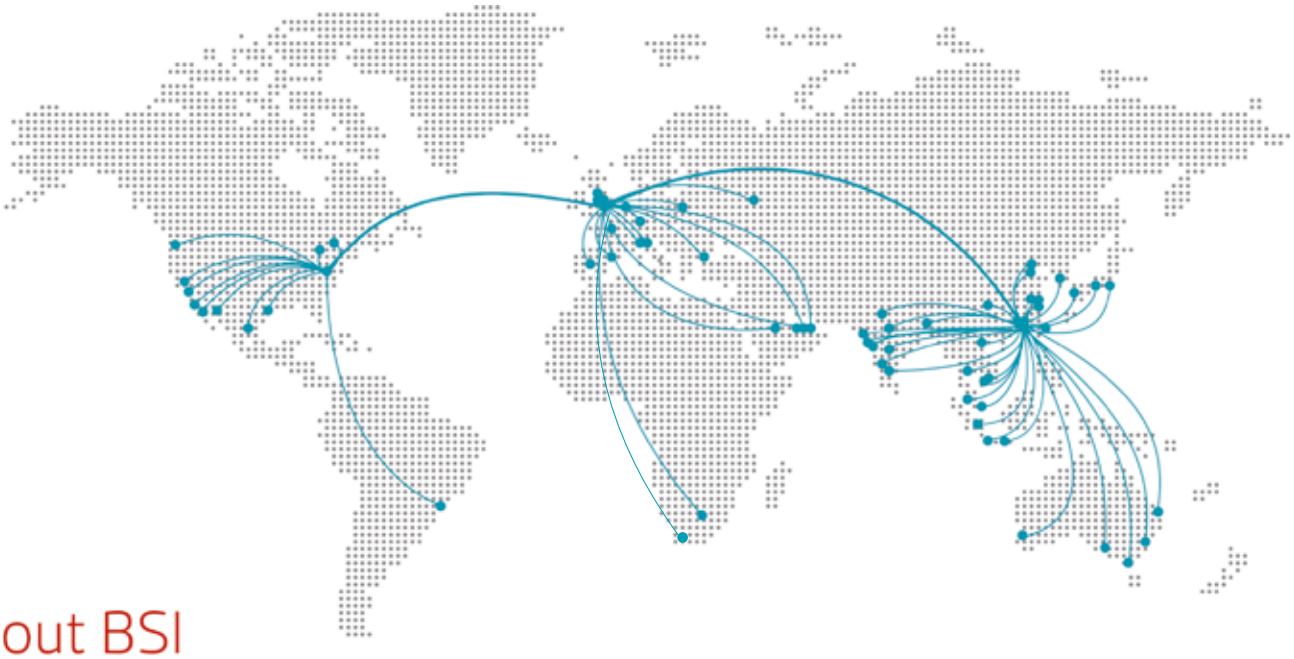
...making excellence a habit.™

BSI fire testing and certification

A comprehensive guide



About BSI

We are the business standards company that equips businesses with the right tools and solutions to turn best-practice standards into habits of excellence. With over 4,000 staff worldwide, we help our clients drive performance, manage risk and grow sustainably.

Founded in 1901 we were the world's first National Standards Body. Now over a century later, we're globally recognized as a champion in best practice. We have been and still are responsible for originating many of the world's most commonly used standards and publish nearly 2,700 standards every year. These standards are developed to address the most pressing issues of today. They also cover various industry sectors, including Aerospace, Automotive, Built Environment, Food, Healthcare, IT and Fire.

All our standards are underpinned by a collaborative and rigorous approach perfected over decades. We always work closely with industry experts, government bodies, trade associations, businesses of all sizes and consumers to develop standards that drive excellence.

We currently work with over 80,000 clients in 172 countries worldwide to help them adopt and cultivate continuous habits of best practice. We also train our clients and provide them with practical implementation guidance, as well as a comprehensive suite of compliance tools. And to ensure our clients get the very best service, we're also independently assessed and accredited globally by ANAB (ANSI-ASQ National Accreditation Board) and 26 other accreditation bodies throughout the world, including UKAS (United Kingdom Accreditation Service).

Our reach is global and we play a key role within the International Organization for Standardization (ISO). As one of the founding members, we help make sure international standards developed address today and tomorrow's business and social needs, while delivering real benefits to an organization and all its stakeholders.

UKAS PRODUCT CERTIFICATION
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Introduction

At BSI we have a full range of testing and certification services to enable you to bring your products to market effectively. We are independent of all product suppliers, installers and manufacturers, so we can guarantee a confidential and impartial service, and provide you with reliable objective guidance. Use BSI to help you independently demonstrate compliance of your new and innovative products or services. Gain CE marking and BSI Kitemark as your passports to new markets and opportunities.

We have been testing fire products since 1960. As a UKAS Accredited Certification Body, we have the expertise and integrity to independently endorse your product development, your credentials and your brand. Plus with our Notified Body status for specific Directives and Regulations, we're committed to helping you meet and demonstrate compliance to the relevant standards and legislation. We focus on delivering a testing and certification partnership underpinned by quality, safety, reliability and accuracy aligned to your product development requirements.

Where are you on your journey?

We have a full suite of testing services for you to choose from, to help you get your products to market Plus if you are developing new products, talking to our experts early in the development process, we can help you realise the full potential and commercial advantage of certification, with significant efficiencies and increased profits to be gained for your business. And with our global reach -with partner laboratories in the UK, China, Middle East and Turkey for example, we can support your business locally.

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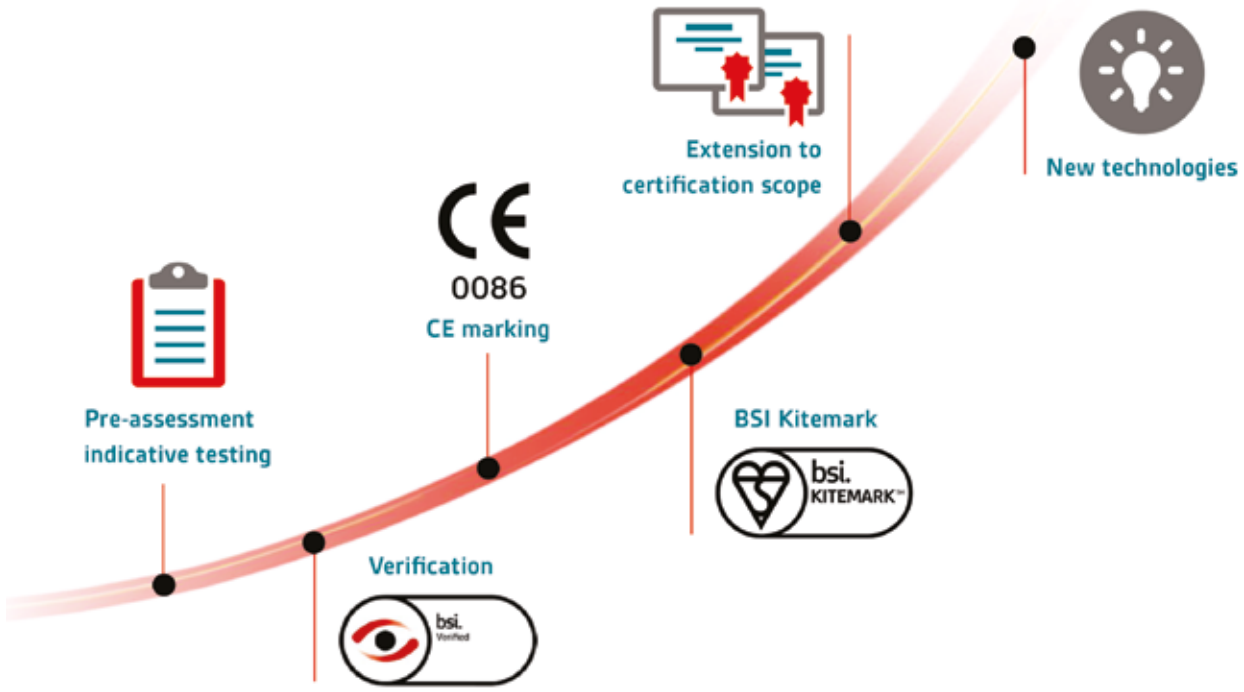
Your roadmap to certification with BSI.



Our services include:

Pre-assessment/indicative testing

We can help support your product development process to test your innovation as a more cost effective solution before you apply for third-party certification. Any non-conformities can be identified at an early stage, reducing the need for re-testing during a formal compliance test.

Your commercial advantage:
Get your products to market more quickly. Investment at this stage could help you steal a march on your competitors.

Verification

If you have self-declared your products in order to meet specific regulations or directives, you'll have your own test data, technical files and test reports. Or if no standard exists in the marketplace, you may have your own test data or evidence that your product has been assessed to a certain requirement. If you're looking for additional verification of that data, we can help. We can review all your technical information, carry out further tests if appropriate and issue a Verification Certificate to you.

Your commercial advantage:
Self-declaration supported by BSI Verification can offer your customers increased levels of confidence in your products. We'll give you the independent overview in specific technical areas, and you'll be able to use verification to support procurement specifications.

CE marking

CE 0086

If you want to trade within the European Economic Area (EEA) and your products fall within the scope of a Directive or Regulation, they must meet the essential characteristics of the Directive or Regulation and you must make a declaration of conformity. CE marking has to be in place from launch. By CE marking you can offer customers a measure of reassurance about the quality and safety of your products.

As a Notified Body (Number 0086) we have the expertise to help you understand what your responsibilities are, and will provide the third-party evidence you need to be able to affix CE marking to your products.

Your commercial advantage:
If the European market is your destination, the CE mark is your route to sales and opportunities.

BSI Kitemark™

BSI Kitemark has been in existence since 1903. We're proud to own it. It's unique to BSI and has helped to address safety, quality and security issues for thousands of products.

Rigorous testing to national or international standards, on-going sample testing to avoid any slippage of manufacturing quality or product performance, and annual assessments of factory production controls all combine to give truly robust, independent, voluntary third-party certification with a BSI Kitemark.

If you choose to implement ISO 9001, the international management system for quality to help control your factory production, we can offer you certification against this management system too.

Your commercial advantage:
The BSI Kitemark is a powerful marketing tool which works around the world as a global passport to help you gain access to new markets.

75% **of clients say BSI Kitemark helps them attract new customers**

65% **confirm BSI Kitemark helps to increase sales**

Plus you can offer your customers additional peace of mind. Direct future clients to your full range of BSI Kitemark approved products, listed in our online Kitemark directory to give additional reassurance.

Extending the scope of your certificates

If something has changed which needs to be reflected on your certificate, we can help. From a new location to a new product or modification, we can help you make sure your products still comply, and your certificate is still valid.

New technologies

Where new or adapted products are ahead of the curve, a relevant standard may not yet be available. We can still help. We can often use other specifications or technical documents, such as trade association specifications or what are known as publically available specifications (PAS's). As long as they are robust, developed by consensus and publically available, we can run a valid certification scheme to them. We are also, where appropriate, able to combine clauses from specific standards in order to be able to offer third-party certification.

Your commercial advantage:

You could be first to market, gaining a significant competitive edge. Combining this with a BSI Kitemark could significantly boost confidence in your products.

Our facilities

We offer a comprehensive range of testing and certification for over 90 different standards for BSI Kitemark, CE marking and BAFE, including on-site witness testing and integrated multi-assessments.

At our Centre of Excellence, we have facilities to undertake a wide range of testing on fire suppression equipment at our Hemel Hempstead Laboratories and have off-site facilities for fire testing. Our labs have a comprehensive range of equipment for testing fire detection panels, power supplies, detectors or various types, call points, sounders, visual alarm devices and line units. Our engineers can visit manufacturers premises or other independent laboratories to undertake work where this is convenient and suitable.

Clients are welcome to view the testing of their products, to meet with our technical engineers and experience testing first-hand to share with colleagues and technical teams. Plus if you wish to film the testing of your products for promotional or technical purposes, we are happy for you to choose this option*.

*an additional charge may apply

Other global markets

BSI's aim is to know what is required to access a particular market and then help manufacturers by offering a certification service that will fulfill that requirement. Often this will be for a brand new product that is designed for a specific market, but it can also be for an existing product that has further potential sales in new areas of the world. We can also often certify to national standards that are recognized in the relevant country or regulatory jurisdiction, such as SANAS certification for the South African market.

This scenario might involve testing to an international 'ISO' standard, in addition to an existing national- or European standard, for example SANS or EN standards. This is not necessarily a major leap and can be very cost-effective if BSI has already provided product certification to the one or the other to just add certification to additional standards.

Fire standards – what BSI can certify and test

Fire Brigade Equipment

BS 336:2010	Specification for fire hose couplings and ancillary equipment	
BS 750:2012	Specification for underground fire hydrants and surface box frames and covers	
BS 5041-1:1987	Fire hydrant systems equipment – Part 1: Specification for landing valves for wet risers	
BS 5041-2:1987	Fire hydrant systems equipment – Part 2: Specification for landing valves for dry risers	
BS 5041-3:1975	Fire hydrant systems equipment – Part 3: Specification for inlet breechings for dry riser inlets	
BS 6391:2009	Specification for non-percolating layflat delivery hoses and hose assemblies for fire fighting	
BS EN 14339:2005	Underground fire hydrants	CE
BS EN 14540:2005	Fire-fighting hoses — Non-percolating layflat hoses for fixed systems	CE
BS EN 694:2014	Fire-fighting hoses – Semi-rigid hoses for fixed systems	CE
BS EN 14384:2005	Pillar fire hydrant	CE
BS EN 15182-2:2007 +A1:2009	Hand-held branchpipes for fire service use – Part 2: Combination branchpipes PN 16	
BS EN 15182-3:2007 +A1:2009	Hand-held branchpipes for fire service use – Part 3: Smooth bore jet and/or one fixed spray jet angle branchpipes PN 16	
BS EN 15182-4:2007 +A1:2009	Hand-held branchpipes for fire service use – Part 4: High pressure branchpipes PN40	
BS EN 15767-2:2009	Portable equipment for projecting extinguishing agents supplied by fire fighting pumps — Portable monitors. Part 1: General requirements for portable monitor assemblies	
BS EN 15767-3:2010	Portable equipment for projecting extinguishing agents supplied by fire fighting pumps — Portable monitors. Part 3: Foam devices	

Fire Extinguishers

BS EN 1866-1:2007	Mobile fire extinguishers — Part 1: Characteristics, performance and test methods	
BS EN 1866-2:2014	Mobile fire extinguishers — Part 2: Requirements for the construction, pressure resistance and mechanical tests for extinguishers, with a maximum allowable pressure equal to or lower than 30 bar, which comply with the requirements of EN 1866-1	
BS EN 1866-3:2013	Mobile fire extinguishers — Part 3: Requirements for the assembly , construction and pressure resistance of CO2 extinguishers which comply with the requirements of EN 1866-1	
BS EN 3-7:2004 +A1:2007	Characteristics, performance requirements and test methods	
BS EN 3-8:2006	Additional requirements to EN 3-7 for the construction, resistance to pressure and mechanical tests for extinguishers with a maximum allowable pressure equal to or lower than 30 bar	
BS EN 3-9:2006	Additional requirements to EN 3-7 for pressure resistance of CO2 extinguishers	
BS EN 3-10:2009	Provisions for evaluating the conformity of a portable fire extinguisher to EN 3-7	

Fire Extinguishers – *continued*

BS 6165:2002	Specification for small disposable fire extinguishers of the aerosol type	
PAS 2013-1:2013	Liquid fire-extinguishing media – Part 1: Hand-applied units for use on Class F fires (up to 3l or up to 5l cooking media)	
SANS 1910:2009	Portable refillable fire extinguishers	
SANS 1567:2014	Portable rechargeable fire extinguishers – CO2 type extinguishers	
PAS 2013-1:2013 +C1:2014	PAS 2013-1 specifies requirements for Liquid Fire-Extinguishing Media – Part 1: Hand-applied units for use on Class F fires (up to 3L or up to 5L cooking media)	
AS/NZS 1850:2009	Portable fire extinguishers — Classification, rating and performance testing	
AS/NZS 1841.1:2007	Portable fire extinguishers. Part 1: General requirements	
AS/NZS 1841.2:2007	Portable fire extinguishers. Part 2: Specific requirements for water type extinguishers	
AS/NZS 1841.3:2007	Portable fire extinguishers. Part 3: Specific requirements for wet chemical type extinguishers	
AS/NZS 1841.4:2007	Portable fire extinguishers. Part 4: Specific requirements for foam type extinguishers	
AS/NZS 1841.5:2007	Portable fire extinguishers. Part 5: Specific requirements for powder type extinguishers	
AS/NZS 1841.6:2007	Portable fire extinguishers. Part 6: Specific requirements for carbon dioxide type extinguishers	
AS/NZS 1841.7:2007	Portable fire extinguishers. Part 7: Specific requirements for vaporising liquid type extinguishers	
AS/NZS 1841.8:2007	Portable fire extinguishers. Part 8: Specific requirements for non-rechargeable type extinguishers	

Fire Blankets

BS EN 1869:1997	Fire blankets	

Hose Reels

BS EN 671-1:2012	Fixed firefighting systems – Hose systems Part 1: Hose reels with semi-rigid hose	CE
BS EN 671-2:2012	Fixed firefighting systems — Hose systems Part 2: Hose systems with lay-flat hose	CE
SANS 543:2015	Fire hose reels (with semi-rigid hose)	

Fire Extinguishing Systems

BRL-K23001/04	Evaluation Guideline for fixed dry aerosol fire extinguishing components	
BS EN 15004-1:2008	Fixed fire fighting systems – Gas extinguishing systems – Part 1: Design, installation and maintenance	

Key:

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- SANAS accreditation available on this standard

Fire Extinguishing Media

BS EN 615:2009	Fire protection. Fire extinguishing media. Specifications for powders (other than class D powders)	
BS EN 1568-1:2018	Fire extinguishing media – Foam concentrates – Part 1: Specification for medium expansion foam concentrates for surface application to water-immiscible liquids	
BS EN 1568-2:2018	Fire extinguishing media – Foam concentrates – Part 2: Specification for high expansion foam concentrates for surface application to water-immiscible liquids	
BS EN 1568-3:2018	Fire extinguishing media. Foam concentrates - Part 3. Specification for low expansion foam concentrates for surface application to water-immiscible liquids	
BS EN 1568-4:2018	Fire extinguishing media – Foam concentrates – Part 4: Specification for low expansion foam concentrates for surface application to water-miscible liquids	

Fire Detection and Fire Alarm Devices for Dwellings

BS 5446-2:2003	Fire detection and fire alarm devices for dwellings. Part 2: Specification for heat alarms	
BS 5446-3:2015	Detection and alarm devices for dwellings – Part 3: Specification for fire alarm and carbon monoxide alarm systems for deaf and hard of hearing people	
BS EN 50291-2:2010 +A1:2015	Electrical apparatus for continuous operation in a fixed installations in recreational vehicles and similar premises including recreational craft — Additional test methods and performance requirements	
BS EN 50194-1:2009	Electrical apparatus for the detection of combustible gases in domestic premises – Test methods and performance requirements	
BS EN 14604:2005	Smoke alarm devices	
AS 3786:2014	Smoke alarms using scattered light, transmitted light or ionization	
BS EN 50291-1:2018	Gas detectors. Electrical apparatus for the detection of carbon monoxide in domestic premises. Test methods and performance requirements	

Fire Detection and Fire Alarm System Components/Devices

BS EN 54-2:1998	Fire Detection and Fire Alarm Systems – Part 2. Control and Indicating Equipment	
BS EN 54–3: 2001/2014	Fire Detection and Fire Alarm Systems – Part 3. Fire Alarm Devices – Sounders	
BS EN 54-4:1997	Fire Detection and Fire Alarm Systems – Part 4. Power Supply Equipment	
BS EN 54-5:2000	Fire Detection and Fire Alarm Systems – Part 5. Heat Detectors – Point Detectors	
BS EN 54-7:2000	Fire Detection and Fire Alarm Systems – Part 7. Smoke Detectors – Point Detectors using Scattered Light or Ionization	
BS EN 54-10:2002	Fire Detection and Fire Alarm Systems – Part 10. Flame Detectors and Point Detectors	
BS EN 54–11:2001	Fire Detection and Fire Alarm Systems – Part 11. Manual Call Points	
BS EN 54-12:2002	Fire Detection and Fire Alarm Systems – Part 12. Optical Beam Smoke Detectors	
BS EN 54-13:2015	Fire detection and fire alarm systems — Part 13: Compatibility assessment of system components	

Fire Detection and Fire Alarm System Components/Devices – *continued*

BS EN 54-16:2008	Fire Detection and Fire Alarm Systems – Part 16. Voice Alarm Control and Indicating Equipment	
BS EN 54-17:2005	Fire Detection and Fire Alarm Systems – Part 17. Short Circuit Isolator Modules	
BS EN 54-18:2005	Fire Detection and Fire Alarm Systems – Part 18. Input / Output Modules	
BS EN 54-20:2006	Fire Detection and Fire Alarm Systems – Part 20. Aspirating Smoke Detectors	
BS EN 54-21:2006	Fire Detection and Fire Alarm Systems – Part 21. Alarm Transmission and Fault Warning Routing Equipment	
BS EN 54-23:2010	Fire detection and fire alarm systems – Part 23. Fire Alarm Devices – Visual Alarm Systems	
BS EN 54-24:2008	Fire Detection and Fire Alarm Systems – Part 24. Components of Voice – Loud Speaker	
BS EN 54-25:2008	Fire Detection and Fire Alarm Systems – Part 25. Components using Radio Links	
BS EN 12094-1:2003	Fixed Fire Fighting Systems – Components for Gas Extinguishing Systems. Part 1: Requirements and Test Methods for Electrical Automatic Control and Delay Devices	
BS EN 12094-3:2003	Fixed firefighting systems. Components for gas extinguishing systems. Part 3: Requirements and test methods for manual triggering and stop devices	
AS 7240-2:2004	Fire detection and alarm systems – Control and indicating equipment	
AS 7240-3:2014	Fire detection and alarm systems – Audible alarm devices	
AS 7240-4:2004+A1:2016	Fire detection and alarm systems – Power supply equipment	
AS 7240-5:2004+A1:2007	Fire detection and alarm systems – Point type heat detectors	
AS 7240-7:2004	Fire detection and alarm systems – Point type smoke detectors using scattered light, transmitted light or ionization	
AS 7240-10:2008	Fire detection and alarm systems – Manual call points	
AS 7240-13:2006+A1:2006	Fire detection and alarm systems – Compatibility assessment of system components	
AS 7240-17:2015	Fire detection and alarm systems – Short circuit isolators	
AS 7240-18:2015	Fire detection and alarm systems – Input/ output devices	
AS 7240-23:2014	Fire detection and alarm systems – Visual alarm devices	
AS 7240-24:2015	Fire detection and alarm systems – Sound system loudspeakers	
AS 7240-27:2016	Fire detection and alarm systems – Point type fire detectors using a scattered light, transmitted light or ionization smoke sensor, an electrochemical cell carbon monoxide sensor and a heat sensor	

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Fire Doors

BS EN 16034:2014	Pedestrian doorsets, industrial, commercial, garage doors and openable windows. Product standard, performance characteristics. Fire resisting and/or smoke control characteristics	
BS EN 1634-1:2014	Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware. Fire resistance test for door and shutter assemblies and openable windows	
BS 476-22:1987	Fire tests on building materials and structures. Method for determination of the fire resistance of non-loadbearing elements of construction	

Emergency Lighting

BS EN 60598-1:2015	Luminaires. General requirements and tests	
BS EN 60598-2-22: 2014	Luminaires. Particular requirements. Luminaires for emergency lighting	
BS EN 61347-2-7: 2012	Lamp controlgear. Particular requirements for battery supplied electronic controlgear for emergency lighting (self-contained)	
BS EN 61347-2-13: 2014	Lamp controlgear. Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules	
BS EN 50171:2001	Central power supply systems	
BS EN 62034:2012	Automatic test systems for battery powered emergency escape lighting	

Installation/Servicing Schemes for Fire Detection, Fire Suppression and Emergency Lighting

BS 5839-1:2013	Fire detection and fire alarm systems for buildings. Code of practice for design, installation, commissioning and maintenance of systems in non-domestic premises	
BS 5839-6:2013	Fire detection and fire alarm systems for buildings. Code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in domestic premises	
BS 5839-8:2013	Fire detection and fire alarm systems for buildings. Code of practice for the design, installation, commissioning and maintenance of voice alarm systems	
SANS 10139: 2012	Fire detection and alarm systems for buildings- System design, installation & servicing.	
BS EN 15004-1:2008	Fixed firefighting systems. Gas extinguishing systems. Design, installation and maintenance	
SANS 14520 :2008	Gaseous fire extinguishing system- Physical properties and system design.	
BS 5266-1:2011	Emergency lighting. Code of practice for the emergency escape lighting of premises	
SANS 1475-1	The production of reconditioned fire fighting equipment – Part 1: portable and wheeled (mobile) rechargeable fire extinguishers	
NPFA 72:2016	National Fire Alarm and Signalling Code	
SP101*	Contract Maintenance of Portable Fire Extinguishers incorporating Registered Fire Extinguisher Service Technicians	
SP203-1*	Fire Detection and Alarm Systems – system design, installation, commissioning and maintenance	
SP203-3*	Fixed Gaseous Fire Suppression Systems – system design, installation, commissioning and maintenance	
SP203-4*	Emergency Lighting Systems – system design, installation, commissioning and maintenance	

* Applicable to the UK only

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We are a Notified Body for the following Directives and Regulation

Construction Products Regulation (CPR)

Marine Equipment Directive (MED)

Pressure Equipment Directive (PED)

If you have any questions about certification and testing for your fire products, please contact us. Our team will be happy to help.

Find out more.
Call:+27(0)12 004 0279
Email: bsi.za@bsigroup.com
or visit: bsigroup.com/en-ZA