Performance of cables in fires
Protecting people and property

All products have their part to play in improving public safety and contributing to effective risk management in the event of fire.

Protecting people, property and businesses against fire can be achieved by appropriate risk management and controls.

One critical step is to ensure that all products specified within the built environment comply with industry standards, proven by independent third party certification. Additionally, the products must be installed and maintained correctly, throughout their service life, to achieve the intended performance during a fire. This applies especially to power, data and voice cables.

Although cables are rarely the source of a fire, cables running through buildings and other structures can speed up the spread of flame, add to the fire load, and can create smoke and gases that are both hazardous to life and damaging to property and infrastructure, impacting on business continuity.

In many installations, it is vital that power and data connections are maintained in the event of fire, as they are a critical element of the evacuation and operational safety systems. These applications generally require fire-rated cables, which maintain circuit integrity and continue to perform for a specified time. Flame retardant cables typically perform a different function and are required to resist the spread of fire and limit the contribution to fire growth and the production of smoke and gases.

These issues are important to different degrees in all buildings, but are critical in high density population areas and applications, such as mass transit systems (e.g. the underground, metro systems and tunnels) and in the marine and offshore sectors.

The design and manufacture of cable is a global business. Cables can be manufactured in one country and shipped and installed in other regions, where regulatory standards may differ widely.

Q “How can you be sure the cables you are using in your project meet the specified fire performance requirements?”

A “By using cables that are third party certified by an independent certification body, such as BRE Global, which operates the LPCB mark of approval.”
Understanding the difference between tested products versus certified products

Products which are simply ‘fire tested’ have been tested against a particular standard. Typically, a manufacturer is able to choose their specimen and submit this to a fire test laboratory. These test results are a mere snapshot of the performance of one sample. There is no requirement for factory production control assessments or ongoing audit testing and this may not indicate robust adherence to the standard once the test has been completed.

Independent third party certification of products and services varies from the above as it involves regular audits of factory production controls and audit testing of samples.

**LPCB® certification**

LPCB (Loss Prevention Certification Board) is a certification brand with worldwide recognition which is owned by BRE Global Limited. It has been working with insurers, regulators, industry, specifiers and government since 1868 to develop and set standards to determine the performance of fire protection products and services in the case of fire.

BRE Global carries out independent third party assessment and certification of fire protection and construction products and services in accordance with International, European, British and its own Loss Prevention Standards (LPS). Around the world, the LPCB certification mark is recognised as a mark that specifiers and regulators (those responsible for checking compliance) can trust.

Beware of products claiming “satisfies” or “complies with” or “meets” LPCB requirements. If it is not printed with the LPCB mark and a certificate number, it isn’t LPCB certified. Make sure you get what you have specified and paid for and are managing your fire risks appropriately. The LPCB RedBook listings are updated daily. To ensure that you are using the most up-to-date information please go to www.redbooklive.com.

By specifying and using LPCB certified cables you are proactively managing the risks in the case of a fire and are demonstrating your commitment to the protection of life, property and business operations.

**BRE Global Assurance (Ireland) Ltd, trading as BRE Global Ireland**

BRE Global Ireland is a Notified Certification Body and Technical Assessment Body accredited by the Irish National Accreditation Board (INAB) to undertake product certification and European Technical Assessments.

EN 50575 for power, control and communication cables means that CE marking is mandatory for these products to be placed on the market in Europe. BRE Global Ireland is able to provide manufacturers of these products with a professional and efficient service in support of their CE marking requirements.

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**BRE Global Limited**

LPCB is part of BRE Global Limited, an independent, third party certification body providing testing and certification, with product testing and approvals of products and services carried out by its experts in world class laboratories. BRE Global offers independent third party certification to cable manufacturers to enable them to demonstrate compliance with international fire performance standards for fire resistance, flammability, smoke emission, acidity and toxicity. BRE Global is accredited by the United Kingdom Accreditation Service (UKAS) for certification, testing and inspection.