 13501-2, a third category is included for loadbearing elements of a construction, designated by the letter R – resistance to collapse, or loadbearing capacity. An example might be the minimum requirement for a fire resisting construction that encloses a place of special fire hazard, which is REI 30, from each side separately.

***"Regulatory guidance for fire resistance has been under review for a number of years, with regular updates published"***

The requirements vary considerably depending on the different factors such as use, size and location. Under Approved Document B Volume 2, 2019 edition incorporating 2020, 2022, 2025, 2026 and forthcoming 2029 amendments, the minimum fire resistance requirements for an industrial building without a sprinkler system range between 60 and 120 minutes, and with a sprinkler system of between 30 and 60 minutes, depending on the height of the building. This applies to both compartment walls and where a degree of fire resistance is needed for the external wall because of proximity to a relevant boundary.

From an insurance perspective, longer periods of fire resistance may be asked for, but it is important to ensure that this is proportionate to the level of risk involved to avoid over-specification.

Photography: Dan Burton

The Stakehill Industrial Estate in Middleton, Greater Manchester, England

### What is the difference between BS 476-22 and BS EN 1364-1?

BS 476-22 is the current UK Standard that specifies the criteria for evaluating the fire resistance of non-load bearing walls, and provides the classification system for the performance of the tested elements.

Test procedures involve subjecting samples to a high-temperature furnace, that can quickly reach up to 1200°C, simulating real fire conditions. The temperature is increased based on a predetermined time/temperature curve. Throughout testing, observations are made to evaluate the product's integrity and insulation performance. From this, the results are compiled into a report that provides a comprehensive overview of how well the sample handled the high temperatures. If a product meets the criteria for both integrity and insulation, it successfully passes the test. However, if either category results in a failure, the product is considered to have failed overall.

BS EN 1364-1 is a harmonised European standard that details test methods for assessing the fire resistance of non-loadbearing walls. The specification evaluates the test sample's ability to resist the spread of fire from one side to another.

Notably, EN 1364-1 distinguishes itself as a more rigorous standard for testing the fire resistance of non-loadbearing walls when compared to British Standards. The procedure includes an optional sampling visit, during which an authorised body oversees the specimen's manufacture. Subsequently, the specimen is delivered to the laboratory, conditioned for testing, surveyed, and instrumented with thermocouples strategically placed on the non-exposed side to measure average and maximum temperatures.

The testing phase evaluates integrity, insulation, and radiation performance, with the specimen required to withstand fire from one side without a cotton pad placed on the other side igniting. In addition to this more rigorous approach, EN 1364-1 undergoes regular review and updates, whereas BS 476-22 has had no significant updates since its publication in 1987.

### Getting the balance right

Understanding the difference between how products react to fire and how effectively they can help to resist fire spread is key to managing risk whilst supporting the creation of buildings that will continue to deliver on multiple fronts over their lifetime. Always bear in mind that tried and tested 'combustible' products and systems may be able to offer better solutions than some 'non-combustible' ones when it comes to fire resistance.

# Peace of mind. Built in with PowerPanel.

QuadCore® PowerPanel can help to create thermally efficient building envelopes, whilst generating renewable solar energy to meet the operational needs of the building occupiers.

But we ask more of our buildings than energy efficiency, so what are all the core benefits that PowerPanel brings to the built environment?

## Mitigating Risk

QuadCore® PowerPanel has undergone extensive testing to ensure that the whole system is robust and durable. Most notably, it is **one of the first systems to have achieved the FM Approval mark to FM 4478** – examination Standard for Roof-Mounted Rigid Photovoltaic Module Systems. This rigorous standard assesses fire performance, wind uplift, hail damage and gravity load resistance from the point of view of asset protection.

## Quality Assurance

QuadCore® PowerPanel is manufactured in the UK using **state-of-the-art robotics, in a factory accredited to ISO 9001, and ISO 37301**. Because each PV module is precisely fitted under strict factory quality control systems, it reduces the risks associated with on-site installation, as well as supporting speedier construction.

## Warranty

Finally, for added peace of mind, a comprehensive, **insurer-backed Kingspan PowerPanel Assured Warranty** is available, subject to project specific information, covering the thermal and structural performance of the insulated panels for up to 25 years, with up to 40-year external coating warranty, whilst the photovoltaic module is covered for up to 25 years and up to 30-year linear power warranty.

Please scan for further information on QuadCore® PowerPanel FM 4478 Approval

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