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Regulating Environmental Compliance Through Product-Specific Standards: A Critical Examination of the Proposed Ecomark Criteria for Paints, Batteries, Paper, and Allied Products

The regulation of environmental standards through product-specific eco-labelling mechanisms has emerged as a cornerstone of contemporary environmental governance, and India's legislative response to this global imperative finds its most recent expression in the draft amendments proposed to the Ecomark Rules, 2024. The Ministry of Environment, Forest and Climate Change, exercising its powers under Section 3, […]

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The regulation of environmental standards through product-specific eco-labelling mechanisms has emerged as a cornerstone of contemporary environmental governance, and India's legislative response to this global imperative finds its most recent expression in the draft amendments proposed to the Ecomark Rules, 2024. The Ministry of Environment, Forest and Climate Change, exercising its powers under Section 3, Section 6 and Section 25 of the Environment (Protection) Act, 1986, read with Sub-section (1)(b) of Section 9 of the Ecomark Rules, 2024, has issued a draft notification bearing G.S.R. 452(E) dated 8th June 2026, proposing substantial amendments to Serial Numbers 1, 3, 6, 11, 15 and 17 of the First Schedule to the said Rules. This notification, published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i), represents a significant regulatory intervention aimed at strengthening the environmental credentials of products manufactured and marketed within the territory of India, and it is imperative that its legal, technical, and policy dimensions be examined with due care and precision.

The legislative antecedents of the present notification trace their origin to the Ecomark Rules, 2024, which were originally notified on 26th September 2024 vide G.S.R. 596(E), thereby superseding the erstwhile Ecomark Scheme of 1991. The 2024 Rules constitute a comprehensive overhaul of India's eco-labelling framework, aligning the same with the Lifestyle for Environment (LiFE) Mission announced by the Hon'ble Prime Minister in 2021, and entrusting the Central Pollution Control Board with the responsibility of implementing the scheme in partnership with the Bureau of Indian Standards. Section 3(1) of the Ecomark Rules, 2024, establishes the foundational eligibility criteria for grant of the Ecomark, requiring that the product must possess a licence or certificate of conformity of Indian Standards granted under the Bureau of Indian Standards Act, 2016, and/or a mandate of the Quality Control Orders issued by the Central Government, and must further fulfil the criteria specified under the corresponding entries in column (3) of the First Schedule. Sub-section (1)(b) of Section 9 of the Rules imposes upon the Central Pollution Control Board the duty to review and develop the criteria for grant of Ecomark, taking into account available knowledge, technological and market developments, and criteria being followed in other countries, and to make appropriate recommendations to the Steering Committee. It is in discharge of this statutory mandate that the present draft notification has been issued.

The notification G.S.R. 452(E) is structured as a draft proposal subject to pre-legislative consultation, and it is significant to note the procedural safeguards embedded therein. The Central Government has invited objections and suggestions from the public and stakeholders likely to be affected by the proposed amendments, providing a window of sixty days from the date of publication of the draft in the official Gazette for the submission of such representations. The objections or suggestions, if any, may be addressed to the Joint Secretary, Ministry of Environment, Forest and Climate Change. This consultative process ensures compliance with the principles of participatory governance and regulatory transparency, and it is only after the expiry of the stipulated sixty-day period and due consideration of all representations received that the Central Government shall proceed to finalize the amendments.

The proposed amendments seek to substitute the existing entries for six distinct product categories in the First Schedule, and each category is accompanied by a detailed matrix of general and specific criteria that manufacturers must satisfy to qualify for the Ecomark. The first category, Serial Number 1, pertains to Paints, Varnishes and Powder Coatings. The general criteria mandate compliance with relevant Bureau of Indian Standards pertaining to quality and performance, production of consent clearances under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, along with authorization under the Environment (Protection) Act, 1986, and the affixation of a QR Code on product packaging specifying the criteria based on which the product has been labelled as Ecomark. The specific criteria introduce stringent limits on volatile organic compounds, with powder coatings required to be entirely free from VOCs, water-based paints restricted to 10 grams per litre, and solvent-based paints capped at 200 grams per litre. Toxic heavy metals and their compounds are regulated with maximum limits prescribed for mercury, cadmium, chromium hexavalent, antimony, lead, and arsenic. The intentional addition of formaldehyde is prohibited, and the presence of benzene, poly-aromatic hydrocarbons, and specified phthalates is either banned or strictly limited. The notification further prohibits the use of persistent organic pollutants, halogenated solvents, ozone-depleting substances, glycol ethers, and organotins. Preservatives and biocides are subject to aggregate limits, and the packaging material must be recyclable, reusable, or biodegradable without the use of halogenated plastics. The manufacturer is required to ensure the use of twenty-five percent renewable energy, comply with applicable Extended Producer Responsibility frameworks, and possess a valid ISO 14001:2015 certification for Environmental Management Systems.

The second category, Serial Number 3, relates to Batteries, and the proposed criteria reflect a strong emphasis on circular economy principles and hazardous substance management. In addition to the general criteria of BIS compliance, environmental

clearances, and QR Code labelling, the specific criteria mandate mandatory registration on the Central Pollution Control Board's Battery Waste Management Extended Producer Responsibility portal under the Battery Waste Management Rules, 2022, with the EPR Registration Number required to be displayed on the packaging or product label. The use of hazardous materials is regulated, with mercury limited to five parts per million and cadmium to twenty parts per million, except in the case of nickel-cadmium batteries. Chlorine-based plastics are prohibited in primary and secondary packaging, and polyvinyl chloride is banned in primary battery casings. The manufacturing unit must meet prescribed effluent and emission discharge standards and submit laboratory analysis test reports from laboratories recognized or accredited under the Environment (Protection) Act, 1986 or by the National Accreditation Board for Testing and Calibration Laboratories. The packaging must be at least ninety percent biodegradable or comply with Extended Producer Responsibility guidelines under the Plastic Waste Management Rules. A graduated mandate for the use of domestically recycled lead in lead acid batteries is prescribed, requiring fifty percent for the financial year 2024-25, sixty percent for 2025-26, and seventy percent from 2026-27 onwards. The manufacturer must install appropriate air pollution control devices and emission monitoring facilities as per Central Pollution Control Board norms, demonstrate a twenty percent reduction in energy consumption preferably through renewable energy integration, and ensure proper disposal of solid and hazardous waste in accordance with applicable rules and standard operating procedures. Discarded and defective batteries must be collected and sent for recycling, and consumer awareness plans on sustainability features and end-of-life instructions are required.

The third category, Serial Number 6, addresses Paper and paper products, and the proposed criteria are notable for their emphasis on sustainable raw material sourcing, resource efficiency, and pollution control. The specific criteria require that paper and paper boards be manufactured from pulp containing not less than sixty percent by weight of non-wood materials such as agro residues and cotton linters, or alternatively from pulp containing not less than seventy percent bamboo, hardwoods, softwoods, and reed sourced from certified or domestic agro-forestry, or that recycled paper contain not less than eighty percent wastepaper. Elemental Chlorine Free or Total Chlorine Free bleaching is mandatory, and the absorbable organic halides limit in pulp is capped at 0.5 milligrams per gram. The use of carcinogenic or mutagenic biocides is prohibited, and the pentachlorophenol limit is set at 0.15 milligrams per kilogram. Food contact papers must comply with Bureau of Indian Standards for contaminants, with per- and polyfluoroalkyl substances and optical brightening agents banned in food-contact applications. The wood and agro-based pulp and paper industry must install chemical recovery plants for achieving zero black-liquor discharge, and wastepaper-based industries must have fibre recovery systems. Agro-based industries must adopt pre-treatment systems achieving minimum seventy-five percent reduction of organic load. The manufacturing unit must meet prescribed effluent and emission standards, submit treated effluent laboratory analysis from recognized laboratories, and provide inspection reports from the concerned State Pollution Control Board or Pollution Control Committee for the last two years. Sludge utilization must follow Central Pollution Control Board standard operating procedures, with minimum seventy percent hazardous waste utilization or recycling, and a three-year recycling plan is to be submitted. Online Continuous Effluent and Emission Monitoring Systems with connectivity to Central Pollution Control Board and State Pollution Control Board servers are mandatory. Specific consumption norms for freshwater and electricity are prescribed for different categories of paper products, with particularly stringent norms for recycled fibre-based paper. The notification also prohibits azo dyes and benzidine-based dyes, regulates formaldehyde in sizing agents, and mandates acid-free properties for handmade drawing paper.

The fourth category, Serial Number 11, covers Wood and Wood Substitute Products, and the criteria reflect a commitment to sustainable forestry and reduced environmental impact in the wood processing industry. The specific criteria mandate that one hundred percent of wood be sourced from agro-forestry, plantation timber, or certified forest management, and that biomass briquette and pellet manufacturing utilize one hundred percent agricultural residues with at least eighty percent agricultural residue content including minimum fifty percent paddy straw. Synthetic gypsum board manufacturing must utilize at least eighty percent gypsum from fertilizer plants or industrial by-products. Natural adhesives, binders, and resins from sources such as soya, lignin, starch, and cardanol must constitute at least twenty percent of the composition for plywood, particle board, medium-density fibreboard, high-density fibreboard, and furniture. Non-biodegradable material is restricted to twenty percent by weight in furniture, doors, window frames, and shutters, with plastic use prohibited entirely. Anti-termite treatments must be free from chlordane and organophosphates, and antimony oxide is prohibited as a flame retardant. Formaldehyde content is limited to Class E1 standards under relevant Bureau of Indian Standards specifications, and heavy metal limits are prescribed for lead and cadmium in synthetic resins. Volatile organic compound content in adhesives is capped at five percent by weight. The manufacturing unit must meet prescribed effluent and emission discharge standards and submit laboratory test results from recognized facilities. Measures to reduce energy and water consumption are required, and one hundred percent waste material utilization in production or boiler processes is mandated, failing which a three-year unit-level recycling plan must be submitted.

The fifth category, Serial Number 15, pertains to Fire Extinguishers, and the criteria emphasize the elimination of environmentally harmful substances and promotion of recyclability. The specific criteria prohibit ozone-depleting substances as identified under the Montreal Protocol, mandate the use of Ecomark-certified paint for container coating, and prohibit halogenated plastics in containers and parts. Packaging must be recyclable, reusable, or biodegradable, with halogenated plastics banned. More than ninety percent of metal components used for containers must be recycled. The product must display a list of all critical ingredients on its label or packaging in descending order based on quantity. Compliance with applicable Extended Producer Responsibility frameworks is required, and the extinguishing agent must be free from heavy metals including lead, cadmium, chromium, copper, nickel, mercury, and zinc, as well as from fluorinated organic compounds including per- and polyfluoroalkyl substances. The manufacturer must possess a valid ISO 14001:2015 certification.

The sixth and final category, Serial Number 17, addresses Coir and Coir Products, and the criteria reflect particular attention to agricultural sustainability, water conservation, and chemical safety. The specific criteria mandate that coir fibre and pith be extracted from coconut husk through mechanical processes only, and that natural rubber or latex used in tufted coir mats and rubberized coir mattresses be sourced from vendors certified or registered with the Rubber Board of India with full traceability for all raw materials. Stringent product limits are prescribed for residual pesticides, pH, total sulphates, free and releasable formaldehyde, antimony, arsenic, lead, cadmium, mercury, chromium, cobalt, copper, nickel, and pentachlorophenol. Azo dyes and benzidine-based dyes are prohibited. The manufacturing unit must utilize renewable energy for twenty-five to thirty percent of its total electricity needs, install rainwater harvesting systems, and in the case of micro, small, and medium enterprises with space constraints, collaborate with local administration for installation in nearby areas. Effluent treatment systems are mandatory for dyeing and bleaching units, and collection and settling tanks are required for wet processing units. One hundred percent utilization of effluent treatment plant-treated wastewater or settling tank supernatant in process or horticulture applications is mandated. Coir fibre, pith processing, and dyeing activities are prohibited in open barren lands or near water bodies. Fugitive emissions and dust-generating sources must be covered, wind-breaking walls must be constructed along the manufacturing unit's periphery, and cleaner fuels such as piped natural gas, compressed natural gas, or bio-briquettes must be used in boilers, thermic fluid heaters, and driers. Packaging must be compostable, biodegradable, or compliant with applicable Extended Producer Responsibility guidelines. End-of-life recycling instructions must be provided via QR Code, and inspection reports from the concerned State Pollution Control Board or Pollution Control Committee for the last two years must be submitted.

A careful perusal of the proposed amendments reveals several cross-cutting themes that underscore the Central Government's regulatory intent. The universal requirement of Bureau of Indian Standards compliance, environmental clearances under the Water and Air Acts, and authorization under the Environment (Protection) Act, 1986, ensures that the Ecomark is not granted in isolation from the broader environmental regulatory framework. The QR Code requirement across all product categories introduces a layer of digital transparency that enables consumers and regulators to access detailed environmental information with ease. The mandatory Extended Producer Responsibility compliance aligns the Ecomark with India's evolving waste management jurisprudence. The ISO 14001:2015 certification requirement institutionalizes environmental management systems within manufacturing enterprises, thereby embedding continuous improvement in environmental performance into corporate governance structures. The renewable energy mandates, ranging from twenty-five to thirty percent across categories, directly contribute to India's climate action commitments under the Paris Agreement. The stringent limits on hazardous substances, including heavy metals, formaldehyde, phthalates, persistent organic pollutants, and per- and polyfluoroalkyl substances, bring Indian standards into closer alignment with international best practices. The packaging sustainability requirements, prohibiting halogenated plastics and mandating recyclability or biodegradability, address the pressing challenge of plastic pollution. The waste management and recycling provisions, including specific recycled content mandates and utilization targets, operationalize circular economy principles within the manufacturing sector.

In conclusion, the draft notification G.S.R. 452(E) dated 8th June 2026 represents a comprehensive and ambitious effort to strengthen India's eco-labelling framework through product-specific, measurable, and enforceable environmental criteria. By covering a diverse array of sectors spanning paints, batteries, paper, wood substitutes, fire extinguishers, and coir products, the proposed amendments demonstrate the Central Government's resolve to mainstream sustainability considerations across the breadth of India's manufacturing economy. The emphasis on renewable energy, circular economy principles, hazardous substance elimination, digital transparency, and participatory governance positions the Ecomark scheme as a robust regulatory instrument for advancing the LiFE Mission and India's Sustainable Development Goals. The sixty-day consultation period provides a valuable opportunity for manufacturers, industry associations, environmental organizations, and consumers to engage constructively with the proposed standards, ensuring that the final amendments strike an appropriate balance between environmental ambition and industrial feasibility. As India continues its trajectory towards sustainable development, the Ecomark

Rules, 2024, and the amendments proposed thereto, are likely to play a pivotal role in shaping the environmental footprint of Indian manufacturing for decades to come.

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