



Tested means Trusted

**SAFETY, QUALITY AND SUSTAINABILITY SOLUTIONS
FOR THE ELECTRICAL & ELECTRONICS INDUSTRY**

SGS



Today's consumers demand safe, effective and quality products with increasing levels of sustainability. Manufacturers and retailers need a single consolidated source to reduce risk, improve efficiency and ensure compliance. With our global network and expertise we can offer you solutions in the different consumer markets worldwide.

From product design analysis to final product testing, risk assessment and product certification, we offer trusted, independent, third party solutions.

With our expertise, industry experience and market understanding you're poised for success.



SERVICES

- Testing
- Audits
- Verification
- Product certification
- Technical solutions
- Product inspection
- Process assessment

CONNECTIVITY & PRODUCTS

- **Softlines & Accessories:**
Textile, apparel, accessories, home textile, footwear, bags, leather and latex products
- **Hardlines:**
DIY, tools, hardware, furniture, houseware, sporting goods, stationery
- **Electrical and Electronics:**
Luminaires, audio/video, automotive parts, household appliances, audio/video equipment, IT&T, mobile, semiconductors, machinery, medical devices certification and retail solutions for final products as well as

components

- **Automotive:**
Components, interior/exterior parts and materials, automotive EE components, automotive batteries, AUTOSAR, embedded software, aftermarket components and products
- **Toys and Juvenile Products:**
All types of toys, from plush toys to ride-on toys and all types of juvenile products, from feeding bottles to safety gates and strollers

THE SGS COMMITMENT

- We strive to deliver outstanding value
- At every step in your project, we are committed to add value to your work by providing:
 - Rapid turnaround time
 - Value-based pricing
 - Technical assistance
 - Key account management
 - Accurate timely reporting
 - Quality and trusted test results
- We can help you improve your product's quality and your brand image

- In long-term partnerships our input will increase the return on your investment

SGS United Kingdom Ltd is a UKAS accredited test house qualified to ISO 17025 and Notified Body on RED, MDD, and TCB certification. The company specialises in single in-house electrical and electronic testing procedures in combination with, machinery, LVD, automotive and Electromagnetic Compatibility (EMC) requirements and many more.

All SGS procedures generate internationally recognised test reports. We are also able to provide full consultancy services and training, enabling product manufacturers and suppliers to plan and instigate effective and efficient approvals.



PRODUCT SAFETY AND SERVICES

Electrical and electronic product manufacturers and retailers are under increasing pressure from clued-up consumers who know about sustainability, energy efficiency and green issues.

Partner with SGS to deliver well-designed, desirable goods that are trusted for real life while ensuring quality, safety and sustainability for retailers and consumers.

SOLUTIONS

- Hazardous substances
- Product safety
- Audit and certification
- Performance and reliability
- Product inspection

SPECIFIC SOLUTIONS

- Retail programmes
- Technical assistance

NEW MARKETS – NEW SOLUTIONS

- Electromedical device industry

- Wireless device and application industry
- Micro and nanotechnology industry

FOR EVERY INDUSTRY

- Household appliances
- Luminaires
- IT&T
- Audio/video equipment
- Medical devices
- Machinery
- Automotive parts
- Microelectronics
- Medical devices

ELECTRICAL SAFETY TESTING CAPABILITIES

- European/international standard
- UK national deviations
- European and international deviations
- Domestic, light industrial and commercial products
- Power tools (domestic and industrial)
- Luminaires (domestic and industrial)
- Laboratory equipment

- Information technology equipment
- Electrical toys
- Extra low voltage products according to the General Product Safety Directive
- Vibration, shock and bump
- Ingress protection (IP) rating
- CB test laboratory under IECEE scheme

TO YOUR ADVANTAGE

We identify the applicable regulations and standards for each of your specific products and target markets.

SGS can help you reduce risks, improve efficiency and ensure compliance to contractual or regulatory requirements in all your manufacturing, sourcing, distribution and retailing operations.

THINKING SUSTAINABLY

Across our global network of sustainability experts we can support your company in its strategy by offering a range of services covering the environmental, safety and social aspects of sustainability.

PRODUCT SAFETY MARKS

WHY CERTIFICATION?

- Fast market access for your product
- Competitiveness in more markets
- Send a signal to potential clients that quality is your major focus
- Get higher ratings when you're evaluated by retailers and importers
- Improved reliability – you can refute allegations of product non-conformity

Certifications in certain countries and for certain products are a mandatory requirement. In most cases they become a crucial selling prerequisite. Product testing and production assessment are needed to receive certification and the associated certification mark.

GET A PRICE BENEFIT

- Adapt the certification programme to your production development plan
- Eliminate design errors that can affect your reputation and market position

SGS Connectivity and Products offers certifications that help you gain a competitive advantage in the various markets in which you are interested.

The SGS safety marks allow you to demonstrate that your product fulfils all relevant and applicable product safety requirements.

Our capabilities in product safety testing and certification, combined with our global accreditations, allow us to offer you the route to several safety marks. See below for example safety marks:



SGS Product Safety



SGS GS



SGS Bauart



SGS Fimko



SGS CEBEC



SGS North America



SGS TÜV GS



SGS TÜV Bauart



ENEC



HAR



CB Scheme



Australia RCM



Russia EAC



Japan PSE



China CCC



UKCA



ELECTROMAGNETIC COMPATIBILITY (EMC)

EMC

Electrical products must be disturbance free and therefore electromagnetically compatible (EMC) with other electrical and electronic equipment. This means a product does not introduce intolerable electromagnetic disturbances into its environment and is not affected by such disturbances.

For example: mobile phones often create interference with electrical equipment used in medical practices.



SGS EMC



China CCC



US FCC



CE Marking



Russia EAC



Taiwan BSMI



Australia RCM



CB Scheme



UKCA



e/Emark



Japan VCCI

Canada ICES-003 Class B
Canada NMB-003 Classe B

Canada ICES

EMC TEST CAPABILITIES

- European harmonised standards
- UK Designated standards
- Domestic/light industrial and commercial products
- Household appliances and power tools (domestic and industrial)
- Luminaires
- Laboratory and information technology equipment
- Outside testing of home equipment at client request
- Electrical toys
- Heavy industrial products
- Construction machinery and equipment
- Security systems and alarms
- Automotive products
- Medical, health, fitness and beauty products
- FCC Part 15
- Testing to standards of Taiwan, Korea, Russia, Australia, New Zealand and Japan
- EMC 'CE' notified body and UK approved body
- Approved body assessments for UKCA (UK)



RADIO TESTING IN TOUCH WITH THE RIGHT STANDARDS

RADIO TESTING CAPABILITIES

- ETSI standards
- European standards including ETSI EN 300 220, ETSI EN 300 330, ETSI EN 300 440, ETSI EN 301 489 etc
- Telemetry equipment
- Radio controlled models and toys
- Baby and nursery monitoring equipment
- Vehicle alarm and immobiliser equipment
- Anti-theft devices
- House and building alarms
- Wireless microphones
- Module approval
- FCC Part 15
- Cellular Testing
- FCC Part 11
- FCC Part 18
- FCC Part 24
- FCC Part 27
- Radio 'CE' Notified body and UK approved body
- Notified body assessment for CE marking (Europe) via our European Network
- Approved body assessments for UKCA (UK)

IT&T SERVICES

SGS operates accredited testing labs providing IT&T network systems such as radio base stations, broadband access multiplexers (DSLAM), switches or routers for the following services:

- Product safety assessment
- EMC testing
- Product reliability assessment (climatic, vibration, earthquake, HALT)
- Air interface testing for radio base stations
- Signalling protocol conformity verification (SIP, SIGTRAN, CCS)
- Pre-compliance testing
- Product design support
- On-site testing
- Test system development
- Compliance management and consultancy
- Thermal simulation
- System certification
- Cellular/Mobiles
- EU RED test services
- UKCA Radio Equipment Regulations test services

- EMC testing
- OTA testing
- Consultancy services
- Client rooms
- International certification schemes and more

WHY SGS?

SGS maintains a highly experienced team of engineers who play an active role in multiple standards boards and are members of various industry groups.

All our labs are ISO 17025/GCF/PTCRB/CTIA accredited and are strategically located in:

- Europe (UK, Germany)
- Asia (China, Taiwan, Japan and Korea)
- US (CA and KS)



AUTOMOTIVE TESTING DRIVING AHEAD WITH STANDARDS

AUTOMOTIVE APPROVALS

- e/E11 mark approval testing
- R10.04 approval (four wheeled vehicles)
- 97/24/EC EMC approval (two and three wheeled vehicles)
- 75/322/EEC EMC approvals agricultural and forestry tractors
- 71/320/EEC EMC approval braking systems
- 95/56/EC anti-theft devices
- ECE regulations 10.04 approval
- ECE regulations 13 approval
- ECE regulation 18 approval
- ECE regulation 97 approval
- ECE regulations 116 approval

INTERNATIONAL AUTOMOTIVE TESTING CAPABILITIES

- ISO 7637 conducted transients parts 1, 2 and 3
- ISO 10605 electrostatic discharge
- ISO 11452 bulk current injection and radiated immunity
- CISPR 25 radiated and conducted emissions
- Manufacturers' specifications

AUTOMOTIVE ENVIRONMENTAL TESTING

- Vibration, shock and bump
- Temperature range and humidity
- Salt mist

ENVIRONMENTAL TESTING CAPABILITIES

- Ingress dust protection up to IP6X (dust tight)
- Ingress water protection up to IPX7 (indefinite immersion)
- Salt spray testing ASTM, BS and ISO standards, Defstan
- Damp heat to EN 60068-2-30
- Thermal shock testing to EN 60068-2-27
- Raised and lowered ambient testing
- Environmental testing to 2011 general requirements
- Environmental testing to EN 50125 railway applications
- Environmental testing to EN 60068 testing procedures and severities for electrotechnical products
- Environmental testing to EN 60945 maritime navigation and radio communications equipment
- Manufacturers' own product specific test plans
- Cold to EN 60068-2-1, dry heat to EN 60068-2-2
- Vibration to EN 60068-2-6
- Meter testing to EN 62052



MACHINERY TESTING MAKING STANDARDS WORK

MACHINERY TESTING CAPABILITIES

- Notified Body under The Machinery Approved Body under The Supply of Machinery (Safety) Regulations 2008
- Complete Suite of Machinery Annex IV services and Machinery non-annex IV services
- Worldwide on-site machinery audit and testing services
- Technical file assessment
- Risk assessment
- Assembly of machinery (production line and machinery integration) assessment
- Provision and Use of Work Equipment Regulations (PUWER) assessment
- Preparation of Machinery Directive supporting documentation
- Route to compliance guidance service
- Pre-compliance and assessment testing
- Electrical verification testing of machinery
- Machinery noise emission testing
- Machinery consultancy/support services
- Bespoke machinery inspection to manufacturer and client specifications

For further information on machinery testing and approvals, contact SGS now

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MEASURING INSTRUMENTS DIRECTIVE (MID)

BENEFITS OF PARTNERING WITH SGS

SGS can help you comply with the MID, by guiding you through the maze of regulatory requirements.

When choosing SGS as your notified body partner, it will provide: a free of charge no obligation quotation for its services; a project manager for all aspects of its service provision creating a one point of call contact; all necessary product and system certifications thus giving you a one supplier approach.

Additional benefits include: access to approval and inspection expertise from SGS offices throughout Europe; an SGS mark that is recognisable throughout the world; and access to quality assurance and engineering experts who are fully trained in the industry.

WHICH DEVICES APPLY?

If you market any of these measuring instruments, you will need to comply with the regulations:

- Gas meters and volume conversion devices
- Active electrical energy meters
- Heat meters
- Measuring systems for the continuous and dynamic measurement of quantities of liquids other than water
- Taximeters
- Material measures
- Dimensional measuring instruments
- Exhaust gas analysers
- SGS compliance solutions
- In addition to MID capability, to help you comply with Directive 2004/22/EC, SGS has designed a suite of solutions to ensure your equipment can be placed on the market:
 - CE marking consultancy
 - Metrology marking advice
 - EC type examination
 - Design examination
 - ISO 9001 certification
 - Conformity assessments
- Technical file construction advice and/or verification
- Identification of product and component testing standards
- Metrological tests
- Meter tests and certification
- Equipment calibration
- Verification of your internal checks
- Creation of evaluation reports
- Manufacturers' assessments
- Ongoing product tests



PRODUCT INSPECTION

PEACE OF MIND ALWAYS

Proactive problem identification and solution implementation are essential to the success of any company. SGS provides an answer to both and offers much more.

OUR CORE INSPECTION BUSINESS

We are capable of providing a wide range of quality inspection services that ensure products comply with regulations, standards and contractual specifications.

IPC (INITIAL PRODUCTION CHECK) - analysis of component, material, and product quality at the beginning of production

DUPRO (DURING PRODUCTION CHECK) - analysis of components, materials, and product quality during production

FRI (FINAL RANDOM INSPECTION) - inspection of randomly selected samples after production is completed to ensure the final product meets specifications

LSUS (LOADING SUPERVISION/UNLOADING SUPERVISION) - check condition of the containers and witness the loading/unloading of goods. On client's special request, SGS can seal containers with SGS seals to reduce the risk of tampering, theft and substitution.

PROVIDING ASSURANCE

SGS's **Quality Assurance Program (QAP)** ensures there is no flaw in a product's design and that the production and delivery systems are functioning efficiently. Through product evaluation, factory assessment, product inspection and shipment control, QAP is an effective method for manufacturers to identify potential production pitfalls, allowing for a faster time-to-market.

BRINGING IMPROVEMENTS

While the QAP will identify effective ways to improve product quality, through the **Quality Improvement Programme (QIP)**, SGS will assume responsibility for implementing the solutions. It is one thing to identify a problem and another to effectively solve it. QIP allows SGS to become deeply involved in the entire process and give its clients increased control over product design and quality.

To succeed in the QIP, SGS utilises a thorough gap analysis method that applies practical tools, such as: Quality Management Systems (QMS),

operations management, organisation audit, data analysis and Process Failure Modes Effect Analysis (PFMEA) to identify the root causes of product flaws and defects and address them.

YOUR BENEFITS

- Create/maintain a high-end, high value product line
- Develop a strong concept of quality and improve brand image
- Assess factory capability
- Validate supplier quality
- Create a strong relationship with suppliers in the long term
- Discover causes of non-conformity and prevent them from occurring
- Mitigate other potential risks and avoid product recalls
- Deliver product lines on a tight schedule and achieve fast time-to market



CERTIFICATION, AUDIT AND TRAINING SERVICES FOR ELECTRICAL PRODUCTS

We audit and provide certification for a range of standards. Certification means that consumers can have confidence that your products are safe, reliable, of good quality and your management systems have been independently audited against international standards.

- **ISO 9001** – Quality Management System
- **ISO 14001** – Environmental Management Systems
- **ISO 45001** – Occupational Health and Safety Management Systems
- **ISO 50001** – Energy Management Systems
- **ISO/IEC 27001** – Information Security Management Systems
- **ISO 22301** – Business Continuity Management Systems
- **ISO 55001** – Asset Management
- **IATF 16949** – Automotive Quality Management System

- **AS9100** – Quality Management System standard for the Aviation, Space and Defence industry
- **SMETA** (Sedex Members Ethical Trade Audit) and a range of social responsibility audits
- Supply chain auditing

QUALITY AND COMPLIANCE STANDARDS FOR ELECTROMEDICAL DEVICES

- **ISO 13485** - Quality Management Systems
- **European Medical Devices Regulation: MDR (EU) 2017/745**
- **Medical Device Single Audit Program (MDSAP)**
- **UK Conformity Assessed (UKCA) Mark**
- **FDA's Premarket Notification 510(k)**
- **US Food and Drug Administration (FDA) site inspections**
- **Japanese medical device regulations, known as the Act on Pharmaceuticals and Medical Devices (PMD Act).**

For more information on our certification services <https://www.sgs.co.uk/en-gb/certification>

ACADEMY TRAINING

Our training solutions provide innovative learning and development solutions, covering multiple areas and industries, tailored to meet your needs. Our courses are delivered in both face-to-face or Virtual Instructor Lead Training (VILT) and eLearning environments, ensuring training objectives are achieved no matter where you are.

[Book our Academy Training Services](#)



INDUSTRY SOLUTION FOR ELECTRICAL PRODUCTS

At every step in your project, we are committed to adding value to your work by providing value-based pricing, technical assistance, key account management, local support, accurate timely reporting and proactive feedback. Our comprehensive services help ensure that your products comply with regulations, standards and contractual specifications. This allows you to demonstrate due diligence at an early stage in your supply chain by reducing delays and enabling a faster time to market.

TESTS THAT WORK FOR YOU

A tailor-made performance testing programme from SGS may include conducting:

PERFORMANCE TESTING

Performance testing includes a minimum of three tests:

- Functionality
- Handling
- Durability/endurance

SAFETY

- Surveillance screening
- Fault analysis
- Full compliance – against relevant legal requirements

EMC/RADIO

- Pre-compliance
- Diagnostics
- Full compliance

FITNESS FOR USE (FFU)

- Including: functionality, handling, durability, artwork (user manual, label rating, packaging)

RELEVANT INSPECTIONS

On production samples: during production inspection (DUPRO) final random inspection (FRI) loading supervision (optional).

TECHNICAL DOCUMENT REVIEW

Ensure your paperwork is complete and up-to-date, save time and expense in the event of defects and warranty claims

- Protocol service
- Technical file assessments



RETAILER BRAND SOLUTION FOR ELECTRICAL PRODUCTS

PRODUCT CATEGORIES

PRODUCTS WOULD INCLUDE:

Small and medium household, such as:

- Kitchen appliances
- Personal care
- Audio/visual
- Lighting
- IT
- Power tools
- Toys

Large household goods, such as:

- Washing machines
- Refrigerators
- Dishwashers

PRODUCT RECALLS

- Risk assessment
- Safety issues identified
- Workshop for product development

THE MARK OF SUCCESS

RETAILERS

The SGS test mark is a quality mark you can trust. Successful applications are

assured that the product meets all relevant quality requirements.

It allows you to demonstrate your commitment to product safety and assures the product's efficiency to consumers. Independent testing and validation demonstrates that a product meets, or exceeds, key purchasing criteria and gives your customers reassurance and peace of mind when choosing to buy.

No more gold seal sample failures means retailers have reliable proof that all products have the quality of the initial samples. Our certification programmes drastically reduce product recall instances, as components, final products and production processes are thoroughly analysed as part of certification.

As a notified and approved body for UK accredited certification body (CB) SGS operates one of the largest safety and EMC testing and certification networks in the world.

We can do so much more to verify your product for market; our aligned testing and interpretation of methods across SGS electrical

and electronics laboratories help you exceed customer expectations and prepare for consumer organisation testing.

Our expertise has enabled us to devise testing programmes that meet the requirements of international standards, like IEC, while also meeting the preferred criteria of consumer organisations.

To learn how SGS can help you exceed customer expectations, visit www.sgs.co.uk or contact ukenquiries@sgs.com for more information.



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 www.linkedin.com/showcase/sgs-connectivity-and-products/

Pen. *Tested.*

Stroller. *Tested.*

Lipstick. *Tested.*

Toy Robot. *Tested.*

Box. *Tested.*

Helmet. *Tested.*

Drill. *Tested.*

Pen. *Tested.*

Mattress. *Tested.*

Paint. *Tested.*

Chair. *Tested.*

Mask. *Tested.*

**Trusted
means
*Tested.***

WHEN YOU NEED TO BE SURE

SGS