



WEARABLE TECHNOLOGY THE CHALLENGES AND OPPORTUNITIES

Wearables technology is a relatively new sector and covers an array of products, like multifunctional watches, pedometers, heart rate monitors, and GPS tracking devices. It is a sector on rise, with the popularity of wearable technology increasing among business and personal users. Some estimate that the sector could be worth USD \$42 billion within five years, and that it promises to revolutionise marketing, retail, fitness and medicine.

SUPPORTING MANUFACTURERS DEMONSTRATE COMPLIANCE, PERFORMANCE AND SAFETY

As part of the product development process, it is critical for manufacturers to understand the mandatory requirements that their products should incorporate, such as product safety, material components, protocol and performance testing considerations. The regulatory hurdles must also be assessed and understood.

In a sector that brings together technology, clothing and portability, it is not surprising that the regulatory landscape is growing rapidly and often changing. Requirements vary from country to country further adding to the imperative for companies to identify and implement proper solutions.

Wearable Technology Products and Accessories that we support include:

- Sports / Fitness Devices
- Headphones / Speakers
- Gaming
- Power Banks / Chargers
- Batteries
- Medical Applications
- Apparel
- Fashion Accessories (e.g., wallets, watches)

TRUSTED SOLUTIONS FOR THE WEARABLE TECHNOLOGY INDUSTRY



HOW SGS SUPPORTS YOU COMPLY

- Global network of testing laboratories with robust capabilities for all types of wearable electronic products – Bluetooth®, Wi-Fi, Battery Operated, NFC, RFID, etc.
- Assistance with International Market Access from our International Type Approval team that supports get your products certified for your target markets
- SGS experts support you build a smart testing plan using your budget efficiently by avoiding unnecessary testing while still complying with all relevant regulatory and performance requirements
- Our global network of 28 chemistry laboratories has the experience and expertise to test your electrical and electronic products against all environmental and safety chemical requirements

SAFETY,EMC,RF

- Electrical Safety (IEC, UL...etc)
- Low Voltage Directive (LVD)
- General Product Safety Directive
- Electromagnetic fields (EMF)
- Electromagnetic compatibility (EMC)
- Federal Communications Commission (FCC)
- Radio & Telecommunications Terminal Equipment (R&TTE)
- Battery Safety
 - International Transport regulation (UN38.3)
 - Secondary cells safety (rechargeable batteries)
- Specific Absorption Rate (SAR)

ALLIANCE LOGO

- Bluetooth
- Wi-Fi
- Near Field Communication (NFC)
- Wireless Power Consortium (WPC)
- Universal Serial Bus (USB) IF
- GCF
- PTCRB (incl OTA (over-the-air) CTIA test plan)



SGS SERVICES FOR YOUR GLOBAL MARKET ACCESS



PERFORMANCE AND RELIABILITY TESTS

- Fitness for use Testing
- Batteries charging and discharging - batteries
- E-Textile / Fabric performance tests
 - Fiber composition
 - Tensile strength, Bursting strength Tearing strength
 - Color fastness to washing, perspiration, rubbing, water, light.
 - Dimensional stability to laundering
 - Abrasion resistance, Pilling resistance, Flammability test
- Highly Accelerated Life Test (HALT) / Mean Time Between Failure (MTBF)
- Environmental Simulation Test
 - Climate simulation test
 - UV exposure
 - Sweat test
 - Salt Spray
 - Water/Dust Resistance (IP test)
- Software & System performance
 - OS compatibility
 - Remote distance evaluation
 - Software installation and usage

CHEMICAL TESTS

- Restriction of the use of certain Hazardous Substances (RoHS)
- Waste Electrical and Electronic Equipment (WEEE)
- Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)
 - Annex XVII restrictions
 - Substances of very high concern (SVHC)
- EU Packaging directive (94/62/EC) and US Toxics in Packaging Clearing House (TPCH)
- Persistent Organic Pollutants (POPs)
- EU Battery directive 2006/66/EC or US Public Law 104-142 or Canada SOR 2014-254)
- California Proposition 65

BIOCOMPATIBILITY (ALLERGENIC EFFECT)

- Nickel Release (Metal)
- Azo dye (Textile, Leather)
- Allergenous disperse dyes (Textile, Leather)
- Carcinogenic dyes (Textile, Leather)
- Dimethylfumarate (DMFu) (leather)
- Polycyclic Aromatic Hydrocarbons (PAHs) (Plastic, Rubber)
- Skin irritation test (whole product)

SUPPLY CHAIN SOLUTION, PRODUCT DESIGN & FAILURE ASSESSMENT

- Supplier Qualification Assessment
- Technical Factory Audit (TFA)
- Material Control Program
- New Product Quality Assurance (NPQA)
- Quality Improvement Project (QIP)
- Product Design Assessment
- Product Failure Analysis



BENEFITS OF WORKING WITH A GLOBAL PARTNER WITH A LOCAL REACH

Access to SGS's worldwide team, with expertise in all areas of compliance, will save time and money. Our services allow manufacturers to focus on what they do best and leave the rest to us. With unrivalled knowledge and understanding of the sector, we support manufacturers minimise risk, by understanding and eliminating hazardous substances, such as chemicals in skin contact, or hazards in lithium batteries. This allows you to rest assured everything possible has been done to ensure user safety and avoid potential recalls.

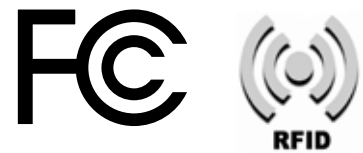
Independent and innovative, our Electrical & Electronics experts use state-of-the-art facilities and technology to deliver tailor made added value services that support improve your business.

We strive to deliver outstanding value at every step in your project by providing:

- Rapid turnaround
- Value-based pricing
- Technical assistance
- Key account management

Our expertise in compliance management will support you make the right choices for different national markets, while carrying out the necessary testing and certification quickly and professionally.

OUR CERTIFICATIONS



CONTACT US

To learn more about SGS certification services contact your local SGS representative, or contact our global team at ee.global@sgs.com.

SGS IS THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

WHEN YOU NEED TO BE SURE

SGS