TÜVRheinland®

2PfG E0001:01.2017
Valid as of 27/02/2017

Criteria for the award of Green Product Mark

Docking Station

Foreword

The work of selecting and developing criteria for the award of Green Product Mark is carried out through Global 2PfG-E Technical Committees (PTC) convened by TÜV Rheinland. Interested parties participate in the selection and development of criteria for the award of Green Product Mark through either PTC membership or stakeholder consultation mechanism.

Criteria for the award of Green Product Mark are drafted in accordance with the rules given in following standards and guides:

- ISO/IEC Directives, Part 1 and Part 2
- ISO/IEC Guide 21, Part 1 and Part 2
- ISO Guide 64
- ISO Guide 82
- ISO 14024
- US EPA Guidelines for Environmental Performance Standards and Ecolabels for Use in Federal Procurement
- ISEAL Code of Good Practice for Setting Social and Environmental Standards

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. TÜV Rheinland shall not be held responsible for identifying any or all such patent rights.

This document was developed using a multi-stakeholder approach involving experts from multiple stakeholder groups including but not limited to consumers, government, industry, labour, non-governmental organizations (NGOs), and service, support, research, academics. Although efforts were made to ensure balanced participation of all the stakeholder groups, a full and equitable balance of stakeholders was constrained by various factors, including the availability of resources and the need for English language skills.

Introduction

Product environmental labels are claims which indicate the environmental aspects of a product and provide information about a product in terms of its overall environmental character, a specified environmental aspect, or any number of aspects. Green Product Mark is a voluntary environmental labelling scheme operating in accordance with ISO 14020 *Environmental labels and declarations – General principles* and ISO 14024 *Environmental labels and declarations – Type I environmental labelling – Principles and procedures*. Green Product Mark has been developed in accordance with ISO/IEC 17067 *Conformity assessment – Fundamentals of product certification and guidelines for product certification schemes*. Certification activities under Green Product Mark scheme shall be performed in accordance with ISO/IEC 17065 *Conformity assessment – Requirements for bodies certifying products, processes and services*.

Through the communication of verifiable and accurate information on environmental aspects of products, Green Product Mark aims to encourage the demand for and supply of those products that cause less stress on the environment, thereby stimulating the potential for market-driven continuous environmental improvement.

Green Product Mark certification scheme is owned by TÜV Rheinland, a leading international technical service provider who have been developing solutions to ensure the safety, quality and economic efficiency of the interaction between man, technology and the environment.

This document is intended to convey clear and unambiguous requirements to be fulfilled for products to get awarded with Green Product Mark.

1 Scope

This document lays out prerequisites, product environmental criteria and product function characteristics that furniture shall comply with, in order to get awarded with Green Product Mark.

All products which demonstrate compliance with relevant prerequisites, product environmental criteria and product function characteristics set forth in this document are entitled to be awarded Green Product Mark.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

- SA8000 Social Accountability
- 2001/95/EC General Product Safety Directive (GPSD)
- 2014/35/EU Low Voltage Directive (LVD)
- 2014/30/EU Electromagnetic Compatibility Directive (EMCD)
- 2014/53/EU Radio Equipment Directive (RED)
- (1999/5/EC Radio and Telecommunication Terminal Equipment Directive (R&TTE))
- Directive 2002/96/EC and 2012/19/EU WEEE
- Directive 2011/65/EC RoHS
- Regulation (EU) No 1907/2006 REACH
- Directive 94/62/EC Packaging and packaging waste
- Regulation (EC) No 519/2012 POP
- ISO 14040, Environmental management – Life cycle assessment – Principles and framework
- ISO 14044, Environmental management – Life cycle assessment – Requirements and guidelines
- PAS2050:2011, Specification for the assessment of the life cycle greenhouse gas emissions of goods and services
- ISO 14021, Environmental labels and declarations – Self-declared environmental claims (Type II environmental labelling)

3 Terms and definitions

For the purpose of this document, the following terms and definitions apply.

3.1 Green Product Mark

A voluntary environmental labelling program owned by TÜV Rheinland to indicate the overall environmental preferability of a product within a particular product category based on life cycle considerations and contribute to a reduction in the environmental impacts associated with products.

3.2 Docking Station

These are products which can be mains-powered by internal or external means or battery-powered and are used within an information technology infrastructure in an office or related environments with a rated voltage not exceeding 600V. A docking station or port replicator or dock provides a simplified way of "plugging-in" an electronic device such as a (laptop) computer to common peripherals.

3.3 Prerequisites

Preconditions that a product shall comply with to be awarded Green Product Mark, which in principle consist of two pillars: legislative/regulatory requirements that the product shall meet in order to access target market; social compliance requirements prescribed to the site where the product has been manufactured.

3.4 Product environmental criteria

These are environmental requirements that the products shall meet in order to be awarded an environmental label.
[SOURCE: ISO 14024: 1999, definition 3.4]

3.5 Product function characteristics

These are attribute or characteristic in the performance and use of a product. In the context of environmental labelling, fitness for purpose implies that a product satisfies health, safety and consumer performance needs.
[SOURCE: ISO 14024: 1999, definition 3.5]

4 Prerequisites

4.1 Social compliance

The social compliance of production site shall be maintained with all statutory and regulatory requirements for the jurisdiction in which the manufacturing operations are located.

Methodology for assessing and demonstrating compliance:

Option 1: The applicant shall be SA8000 certified or carry out the production at SA8000 certified facilities and shall provide documented proof of third party audits conducted at production facilities of Green Product Mark certified products.

Option 2: The applicant shall be a full member of BSCI and should provide documented proof of third party audits conducted at production facilities of Green Product Mark certified products.

Option 3: The applicant shall submit a sustainability report developed according to the GRI Sustainability Reporting Guidelines.

The documented proof/report mentioned in any of the above 3 options shall be a maximum of 12 months old at the time of application for Green Product Mark certification as stipulated in EN ISO/IEC 17021.

4.2 Product safety

Compliance shall be maintained with safety requirements (generally accepted rules of engineering), essential usability requirements, and other requirements set forth in statutory regulations for the jurisdiction in which Green Product Mark certified products will be sold.

Methodology for assessing and demonstrating compliance:

If supplied by SELV like USB port and/or internal battery:

- 2001/95/EC General Product Safety Directive (GPSD)

If supplied by mains directly or is provided with external power supply together:

- 2014/35/EU Low Voltage Directive (LVD)
- 2014/30/EU Electromagnetic Compatibility Directive (EMCD)

If providing further functionality:

- 2014/53/EU Radio Equipment Directive (RED)
- (1999/5/EC Radio and Telecommunication Terminal Equipment Directive (R&TTE))

The applicant shall provide the certificate of national safety approval relevant to the jurisdiction in which Green Product Mark certified products will be sold. The certificate shall not be older than 1 year.

5 Product environmental criteria

5.1 Protection of human and environmental health

5.1.1 Restriction of Hazardous substances

Chemical substances contained in the product shall comply with the limit values listed as follows:

Requirement	Regulation	Limit
Odour	In house-method, with reference to SNV 195651 Rating scale 1~5 (TÜV Rheinland expertise)	Grade 2 (in operation)
RoHS	Directive 2011/65/EU and amendments	The product shall meet the substance restriction requirements of the European RoHS Directive, using the version which is in force at the time the product is declared to conform to this standard. All exemptions to the substances restrictions as defined by the Directive are applicable. In addition a RoHS Declaration of Conformity to Directive 2011/65/EC shall be provided by the applicant
Substances of Very High Concern (REACH SVHC)	Regulation (EU) No 1907/2006	Refers to 0.1% in each part of the article and each packaging separately
Phthalates: DEHP, DBP, BBP, DINP, DIDP, DNOP + SVHC-Phthalates	With reference to Regulation (EC) No 1907/2006 Annex XIV and XVII	Refers to 0.1% in each finished part of the article (all sub-products which can be separated without tools).
NP/ OP + NPEO/ NPEO (Nonylphenol/ Octylphenol + Ethoxylates)	Regulation (EU) No 1907/2006	100 mg/kg each (AP) / 100 mg/kg each (APEO)
Organotin Compounds	With reference to Regulation (EU) No 1907/2006	0.1 mg/kg :TBT; 1 mg/kg: MBT, DBT, DOT
Pentachlorophenol (PCP)	Regulation (EU) No 1907/2006	Pentachlorophenol shall not be used in any part of the accessory of Routing Switch.
Flame retardants (PBBs, PBDEs, TRIS, TEPA)	Reference to Regulation (EU) No 1907/2006	1000 mg/kg Applicable to all materials except metals, glass, ceramic and wood.
Cadmium	Regulation (EU) No 1907/2006	100 mg
Lead	DIN EN 1122:2002	90 mg/kg
PAH (Polycyclic Aromatic Hydrocarbons)	18 PAH according to AfPS GS 2014:01 PAK	Requirements set but AfPS
Halogen	NEMI Position Statement on "Low Halogen" Electronics	Cl, Br: 1000 mg/kg (in each material) All Printed circuit board (PCB) and substrate laminates shall meet Br and Cl requirements for low halogen as defined in IEC 61249-2-21 and IPC-4101B per 1a (refer to IEC and IPC standards for actual requirements). The maximum total halogens contained in the plastic parts exceeding 25 g, resin plus

Requirement	Regulation	Limit
		reinforcement matrix should be less than 1500 ppm with maximum chlorine of 900 ppm and maximum bromine being 900 ppm. Note: Before Jan.1, 2016 following parts are exempt from this requirement: Printed circuit board and electronic components. From Jan. 1, 2016 all certified product shall meet the requirement. For plastic parts exceeding 25 g manufacturer shall provide a declaration which declares the materials used in the production meet the above seen requirement
Packaging testing	Directive 94/62/EC and amendments	Pb+ Hg+ Cd+ Cr(VI) < 100 mg/kg Use of recyclable fiber based packaging materials: minimum percentage of overall packaging: 70% Post-consumer recycled plastic packaging: minimum percentage: 5%.
Mercury	DIN EN 1483	Mercury is not allowed for backlight unit.
Beryllium	DIN EN ISO 11885	Refers to 0.1% in each finished part of the article (all sub-products which can be separated without tools) and each packaging separately.
Antimony	DIN EN ISO 11885	Refers to 0.1% in each finished part of the article (all sub-products which can be separated without tools) and each packaging separately.
Short chain Chlorinated Paraffins C10-C13 (SCCP)	Regulation (EC) No 519/2012 (POPs)	Refers to 0.1% in each finished material of the article and each packaging (made of PVC, soft plastic and leather material)
Hexabromocyclododecane (HBCDD)	Regulation (EC) No 519/2012 (POPs)	Refers to 0.01% in each finished material of the article and each packaging (made of EPS and PS foams)

Methodology for assessing and demonstrating compliance: The applicant shall provide test reports issued by TÜV Rheinland, or by a laboratory accredited by one of ILAC MRA signatories according to ISO/IEC 17025 and holding accreditation scope that cover the standards relevant to substances listed in 5.1.1. Testing reports are deemed valid for a period of 12 month from date of test sample submission up to the date of review. Reports should be issued for the complete finished product. Component reports shall not be accepted. Declaration of Compliance shall be provided, covering all legal requirements: REACH Substances of Very High Concern (SVHC) and biocides.

5.2 Sustainable use of resources

5.2.1 Energy Efficiency

The applicant provides certificate(s) or an accredited test report that shows compliance to the limits. TÜV Rheinland reviews the content and the stated limits. Alternatively TÜV Rheinland verify the limits by a retesting a sample product.

European Ecodesign Directive standards currently in force for various IT products:

If docking station is mains powered:

Lot 6 - Standby and Off-mode EC 1275/2008

Amendment to Lot 6 - EU 801/2013

If docking station is supplied by external power supply – the power supply shall comply with:

Lot 7 - External Power Supplies EC 278/2009

RAL standards for various IT products:

Number	Title	Edition

Energy Star standards for various IT products:

If the docking station provides network functionality like a router / switch or access point:

Title	Edition
Small Network Equipment	2013

Methodology for assessing and demonstrating compliance: The applicant shall provide test reports issued by TÜV Rheinland, or by a laboratory accredited by one of ILAC MRA signatories according to ISO/IEC 17025 and holding accreditation scope that cover the standards relevant to substances listed in 5.2.1. Testing reports are deemed valid for a period of 18 month* from date of test sample submission up to the date of review. Reports should be issued for the complete finished product. Component reports shall not be accepted.

5.2.2 WEEE

- 2002/96/EC
- 2012/19/EU and amendments

Methodology for assessing and demonstrating compliance: The applicant shall provide test reports issued by TÜV Rheinland, or by a laboratory accredited by one of ILAC MRA signatories according to ISO/IEC 17025 and holding accreditation scope that cover the standards listed in 5.2.2. The recovery content shall not less than 75%, the reuse and recycling content shall not less than 65%.

5.2.3 Recycle Design

5.2.3.1 Recycled (post consumer) plastic material content

- ISO14021:1999
- National Green Scheme (Eco Label, IEEE 1680:2006, etc.

Methodology for assessing and demonstrating compliance: The applicant shall provide the declaration that states post-consumer recycled material content of plastic part (Enclosure, frame and keyboard, excluding PCB, cable, label and electronic components) of the product shall not less than 10%.

5.3 Evaluation of product climate resilience

The producer shall quantify/assess the life cycle greenhouse gas emissions of products using life cycle assessment techniques, i.e. by describing the inputs and their associated emissions attributed to the delivery of a specified amount of the product functional unit.

Methodology for assessing and demonstrating compliance:
Option 1: The applicant shall provide a report of Product Carbon Footprint based on PAS 2050 or ISO/TS 14067. The report shall be verified by an independent third-party.

Option 2: The applicant shall provide a report of Life Cycle Assessment using ISO 14040 and ISO 14044. The report shall at least include the environmental impact category Global Warming Potential and shall be reviewed by an independent third-party.

The critical review process shall ensure that (source: ISO 14044:2006):

- the methods used to carry out the LCA are consistent with this international standard,
- the methods used to carry out the LCA are scientifically and technically valid,
- the data used are appropriate and reasonable in relation to the goal of the study,
- the interpretations reflect the limitations identified and the goal of the study, and
- the study report is transparent and consistent.

The minimum necessary score to qualify as a reviewer or a review team is six points, including at least one point for each of the three mandatory criteria (i.e. verification and audit practice, LCA methodology and practice, and knowledge of technologies or other activities relevant to the study).

6 Product function characteristics

6.1 Longevity

- The applicant shall declare that the spare parts are available for 3 years after end of production.
- Electrolytic capacitors in their particular application for temperature and rippel current, the life time shall achieve more than 55000 hours (approx. 6 years).

6.2 User guide information

Information shall be publicly available and shall contain the following information so far as applicable:

- Necessary recycling information of plastic parts > 50 g, when the marking for recycling according to ISO 11469 or equivalent is not possible
- Remanufacturing information like: source of spare parts, repair instructions
- Information about how to disassembly the product like instructions, tools, duration
- Instructions for environmentally sound disposal at the end of the life cycle

Methodology for assessing and demonstrating compliance: The applicant shall demonstrate that the information listed above are available. The information can be given on the corporate website or as information for use, given in together with the product.