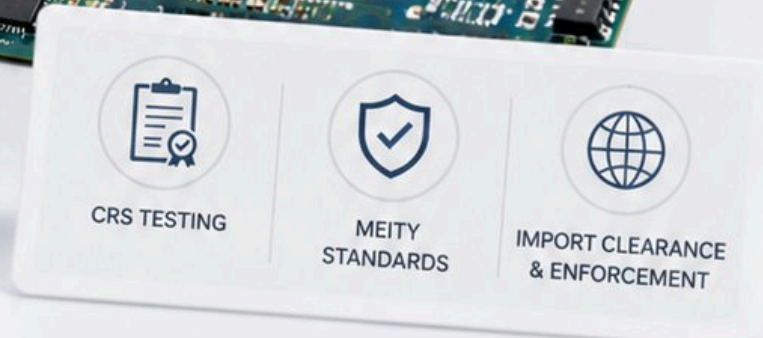


# B2

## BIS Certification, Quality Standards & Product Safety

Compulsory Registration Scheme,  
CRS Testing, MEITY Standards,  
Import Clearance & Enforcement



# BIS Certification, Quality Standards & Product Safety

Compulsory Registration Scheme, CRS Testing, MEITY Standards, Import Clearance & Enforcement

*Booklet II of VI — Indian Electronics Sector Legal Series*

Bhatt & Joshi Associates, Advocates & Legal Consultants

**Disclaimer:** Educational publication only. Not legal advice. Bar Council of India Rules complied with.

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## CHAPTER ONE

# BIS Act 2016 and the Certification Architecture

*Bureau of Indian Standards, Certification Schemes, IS Standards Development and WTO-TBT Compliance*

*The Bureau of Indian Standards Act, 2016 provides the comprehensive statutory framework for product quality certification in India, replacing the earlier BIS Act of 1986 with significantly enhanced powers and penalties. For electronics manufacturers and importers, BIS certification — particularly the Compulsory Registration Scheme — is the most critical regulatory compliance obligation before any product can be legally sold in India.*

## 1.1 BIS Act 2016: Statutory Framework and Powers

The Bureau of Indian Standards Act, 2016 (BIS Act) constitutes the Bureau of Indian Standards as a statutory body under the Ministry of Consumer Affairs with comprehensive powers over standards development, product certification, and quality enforcement. The Act vests the Bureau with: the power to formulate and publish Indian Standards (IS) in any subject area; the power to grant, suspend, and cancel licences for the use of the ISI mark (the primary certification mark for voluntary certification under the ISI scheme); the power to require compulsory registration of specified categories of goods (through the CRS mechanism); the power to search, seize, and confiscate non-compliant goods; the power to impose penalties for selling uncertified goods in

violation of mandatory certification requirements; and the power to initiate prosecution for serious violations. The BIS Act 2016 significantly increased the penalty levels for non-compliance compared to the predecessor legislation: selling goods in violation of a mandatory certification requirement can result in a fine of up to Rs. 2 lakh for a first offence and up to Rs. 5 lakh for subsequent offences, in addition to confiscation of the non-compliant goods. The enhanced penalties reflect the government's seriousness about product safety enforcement for consumer electronics, where substandard goods — particularly chargers, power banks, and batteries — have been responsible for numerous fire and safety incidents in Indian homes.

The BIS Act 2016's three principal certification schemes are legally distinct and serve different policy objectives. The ISI Mark Scheme (voluntary, available for most product categories but mandatory for goods covered by a Quality Control Order) allows manufacturers who have obtained BIS licence to affix the ISI mark on their products, signifying conformity with the applicable Indian Standard. The Hallmarking Scheme (mandatory for gold and silver jewellery) ensures the accuracy of precious metal content claims. The Compulsory Registration Scheme (CRS), which is the scheme most relevant to the electronics sector, requires manufacturers or importers of specified electronic products to register those products with BIS before selling them in India, with registration conditional on the product meeting the applicable Indian Standard as verified through testing at a BIS-recognised laboratory. The CRS is described in detail in Chapter Two.

## **1.2 Indian Standards Development for Electronics**

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Indian Standards for electronic products are developed by the BIS's Electrotechnical Division Council, which manages sectoral advisory committees covering: electrical safety of information technology equipment (committee ETDC 20, developing IS 13252 aligned with IEC 62368-1); electromagnetic compatibility (committee ETDC 28, developing IS standards aligned with CISPR publications); wireless communication equipment (committee ETDC 55, developing standards aligned with ITU and ETSI standards); and battery safety (committee CHD 16, developing IS standards aligned with IEC 62133 and UN 38.3). India's IS standards for electronics are predominantly harmonised with international standards published by the International Electrotechnical Commission (IEC), the European Telecommunications Standards Institute (ETSI), and the IEEE, rather than uniquely domestic standards — this harmonisation is both technically appropriate (leveraging the extensive work of international standards bodies) and commercially important (it allows manufacturers who have tested their products to IEC/CISPR standards in their country of manufacture to demonstrate equivalence to Indian standards more easily). The WTO Agreement on Technical Barriers to Trade (TBT) requires India to base its product standards on relevant international standards unless a legitimate reason exists for deviation — the BIS's practice of adopting international standards as the basis for IS standards is consistent with this TBT obligation.

### **1.3 Foreign Manufacturer Registration and the AiR Requirement**

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A critical and commercially significant provision of the BIS CRS framework is the requirement that foreign manufacturers (overseas entities who manufacture electronic products outside India for sale in the Indian market) must appoint an Authorised Indian Representative (AiR) — a legal entity incorporated in India — who takes on legal responsibility for the compliance of the registered products in India. The AiR is not merely an administrative intermediary: under the BIS CRS regulations, the AiR is jointly and severally liable with the foreign manufacturer for any non-compliance of the registered products with the applicable IS standard, for any failure to take corrective action when a compliance issue is identified, and for any misrepresentation in the CRS registration application. This liability framework means that the selection and appointment of an AiR is a legally consequential decision for both the foreign manufacturer and the Indian entity that agrees to serve as AiR. Indian subsidiaries of multinational electronics companies typically serve as the AiR for their parent company's products — accepting the legal liability that comes with this role in exchange for the commercial benefit of being the authorised distributor for the parent's products. Third-party AiR service providers (law firms, regulatory consultants, or dedicated AiR service companies) are used by smaller foreign manufacturers who do not have an Indian subsidiary, but these providers must clearly understand and contractually address the liability they are accepting as AiR.

# Compulsory Registration Scheme: Products and Process

*CRS Registration Procedure, Covered Products, Testing Requirements, and Compliance Management*

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## 2.1 CRS: Legal Basis and Product Scope

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The Compulsory Registration Scheme (CRS) for electronic products was originally introduced under the Electronics and IT Goods (Requirements for Compulsory Registration) Order, 2012, notified by MEITY under the IT Act 2000's powers relating to mandatory standards for electronic goods. The Order was subsequently subsumed within the BIS Act 2016 framework, with CRS registration now administered by BIS through the "Registration Scheme" under the Act. The product scope of the CRS has been progressively expanded since 2012 through successive amendments to include: mobile phones and tablets; laptops and notebook computers; LED televisions and monitors; LED lights and fixtures; power supplies and adapters (chargers); microwave ovens; refrigerators and air conditioners; washing machines; set-top boxes; printers and scanners; digital cameras; audio and video players; wireless keyboards and mice; power banks; and a growing range of IoT and smart home devices. As of the latest published schedule, the CRS covers over 80 distinct product categories, making it one of the broadest mandatory product certification programmes among major electronics markets. The guiding principle for inclusion of a new product category in the CRS is that the product poses safety risks to consumers — primarily electrical safety, electromagnetic interference, and battery safety risks — that justify mandatory pre-market certification rather than relying solely on manufacturer self-declaration or post-market enforcement.

## 2.2 CRS Registration Process: From Application to Certificate

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The CRS registration process begins with the manufacturer (or its AiR for foreign manufacturers) submitting a registration application through the BIS online portal, accompanied by: technical documentation specifying the product's model designation, technical specifications, and compliance claims; a test report from a BIS-recognised testing laboratory demonstrating the product's conformity with the applicable Indian Standard; a declaration of conformity from the manufacturer; the AiR appointment letter (for foreign manufacturers); and the prescribed registration fee. The BIS technical officer reviews the application for completeness and consistency, assessing whether the test report covers all mandatory test parameters for the product category, whether the test report laboratory is currently BIS-recognised, and whether the product specifications in the application match those in the test report. Upon satisfactory review, BIS issues a Registration Certificate valid for two years (renewable upon fresh testing or technical equivalence assessment), and the manufacturer is entitled to print the BIS "R" number

(the CRS registration number in the format "R-XXXXXXX") on the product packaging and marketing materials. The registration certificate is product-model specific — a manufacturer with a broad product portfolio (for instance, a mobile phone OEM with 15 distinct models) must obtain separate CRS registrations for each model, and any material change to a registered product (such as a change in the power adapter specification, the battery specification, or the PCB design that affects safety-relevant circuit elements) requires either a fresh registration application or a change notification to BIS supported by updated test data.

### **2.3 Testing Laboratories: BIS Recognition and Accreditation**

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BIS recognises testing laboratories for specific product categories under the CRS based on: NABL accreditation to ISO/IEC 17025 for the relevant test methods; demonstrated technical competence and equipment capability for the specific IS standard's test parameters; and physical inspection by BIS officials. Both domestic Indian laboratories (such as STQC — the Standardisation Testing and Quality Certification Directorate under MEITY, and several private NABL-accredited labs) and foreign laboratories (recognised by BIS on the basis of reciprocal recognition agreements with equivalent accreditation bodies in other countries) are eligible to issue test reports for CRS applications. The BIS recognition of foreign labs is a commercially important facility for international electronics manufacturers: a product tested to IEC 62368-1 (the safety standard for audio/video, IT, and communications equipment) at a certified European or American laboratory can use that test report for the CRS application, provided the laboratory is BIS-recognised for that standard category, avoiding the need to retest the product in India and significantly reducing the time and cost of CRS compliance. The list of BIS-recognised foreign laboratories is published on the BIS website and is periodically updated, and practitioners advising foreign manufacturers on CRS compliance should verify the current recognition status of the manufacturer's preferred testing laboratory before relying on an existing foreign test report for the CRS application.

## Quality Control Orders and MEITY Standards

*Mandatory QCOs, EMC Requirements, Energy Efficiency Standards and Import Equivalence*

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### 3.1 Quality Control Orders for Electronics

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Quality Control Orders (QCOs) issued by the central government under the BIS Act 2016 and the Essential Commodities Act make specific product categories subject to mandatory BIS ISI certification (for domestically manufactured products) or mandatory CRS registration (for imported products), without which the goods cannot be legally sold in India. QCOs for electronics have been issued covering: LED lights and luminaires (requiring IS 16102 compliance); power transformers; electric motors used in consumer appliances; air conditioners (requiring BEE energy efficiency compliance in addition to BIS safety certification); and several industrial electronics categories. The legal effect of a QCO is to convert what would otherwise be a voluntary certification (manufacturer's choice to obtain ISI mark) into a mandatory pre-market requirement — any product in the covered category manufactured or imported after the QCO's effective date without the prescribed certification is an illegal product under the Essential Commodities Act, subject to seizure and the manufacturer/importer subject to prosecution. For electronics manufacturers whose products fall within a QCO category, the compliance obligation is absolute — there is no grace period for existing inventory after the QCO takes effect, and the consequences of non-compliance (seizure, penalty, prosecution) are severe enough to justify urgent compliance action rather than a "wait and see" approach. Practitioners advising electronics companies must track QCO notifications in the Official Gazette and MEITY communications, as new QCOs affecting electronics product categories are issued with limited advance notice and relatively short implementation timelines.

### 3.2 Electromagnetic Compatibility Requirements

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Electromagnetic Compatibility (EMC) requirements for electronic products — which limit the electromagnetic emissions from products (to prevent interference with other electronic devices and with radio communications) and require products to be immune to reasonable levels of electromagnetic disturbance (so that they function correctly in typical environments) — are specified in a series of IS standards based on the CISPR (Comité International Spécial des Perturbations Radioélectriques) international publications. The primary EMC standard for information technology equipment is IS 13252 Part 2 (based on CISPR 32), which specifies radiated and conducted emission limits for electronic products including computers, printers, monitors, and associated peripherals. Compliance with IS 13252 Part 2 is a mandatory CRS requirement for IT equipment, and test reports demonstrating EMC compliance must be submitted as part of the CRS application. The EMC compliance challenge for electronics

manufacturers is that EMC performance is sensitive to product configuration: an EMC-compliant laptop tested in one configuration (with a specific power adapter, specific software state, and specific peripheral attachments) may not comply in all configurations encountered by consumers. Manufacturers must therefore be careful to test representative worst-case configurations and to specify in the product documentation any operational or connectivity conditions that might affect EMC performance, to ensure that the CRS registration covers the product's typical real-world use cases.

### **3.3 Energy Efficiency Standards: BEE Labelling for Electronics**

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The Bureau of Energy Efficiency (BEE), under the Energy Conservation Act 2001, administers the Star Labelling Programme for energy-using equipment, under which specified categories of electronics must display the BEE star rating label indicating their energy efficiency level. Electronics categories covered by mandatory BEE star labelling include: room air conditioners (1-5 star rating for EER — Energy Efficiency Ratio); LED televisions (star rating for standby and on-mode power consumption); computers (star rating for idle mode power consumption); and distribution transformers. The BEE star labelling requirement is separate from the BIS CRS requirement, and both must be met for covered products: a television must have both a valid BIS-CRS registration number (demonstrating safety compliance) and a valid BEE star label (demonstrating energy efficiency compliance) before it can be legally sold in India. For manufacturers who obtain BEE star ratings for their products, the energy efficiency compliance adds an additional testing and certification obligation (BEE uses its own network of approved testing labs, which may differ from BIS-recognised labs for CRS purposes) and an annual compliance cycle (star ratings must be renewed if the product's energy performance changes or if BEE revises the minimum efficiency requirements for the category).

# Import Clearance, Enforcement and Penalties

*Customs Interface with CRS, BIS Enforcement Powers, Market Surveillance and Recent Enforcement Actions*

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## 4.1 Customs Interface with BIS-CRS

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The customs clearance process for imported electronics goods in India is tightly integrated with the BIS CRS compliance requirement: customs authorities at every port of entry are empowered and required to verify that imported electronic goods in CRS-covered categories have a valid BIS registration before releasing the consignment. The Bill of Entry for imported electronics must include the BIS-CRS registration number in the relevant declaration field, and the customs system is designed to cross-reference the declared CRS number with the BIS registration database to verify validity. Where a CRS number is absent, expired, or does not match the imported product's specifications, the customs authority must detain the consignment and issue a notice to the importer — the consignment cannot be released into the domestic market until either the compliance is demonstrated (by production of a valid CRS certificate) or the goods are re-exported. The consequences of attempting to import CRS-covered electronics without valid registration are serious: in addition to the delay and cost of detention, the importer faces potential confiscation of the goods (under the Customs Act, 1962, goods imported in violation of a mandatory technical regulation are liable to confiscation as "prohibited goods") and prosecution under the BIS Act 2016. For e-commerce platforms and small importers who source electronics from overseas marketplaces without verifying CRS compliance, the risk of customs detention is a significant operational and financial exposure that is often underestimated until a consignment is actually detained at the port.

## 4.2 BIS Market Surveillance and Enforcement

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BIS exercises market surveillance powers under the BIS Act 2016 to identify and address non-compliant electronics in the domestic market — products that have been sold without CRS registration, products whose actual performance does not conform to the registered specification, or products whose CRS registration has been obtained through misrepresentation. BIS's enforcement approach includes: random purchase of products from the open market followed by laboratory testing to verify compliance with the applicable IS standard; inspection of importers' documentation at ports and warehouses; complaints-based investigation where consumer or competitor complaints trigger a targeted compliance check of a specific product or brand; and coordinated enforcement operations with customs authorities at major ports. Products found to be non-compliant in BIS market surveillance are subject to: a show-cause notice to the manufacturer/importer/AiR specifying the alleged non-compliance; an opportunity for the manufacturer to respond with counter-evidence or explanation; and if non-compliance is

confirmed, orders for: (a) cessation of sales of the non-compliant product; (b) recall and withdrawal from the market; (c) corrective action to bring the product into compliance; and (d) penalty imposition under the BIS Act. The maximum penalty under BIS Act 2016 for a first contravention is Rs. 2 lakh, escalating to Rs. 5 lakh for each subsequent contravention — amounts that are relatively modest for large companies but represent a meaningful deterrent for small and medium importers.

### **4.3 High-Profile Enforcement: Chinese Electronics Brands**

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BIS enforcement actions against major Chinese electronics brands — including OPPO, Vivo, Xiaomi, and several smaller brands — have been among the highest-profile regulatory enforcement events in India's electronics sector in recent years. Several of these actions were related not only to CRS compliance but also to: under-valuation of imports for customs duty purposes (a separate enforcement action by the Directorate of Revenue Intelligence); alleged violations of licensing conditions; and in some cases, allegations about the completeness and accuracy of information provided in MEITY and BIS registration applications. The scale of the enforcement actions — involving searches of corporate offices, seizure of financial records, and demands for substantial duty and penalty payments — has had a chilling effect on Chinese electronics brands operating in India and has prompted a general reassessment of compliance standards across the industry. For legal practitioners advising electronics companies (whether Chinese-headquartered or others) on their India operations, these high-profile enforcement cases underscore the importance of: maintaining accurate and complete BIS-CRS documentation; ensuring that customs valuations accurately reflect the arm's length transaction value; and conducting periodic internal compliance audits of the company's regulatory filings across MEITY, BIS, customs, and tax authorities.

# Product Safety, E-Waste EPR and Consumer Protection

*CPA 2019 Product Liability, E-Waste Rules 2022, CCPA Powers and International Safety Standards*

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## 5.1 Product Liability for Defective Electronics: CPA 2019

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The Consumer Protection Act, 2019's product liability framework (Sections 82–89) applies with full force to electronic products, creating no-fault liability for manufacturers, importers, and sellers of defective electronics. The three categories of product liability action — manufacturing defect (product deviates from specification), design defect (product design is inherently dangerous), and warning/instruction defect (inadequate safety information) — are all highly relevant to the electronics sector: smartphones whose batteries catch fire (manufacturing defect if the specific unit's battery was incorrectly assembled; design defect if the thermal management design is inherently inadequate for the advertised use cases); laptops whose power adapters fail causing electrical burns (manufacturing defect or design defect depending on whether the failure is a production variation or a systematic design failure); and power banks sold without adequate warnings about charging requirements that, if violated, cause fires (warning defect). The CCPA's additional enforcement powers — including the right to investigate product safety issues suo motu, to issue safety notices, and to recommend recalls to the relevant ministry — provide a regulatory enforcement overlay that supplements the consumer forum adjudicatory route and enables faster action against systemic product safety issues affecting large numbers of consumers.

## 5.2 E-Waste Rules 2022 and Extended Producer Responsibility

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The E-Waste (Management) Rules, 2022, notified by the Ministry of Environment, Forest and Climate Change under the Environment Protection Act, 1986, establish a comprehensive Extended Producer Responsibility (EPR) framework for producers of electronics equipment. Under the 2022 Rules, every "producer" — defined to include the brand owner (whose name appears on the product), the importer (for imported products), and the manufacturer (for domestically manufactured products) — must: register with the Central Pollution Control Board (CPCB) as an EPR-registered producer; achieve annual e-waste collection targets (expressed as a percentage of the units sold in a previous reference year, increasing progressively to 100% by 2026); purchase EPR certificates from CPCB-registered waste recyclers to demonstrate collection target compliance where the producer's own collection programme falls short; and file annual EPR compliance reports with the CPCB. The practical compliance challenge for electronics producers is building a nationwide collection infrastructure for their end-of-life products — a logistics and reverse logistics challenge that requires: establishing consumer take-

back points (at authorised service centres, dealer locations, or dedicated collection camps); contracting with CPCB-registered e-waste recyclers for the processing of collected waste; and tracking the chain of custody from consumer surrender to final recycling to support the EPR compliance documentation submitted to CPCB.

### 5.3 Battery Safety and Lithium-Ion Regulation

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The lithium-ion battery safety regulatory framework — spanning the BIS CRS requirement (IS 16046 for lithium-ion cells), the E-Waste Rules' EPR obligations for battery producers, the PESO (Petroleum and Explosives Safety Organisation) regulations for the storage and transport of lithium-ion batteries above specified quantities, and the international carriage requirements for lithium batteries in air freight (IATA DGR special provisions A45/A123) — creates one of the most complex multi-agency compliance matrices for any single electronics product category. For smartphone, laptop, and power bank manufacturers, the lithium-ion battery in their products is simultaneously: a BIS-CRS-covered product component (requiring IS 16046 certification); a hazardous article requiring IATA DGR compliance when air-freighted; an e-waste product component requiring EPR tracking at end of life; and a product with PESO implications when stored in large quantities at distribution centres. Managing this multi-agency compliance matrix requires systematic coordination between the OEM's product compliance, logistics, and sustainability teams — a coordination challenge that legal practitioners in the electronics sector are increasingly called upon to facilitate through regulatory compliance programme design.

**Booklet II Key Takeaways:** BIS certification — particularly the Compulsory Registration Scheme — is the most operationally critical regulatory compliance obligation for electronics product manufacturers and importers in India. The BIS Act 2016's enforcement powers (search, seizure, confiscation, prosecution), the CRS's product scope (80+ categories), and the customs interface with CRS compliance create a regime that is actively enforced and commercially consequential. E-waste EPR under the 2022 Rules adds significant product lifecycle management obligations. The CPA 2019's no-fault product liability creates financial exposure for defective electronics that demands systematic quality management. International brands must invest in dedicated India compliance infrastructure — including AiR appointment, lab-specific test management, and market surveillance monitoring — to maintain continuous CRS compliance across their product portfolios.

# BIS and Product Safety: Advanced Compliance Topics

*CRS for Imported Brands, SAR Compliance, RoHS Implementation, Counterfeit Detection and International Standards Cooperation*

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## B.1 CRS Compliance Management for International Brands

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International electronics brands with large India product portfolios — OEMs offering 20-50 distinct models across smartphones, tablets, laptops, accessories, and smart home devices — must develop systematic CRS compliance management programmes that address the full lifecycle of CRS registration for each product. The key elements of an effective CRS compliance programme for an international brand include: a product launch gate review that makes CRS registration a mandatory precondition for commercial launch (preventing the commercial team from launching products before CRS compliance is confirmed); a model management database that tracks the CRS registration status, registration number, expiry date, and the laboratory test report reference for each registered model; a change management process that identifies when product changes require fresh CRS registration versus a change notification to BIS; an AiR management framework that clearly defines the AiR's responsibilities, the information they need from the manufacturer, and the indemnification arrangements for the AiR's liability exposure; and a market surveillance monitoring system that tracks BIS enforcement actions, competitor product recalls, and changes in BIS registration requirements for the brand's product categories. The consequence of CRS non-compliance — even for brief gaps between product launch and registration completion — is severe: customs detention of shipments, product recall obligations, regulatory penalties, and the reputational damage from a high-profile enforcement action are all commercially catastrophic outcomes that a robust compliance programme prevents. The commercial cost of a comprehensive CRS compliance programme — dedicated regulatory affairs staff, testing laboratory relationships, AiR management — is modest relative to the financial exposure of non-compliance for a major electronics brand.

The CRS renewal process — which requires fresh registration every two years — creates a calendar-driven compliance cycle that must be actively managed to prevent registration expiry during periods of commercial peak demand. Many electronics brands have experienced the commercially embarrassing situation of having registrations expire (due to administrative oversight or staff turnover in the regulatory affairs function) during high-demand periods such as the festive season launch of new smartphone models, resulting in customs detention of shipments and inability to fulfil confirmed orders. Preventing registration lapses requires: reminder workflows in the CRS management system that trigger renewal actions at least 6 months before expiry; budgeting for testing costs (which can be Rs. 50,000 to Rs. 5 lakh per

product per test cycle depending on the product category and test scope) in the annual compliance budget; maintaining relationships with BIS-recognised testing laboratories that can prioritise renewal testing for time-sensitive product categories; and contingency plans for expedited processing of renewal applications where a registration is approaching expiry.

## **B.2 SAR (Specific Absorption Rate) Compliance for Mobile Devices**

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The Specific Absorption Rate (SAR) — a measure of the rate at which radiofrequency (RF) energy is absorbed by the human body from a wireless device — is a critical safety parameter for mobile phones, tablets, and wearable devices that must be measured and documented as part of the product's compliance with India's mobile handset safety guidelines. DoT's guidelines specify a maximum SAR limit of 1.6 W/kg averaged over any 1 gram of human tissue (the same limit as the US FCC standard), with this measurement to be taken at the most restrictive antenna position specified in the test protocol (typically with the device pressed against a head or body tissue phantom). The SAR measurement process — conducted using calibrated dipole antennas and computerised scanning systems in a controlled RF shielded chamber — is a specialised test that requires accredited laboratory facilities meeting the IEEE 1528 standard for SAR measurement methodology. For international electronics brands whose devices have been SAR-tested to the FCC standard in the United States (using the same 1.6 W/kg head limit), the existing US SAR test reports can generally be leveraged for India compliance demonstration, avoiding the cost of repeat testing in India. For devices tested to the European ICNIRP standard (1.6 W/kg averaged over 10 grams of tissue — a different averaging method that generally produces lower readings than the 1-gram averaging), the conversion of European SAR measurements to the Indian 1-gram standard requires either re-testing to the 1-gram protocol or mathematical adjustment, which BIS and WPC compliance officers accept in certain circumstances with appropriate technical justification.

## **B.3 RoHS and Hazardous Substance Restrictions**

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India's electronic waste management framework includes restrictions on the use of hazardous substances in electronic equipment, aligned with (but not identical to) the European Union's RoHS (Restriction of Hazardous Substances) Directive. The E-Waste (Management) Rules, 2022, in Schedule II, specify restrictions on the use of the following hazardous substances in electrical and electronic equipment placed on the Indian market: lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium (Cr VI), polybrominated biphenyls (PBBs), and polybrominated diphenyl ethers (PBDEs), with maximum concentration thresholds aligned with the EU RoHS 2 limits (0.1% by weight for lead, mercury, hexavalent chromium, PBBs, and PBDEs; and 0.01% by weight for cadmium). Compliance with these hazardous substance restrictions is a legal obligation for all manufacturers and importers of electronic and electrical equipment placed on the Indian market — non-compliance constitutes a violation of the E-Waste Rules that is enforceable by the CPCB and state pollution control boards. For international electronics brands

whose products are designed for global markets in compliance with EU RoHS 2, the Indian hazardous substance restrictions are generally satisfied by the existing EU compliance, since the EU RoHS 2 standard is at least as stringent as India's requirements in all regulated substance categories. However, compliance documentation — material declarations, supplier declarations of conformity, and test reports for restricted substances — must be maintained and available for production to the CPCB or customs authorities on request, making a robust RoHS documentation system a practical compliance requirement even for brands whose products are inherently RoHS-compliant by design.

#### **B.4 Counterfeit Detection and Anti-Counterfeiting Measures**

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Counterfeit electronics — products bearing unauthorised reproductions of registered brand trademarks and fake model designations, without the quality control, safety testing, and certification compliance of the genuine product — represent a serious safety hazard to consumers and a significant commercial harm to legitimate electronics brands. Common counterfeit electronics in the Indian market include: chargers and power adapters (which are frequently counterfeited and have been responsible for numerous electrical fires and consumer injuries due to their absence of genuine safety features); smartphone accessories (chargers, earphones, cases) falsely claiming to be original brand products; and in some cases, complete smartphone units or components falsely represented as brand-new when they are refurbished, repaired, or replicated. The legal framework for addressing counterfeit electronics encompasses: trademark law enforcement (Section 102-104 of the Trade Marks Act, 1999, criminalising the application of counterfeit trademarks); the BIS Act 2016's prohibitions on misrepresentation of certification status (falsely claiming BIS CRS registration is a criminal offence); customs enforcement through IPR Enforcement Rules, 2007; and police investigation under the IPC's provisions on cheating (Section 420) and property marking offences. For brand owners facing significant counterfeiting problems in India, the most effective enforcement strategy combines: proactive customs recordal of trademarks (enabling customs interception of counterfeit consignments at port); regular market intelligence and test purchases to identify counterfeit distribution channels; coordinated enforcement actions with local police through trained IP enforcement units; and consumer awareness programmes (hologram stickers, QR codes, dedicated helplines for authentication verification) that help consumers distinguish genuine from counterfeit products at the point of purchase.

#### **B.5 India-International Standards Cooperation**

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India's participation in international standards organisations — the IEC (International Electrotechnical Commission), ISO (International Organization for Standardization), and ITU (International Telecommunication Union) — through BIS, TRAI, and DoT provides the mechanism through which Indian national standards are aligned with international standards and through which India influences the development of international standards that will

eventually be adopted in India. BIS is India's member body to the IEC and ISO, participating in IEC technical committees (TCs) relevant to electronics: IEC TC 47 (Semiconductors), IEC TC 48 (Electromechanical Components), IEC TC 108 (Safety of Electronic Equipment), IEC TC 100 (Audio, Video and Multimedia Systems), and IEC CISPR (Electromagnetic compatibility). India's active participation in IEC standardisation — through Indian experts on IEC technical committees — serves both a technical quality objective (ensuring that international standards reflect Indian conditions and use cases) and a commercial objective (companies whose engineers participate in standards development often gain early knowledge of upcoming standard changes that provides a competitive advantage in product development planning). For electronics companies, understanding which IEC committees are relevant to their product categories, supporting their India technical experts in IEC participation, and monitoring draft IEC standard developments through the BIS public comment process are practical steps for proactive engagement with the standards development process that will determine their compliance obligations.

**Booklet II — Complete Summary:** BIS certification — encompassing the Compulsory Registration Scheme, Quality Control Orders, energy efficiency labelling, and electromagnetic compatibility standards — is the central pillar of product safety regulation for electronics in India. International brands must invest in systematic CRS compliance management, SAR documentation, RoHS compliance records, and counterfeit protection to maintain continuous regulatory compliance. BIS Act 2016's enhanced enforcement powers, CCPA's product safety investigative authority, and the E-Waste Rules' EPR obligations together create a demanding post-sale compliance environment that extends far beyond the initial CRS registration.