



# Take a closer look

**BSI:** Certification, Testing and Laboratory Capabilities

*raising standards worldwide™*







## BSI certification and testing capabilities

### How can BSI help you?

BSI offers a full range of testing and certification services from research and development, pre-production, prototype, batch and audit to full compliance testing. With UKAS accredited laboratories covering materials assessment, electrical safety, fire

related products, protective safety equipment, eyewear, hearing protection, alarm systems, cables, engineering products, environmental, lighting, BSI – a Notified Body for CE marking and owner of the prestigious Kitemark – has one of the widest testing and certification capabilities in the world.

# European Directives

## Construction Products Directive (fire related products)

Hose and hose reels to control panels, including detectors against BS EN 54 and a range of British European and International standards. Schemes also include domestic, smoke, heat, CO and gas alarms.

## Personal Protective Equipment (PPE)

Covering simple household and work place gloves. All forms of hard hats to sports helmets. Hearing defenders, eye wear, dust protection and breathing apparatus as well as protective suits and work wear. In fact, any product that can be worn or used for personal protection.

## Pressure Equipment Directive (PED)

Any product that has a stored pressure would have to be considered under this Directive and in some cases this could include a complete assembly or plant. BSI can provide a full range of compliance options for PED including fire extinguishers.

## Transportable Pressure Equipment Directive (TPED)

Products with a stored pressure, that are used in a mobile environment must be tested under the TPED. BSI can test against this directive, with its wide ranging PED testing capabilities.

## Potentially Explosive Atmospheres Directive (ATEX)

This covers any equipment that is for use within an explosive atmosphere, whether it is electrical, electronic or mechanical. Various routes to compliance exist and BSI can help you choose the best one for your product.



As a notified body for 15 EU Directives BSI offers one of the most comprehensive services in the world

### **Lift Directive**

BSI's notification under this Directive is for the safety components that are fitted to lift systems, automatic braking systems, door interlocks and descent braking systems. On site assessments conducted at the manufacturer's site or at the lift installation can be arranged.

### **Marine Equipment Directive (MED)**

Applies to passenger carrying vessels where BSI's notification is for the safety products such as fire, communications and life saving equipment.

### **Gas Appliances Directive (GAD)**

Covers all gas appliances and fittings relating to gaseous fuel burning products that are used in lighting, heating and cooking from camping to household equipment.

### **Efficiency of Liquid or Gaseous Fuelled Hot Water Boilers**

Covers the energy efficiency requirements for new hot-water boilers fired with liquid or gaseous fuels and forms part of the European Union's SAVE programme (Specific Actions for Vigorous Energy Efficiency). The Regulations specify minimum levels of efficiency that new hot water boilers, sold in the United Kingdom, must operate at whilst running at full load or part load conditions.

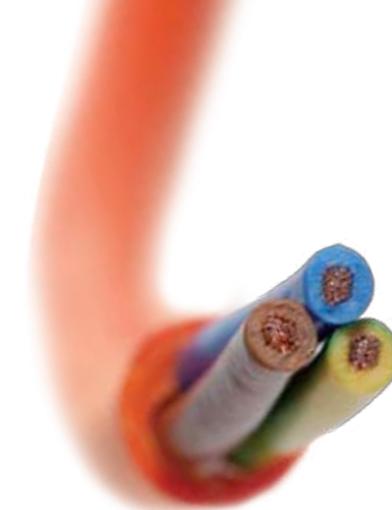
### **Construction Products (CPD)**

This Directive relates to products which are produced for incorporation in a permanent manner in works. Works include buildings, roads, bridges and other civil engineering projects.



“BSI is our one-stop-shop for testing manual fire fighting equipment to comply with all types of directives and standards worldwide. They understand the industry so well.”

– Chris Fergusson, Product Development Manager  
Chubb Fire Limited, UK



### Low Voltage Directive (LVD)

Low Voltage means all electrical equipment designed for use with a voltage rating of between 50 and 1000 V AC and between 75 and 1500 V DC. The Directive covers consumer and capital goods designed to operate within those voltage limits, including in particular, electrical appliances, lighting equipment (including ballasts), switch gear and control gear, electric wiring, appliance couplers and cord sets, electrical installation equipment and electrical equipment intended for incorporation into other equipment such as transformers and motors.

### Non-automatic Weighing Instruments (NAWIs)

Defined as weighing instruments that require the action of gravity to determine the mass and require the intervention of an operator during weighing. For instruments designed for domestic or personal use at home, the requirements are simple, only the manufacturer's name and the weighing capacity need be marked on the instrument. For commercial, retail and industrial use the requirements are considerably greater.

### Measuring Instrument Directive (MID)

The Measuring Instrument Directive came into force in 2006 and aims to create common measuring standards across the EU. Devices include; gas, water and electricity meters, material measures, gas exhaust analysers, taximeters and automatic weighing instruments. In order to display the CE mark under this Directive manufacturers must prove their products are durable, reliable, suitable for intended use and sensitive to the required measurement with repeatable results. Once certification is attained the product can be sold in all EU member states.



### **Active Implantable Medical Devices (AIMDD)**

The Directive applies to all active devices and related accessories intended to be permanently implanted in humans. Services include technical documentation/file or design dossier assessment/review, device type examination, product quality assurance (based in ISO 13485), production quality assurance (based in ISO 13485), full quality assurance (ISO 13485), batch verification/release.

### **In Vitro Diagnostic Medical Devices Directive (IVDD)**

The In Vitro Diagnostics Directive (IVDD) applies to all devices and kits used away from the patient to make a diagnosis of patient medical conditions. Services include technical documentation/file or design dossier assessment/review, device type examination, product quality assurance (based in ISO 13485), production quality assurance (based in ISO 13485), full quality assurance (ISO 13485), batch verification/release.

### **Medical Devices (MDD)**

The Directive applies to all general medical devices not covered by the Active Implantable Medical Devices Directive or the In Vitro Diagnostics Directive. Services include technical documentation/file or design dossier assessment/review, device type examination, product quality assurance (based in ISO 13485), production quality assurance (based in ISO 13485), full quality assurance (ISO 13485), batch verification/release.

### **Radio & Telecommunications Terminal Equipment (RTTE)**

This directive is the main compliance route for all radio and telecoms equipment that is sold across Europe. As one of the new approach directives, this compliance aims to harmonise frequency bands across the EU.



“Even more than the competitive quote, it was the unfailing support and guidance that impressed me.”

— Steve Riddett, Managing Director,  
Temperature Technology Ltd

# Laboratory Testing Capabilities

## Alarm Systems Laboratory

Operational testing of control & indicating equipment, electrical automatic control & delay panels, heat detectors, manual call points, power supply equipment, smoke alarm devices, smoke detectors and sounders to ensure they work.

## Cables Testing Laboratory

Dimensional, mechanical and physical testing of armoured & PVC (insulated for power distribution), low smoke corrosion gas emission cables, fibre optic cables, lift cables (up to 450/750V), mineral insulated cables, insulation tapes, vehicle cable, flexible supply cord & cable, adhesive insulating tape. Testing includes determination of dimensional properties & mass, electrical resistance, flame resistance, flexural testing, halogen gas emission rates, high voltage, insulation resistance, smoke emissions, tensile testing.

## Calibration Laboratory

Light sources, luminous flux and luminous intensity, light meters, luximeters, illuminance meters, photometers, white light meters, colour and ND filters, colour & reflectance tiles, photometer linearity, luminance meters.

## Complex Electronics Laboratory

Safety & essential performance of medical equipment, safety of electrical equipment for measurement, control and laboratory use, safety of information technology equipment.

## Construction Products Laboratory

Mechanical and physical testing of polymeric plastic pipes & fittings, windows, doors, insulation materials, concrete, glass, domestic copper cylinders, copper hot water storage combination units, copper and copper alloy tubes, fittings, radiators and convectors.

“Although I can’t quantify the exact value that the Kitemark has brought us, we have definitely won contracts on the back of it and more than recouped the cost of accreditation.”

– Dean James, Sales and Marketing Director, Corin Tech, UK





### **Controls & Accessories Laboratory**

Mechanical, physical and electrical testing of plugs, sockets and switches. Testing includes assessment under normal and/or fault conditions, endurance, impact, inductive loads, insulation resistance, material properties (ball pressure, glow-wire & CTI) and temperature rise.

### **Electrical Components Laboratory**

Mechanical, physical and electrical testing of components. Testing includes distance through insulation of optocouplers, endurance (capacitors), flammability, high voltage, impulse, insulation resistance.

### **Environmental Laboratory**

Mechanical and physical testing of almost any product to see how it performs in a specific environment. Testing includes acoustics, climatic (temperature & humidity), corrosion (salt spray), dielectric withstanding voltage, temperature cycling, thermal shock, pressure chambers, solar exposure, salt fog, sine and random vibration, mechanical shock & bump, drop & topple, free fall, impact, insulation resistance, noise, vibration (sinusoidal, random, horizontal, vertical), ingress protection, environmental stress screening (ESS), reliability demonstration, HALT & HASS, IP.

### **Lighting Laboratory**

Safety, photometric, colorimetric and performance testing of lamps, LEDs and luminaires for household, industrial, medical, highway, automotive, sports, aviation, navigation, marine safety equipment and emergency uses. The laboratory also provides technical services for the UK's Vehicle Certification Agency, is an accredited test facility for AMECA (Automotive Manufacturers Equipment Compliance Agency) USA for motor vehicle lighting and signalling equipment and a registered test facility for the Road Vehicle Certification System, Australia.



### **Windows and Doors Laboratory**

Mechanical, physical and endurance testing of curtain walling, doors, patio doors and windows. Testing includes climatic resistance (water & UV), endurance, mechanical performance, operating characteristics, research & development, security (resistance to attack), weather tightness.

### **Glass Products Laboratory**

Testing of architectural glass, automotive glazing products and insulated glass units. Tests include breaking characteristics, impact performance, optical properties, resistance to environmental conditions, gas concentration, gas leakage, moisture penetration, resistance to UV exposure.

### **Industrial and Engineering Laboratory**

Mechanical and physical testing of fire protection, industrial valves, fire extinguishers, fire hoses, fire hydrants, thermostatic mixing valves, manhole covers, high capacity drainage channels, clay pipes, playground equipment and engineering valves.

### **Impact Protection Laboratory**

Mechanical, safety and physical testing of headwear, body protection and playground surfaces. Tests include dynamic tensile, impact absorption and retention of fixings & straps.

The laboratory is also certified by and provides technical support to the UK's Vehicle Certification Agency, the International Rugby Board and Standards Australia (Headwear).

### **Latex Laboratory**

Testing of natural rubber latex condoms and medical gloves for single use. Testing includes strength test, tests for holes, tears, foreign bodies, visible defects, colour fastness, minimum length and width.



“Collaboration with BSI, through the Kitemark scheme, gives total confidence that all the necessary safety requirements have been properly considered”

– Andy Yates, Technical Director, SMP Playgrounds Ltd, UK





### **Materials Laboratory**

Dimensional, mechanical and physical testing of metallic and non-metallic products such as cattle, goat & sheep ear tags, cisterns, dustbins, gaskets & weather seals, polymeric pipes, polyethylene pipes, polybutylene pipes, PVC-u pressure pipes, plastic rainwater pipes, soil & ventilating pipes, air admittance valves, PVC-u eaves, eave brackets, gutters & fittings PVC conduits & fittings, PVC-u profiles, PVC-UE cladding profiles, sharps containers, steel conduits & fittings and sterilisation indicators. Testing includes thermal cycling, UV weathering and hydrostatic pressure.

### **Plumbing, Insulation & Access Equipment Laboratory**

Dimensional, mechanical and physical testing of access equipment (ladders, platforms & steps), building insulation, copper central heating cylinders, copper and malleable pipes & fittings, cylinder insulation, plumbing components. Testing includes dimensions, mass, thermal efficiency, pressure, finish, loading torque and performance.

### **Respiratory & Eye Protection Laboratory**

Dimensional, mechanical, optical and physical testing of breathing apparatus, dust masks, eyewear (glasses, goggles & visors), filters and respiratory devices. Mechanical and physical testing of cricket balls. Testing includes impact, penetration, strength of retention system, construction, optical and exclusion capacity.

### **Taximeters & Skid Testing Laboratory**

Testing includes bench testing of taximeters, calibration of skid testers, skid/slip resistance, validation of fuel samples. The laboratory conducts the testing for the taximeters used by the Public Carriage Office, London.



# Testing services



## Kitemark Products and Services

With BSI, manufacturers can take a step further in showing their commitment to quality and safety, by applying for the Kitemark. The Kitemark is one of the most respected product quality marks in the world, owned and operated by BSI. It is an independent voluntary certification scheme, that proves that a wide range of products and services ranging from lighting to garage services, conform to comprehensive standards ensuring vital safety and performance requirements are consistently met.

Research shows that **88%** of UK adults trust the Kitemark\* and **75%** of UK adults state that the presence of the Kitemark helps them choose between products\*.

### For consumers

When a product or service has attained the Kitemark, it sends out a clear signal to consumers that the highest standards of quality and safety are consistently achieved. By delivering this reassurance consumers trust the product or service that bears the Kitemark.

### For businesses

Kitemark scheme members are able to create a business advantage, with products and services that stand out from the competition. With the enhanced reputation the Kitemark brings, other market opportunities such as tenders and larger projects become more accessible.

#### Scheme sectors

Cement & masonry  
Wastewater & drainage  
Waterproofing  
Pipes  
Plumbing & heating  
Interior construction

Glass & glazing  
Windows & doors  
Fire suppression & detection  
Electrical products  
Road products  
Ladders & access equipment  
Protective equipment

#### Services:

Automotive  
Window Installation  
Electrical Contractor  
Removals  
Fire Alarm Systems  
Emergency Lighting



“When the Kitemark became available it was essential that we worked to achieve it as there is no other symbol in the world that denotes such high quality and trust.”

– East Bilney Coachworks, Mark Baldwin, MD



### **CE marking**

The majority of products sold in the European Union, must bear the CE mark, the sign of compliance to the relevant EU Directive. As a Notified Body for many European Directives, BSI can offer a comprehensive range of testing and certification services for CE marking, enabling manufacturers to confidently and legally affix the CE mark to their products. Although CE marking is a conformity mark it is not a quality mark and should not be interpreted as such.

### **Pre-assessment/Direct Testing**

With a worldwide reputation as an independent testing authority, BSI can not only test a wide range of products both to International and Nationally recognised standards, but in many cases can formulate test programmes to meet specific client needs and create test regimes beyond those required by published standards.

Manufacturers at the development stage with their products can benefit from indicative testing, also known as pre-assessment.

The benefit of this type of testing means that any non-conformities can be identified at an early stage, reducing the need for re-testing during the formal compliance test and enabling a quick transition into the marketplace.

### **Partnering through compliance**

BSI is committed to helping its manufacturers meet and demonstrate their compliance to the relevant legislation, by guiding companies through the certification process we enable them meet the needs of consumers and businesses.

## **Whatever your testing or certification needs BSI has the expertise and facilities to help**

Product testing, CE marking against many European Directives, Kitemark Certification, Standard compliance, manufacturer's specifications, research & development projects.



# Management Systems



For more information please visit [www.bsigroup.co.uk/improve](http://www.bsigroup.co.uk/improve)  
call +44 (0)845 080 9000 or email [certification.sales@bsigroup.com](mailto:certification.sales@bsigroup.com)

For more information please visit [www.bsigroup.co.uk/training](http://www.bsigroup.co.uk/training)  
call +44 (0)845 080 9000 or email [training@bsigroup.com](mailto:training@bsigroup.com)

For more information please visit [www.bsigroup.co.uk/entropy](http://www.bsigroup.co.uk/entropy)  
call +44 (0)845 080 9000 or email [info.entropy@bsigroup.com](mailto:info.entropy@bsigroup.com)

## Assessment and certification

BSI is a global provider of management systems assessment, certification and training services with more than 60,000 certified locations and clients in over 100 countries. We offer a wide range of assessment products and services covering all the major management system standards as well as many specialised schemes.

Our clients range from some of the world's largest organisations to smaller, local businesses, charities and government departments, whom we certify to standards covering Quality, Environmental, Occupational Health and Safety, Information Security, Business Continuity and Integrated Management.

Certification is instrumental in protecting an organisation's brand and reputation. Management systems based on industry best practice enable companies to be consistent in the delivery of products and services help demonstrate an organisation's commitment to achieving continual improvement.

## Training

BSI is a leading supplier of training courses with unrivalled experience in business improvement training and in standards-based management systems. Training is delivered via a variety of options including eLearning modules, distance learning, in-company training and open courses, along with individually tailored training solutions which can be moulded around an organisation's requirements. Choosing BSI Training demonstrates to customers, competitors, suppliers, staff and investors that an organisation uses industry-respected best practices wherever possible.

## Management System Software

Entropy Software, BSI's management system software solution, is used by leading organisations at over 14,000 sites around the world to improve their business performance and manage their risks. A scalable web-based solution, Entropy software is established as a market-leading framework for the integration of environmental, health and safety, quality and supply chain compliance management systems.



# Information request form

I would like further information relating to the following services:

## European Directives

- Construction Products Directive (fire related products)
- Personal Protective Equipment (PPE)
- Pressure Equipment Directive (PED)
- Transportable Pressure Equipment Directive
- Potentially Explosive Atmospheres Directive (ATEX)
- Lift Directive
- Marine Equipment Directive (MED)
- Gas Appliances Directive (GAD)
- Low Voltage Directive (LVD)
- Non-automatic Weighing Instruments (NAWIs)
- Construction Products (CPD)
- Efficiency of Liquid or Gaseous Fuelled Hot Water Boilers
- Active Implantable Medical Devices (AIMDD)
- In Vitro Diagnostic Medical Devices Directive (IVDD)
- Medical Devices (MDD)
- Radio Equipment & Telecommunications Terminal Equipment (RTTE)
- Measuring Instrument Directive (MID)

## Laboratory Testing Capabilities

- Alarm Systems Laboratory
- Cables Testing Laboratory
- Calibration Laboratory
- Complex Electronics Laboratory
- Construction Products Laboratory
- Controls & Accessories Laboratory
- Electrical Components Laboratory
- Environmental Laboratory
- Windows & Doors Laboratory
- Glass Products Laboratory
- Impact Protection Laboratory
- Industrial and Engineering Laboratory
- Latex Laboratory
- Lighting Laboratory
- Materials Laboratory
- Plumbing, Insulation & Access Equipment Laboratory
- Respiratory & Eye Protection Laboratory
- Taximeters & Skid Testing Laboratory

**Kitemark Schemes:** (please state): .....

**Management systems:**     Assessment & certification                       Training                       Entrophy software

Please state Management system Standard : .....

## Contact details:

Name (Mr/Mrs/Miss/Ms/Dr/Prof) .....

Telephone ..... Email .....

## Company details:

Name .....

Address .....

..... Postcode .....

**Please detach this form and fax back to +44 (0)8450 765601  
or email: [testing.services@bsigroup.com](mailto:testing.services@bsigroup.com)**

## BSI

Kitemark House,  
Maylands Avenue,  
Hemel Hempstead,  
Hertfordshire HP2 4SQ

T: +44 (0)8450 765600

F: +44 (0)8450 765601

e: [testing.services@bsigroup.com](mailto:testing.services@bsigroup.com)

[www.bsigroup.com/testing-services](http://www.bsigroup.com/testing-services)

By printing this document on Cocoon Silk recycled paper the environmental impact was reduced by\*:

-  0.2 kg of landfill
-  5,517 litres of water
-  550 kWh of electricity
-  51 kg CO<sub>2</sub> of greenhouse gases
-  4 Trees

Source:  
European BREF (data on virgin fibre paper),  
Carbon footprint data audited by the  
CarbonNeutral Company,

\*compared to a non recycled paper

Call our Customer Services Team now on +44(0)8450 765600

Kitemark and the Kitemark logo are registered trademarks of BSI  
\*GfK NOP Survey PS1025/1209v2



Printed responsibly using vegetable oil based inks on 100% recycled paper, under chain of custody conditions by an FSC certified printer. **Please recycle after use.**

*raising standards worldwide™*



BSI Group: Standards • Information • Training • Inspection • Testing • Assessment • Certification