2 PfG E 0029/05.21

Criteria for the award of Green Product Mark for Screen Protector

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Foreword

The work of selecting and developing criteria for the award of Green Product Mark is carried out through Global 2 PfG-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, nongovernmental 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.

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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 human, 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.

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1. Scope

This document lays out prerequisites, product environmental criteria and product function characteristics for the screen protector (screen film).

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.

- SA 8000, Social Accountability

- ISO 14040, Environmental management - Life cycle assessment - Principles and framework

- ISO 14044, Environmental management - Life cycle assessment - Requirements and guidelines

- Product Environmental Footprint (PEF) Guide

- 2001/95/EC General Product Safety Directive

- ISO/TS 14067, Greenhouse gases - Carbon footprint of products - Requirements and guidelines for quantification

- ISO 14021, Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling)

- Regulation (EC) No. 1907/2006 (REACH)

- Regulation (EU) 2019/1021 (POP)

- Regulation (EC) 1278/2012 (CLP)

- Directive 2005/20/EC and amendments on Packaging and Packaging waste

- Chemicals Prohibition Ordinance (ChemVerbotsV - Chemikalienverbotsverordnung)

- AfPS GS 2019-01 on polycyclic aromatic hydrocarbons

- 2 PfG S 0147, TÜV Rheinland PROOF Kriterienkatalog für Schadstoffgeprüfte Konsumgüter

3. Terms and definitions

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

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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. Prerequisites

Preconditions that a product shall comply with to be awarded TÜV Rheinland's 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.

3.3. Product environmental criteria

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

3.4. Product function characteristics

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 brand owner, manufacturer and/or 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:

Brand owner shall have a code of conduct for the social responsibility, and factory that is considered consistent with the following:

- Forced labor convention
- Right to organize and Collective bargaining convention
- Freedom of Association and the right to organize convention
- Equal remuneration convention

- Discrimination employment and occupation convention
- Abolition of Forced labor convention
- Minimum age convention

The code of conduct consistent with this mandate must be effectively communicated to the next tier major suppliers. The brand owner must supervise the implementation of the code of conduct at all final assembly factories that the brand owner is using to manufacture the certified product.

The final assemble factory shall submit audit reports and Corrective action plan (CAP).

Independent audits must be conducted by organizations accredited to ISO 17021 and carried out by SA8000, RBA or BSCI certified lead auditors.

Types of accepted audits are:

a. SA8000,

b. RBA VAP ,

c. BSCI, or

d. Other equivalent audit report

The overall score of RBA VAP audit report shall be greater than 160 or no priority/major non-compliance.

The documented proof/report shall be a maximal of 12 months old at the time of application for Green Product Mark certification. The CAP for each non-conformity shall be provided together with audit report.

Documentation verification

Following documents shall be verified:

1. Code of conduct of brand owner (either document or URL is accepted)
2. Social audit certificate/report and CAP of final assemble factories.

4.2. Environmental compliance

All production facilities must assure compliance with the applicable national and local legal environmental law e.g. referring to air emissions requirements applicable to their processing/manufacturing stage.

Methodology for assessing and demonstrating compliance:

The applicant shall provide the valid certificate or related documents to proof the compliance to the applicable national and local legal environmental law. A valid ISO 14001 certificate is acceptable.

It is allowed that a grace period of maximum 12 months on factory that is not yet certified, by presenting a time plan for achieving the ISO 14001 certification and signing an declaration.

TÜV Rheinland has the right to abolish issued certificate if the factory will not be able to achieve ISO 14001 certification within the grace period.

Documentation verification

Following documents shall be verified:

1. The valid environment certificate or relate documents. (E.g.: ISO 14001 certificate)

5. Product environmental criteria

5.1. Protection of human health and environment

Products need to fulfil basic safety and quality requirements, verified by TÜV Rheinland either through testing or by accepting test reports. The selections of tests is depending on the type of product and material.

5.1.1 Restriction of hazardous substances

The final product shall not contain hazardous substances listed in the Restricted Substance List of 2 PfG S 0151 or 2 PfG S 0147 at or above the specified concentration limits or according to the specified restrictions.

Chemical preparations with or combinations of H-Phrases mentioned in Annex of this document, (according to CLP Regulation (EC) No 1278/2012) are restricted in the manufacturing of chemical products and preparations above the threshold limit of 0.1 %.

Controlling and monitoring the chemical usage in production is covered by auditing process and the testing of the producer's Chemical Management System.

Biocide finishes used to give biocidal properties to the final products shall not be incorporated into fibers, fabrics or the final product.

Examples on biocidal treatment include triclosan, nano- silver, zinc organic compounds, tin organic compounds, dichlorophenyl(ester) compounds, benzimidazol derivatives and isothiazolinones.

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.

The test report shall be issued according to following standard, directive or regulations

- Screening of substances of very high concern (SVHC) subject to the candidate list by European Chemical Agency (ECHA) according to Regulation (EC) No.1907/2006 of REACH and amendments
- REACH Regulation (EC) No. 1907/2006, the last amendment (EU) 2015/628 entry 63 of Annex XVII - Total Lead Content
- Total Cadmium Content
- Polycyclic aromatic hydrocarbons (PAHs)
- Phthalates - REACH regulation (EC) No. 1907/2006 and its amendment regulations on Annex XVII entries 51 and 52
- Organotin compounds content Short Chain Chlorinated Paraffin (SCCP) - according to Regulation (EU) 2019/1021
- Flame retardants (HBCDD) content - according to Regulation (EU) 2019/1021
- Polycyclic aromatic hydrocarbons (PAHs) - according to GS Specification –AfPS GS 2019:01
- According to RoHS (recast): Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, 2011/65/EU last amended by
- (EU) 2015/863
- Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): Total lead content in substrate materials
- Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): Phthalates

Testing reports are deemed valid for a period of 12 months 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.

The product (include product body, packaging and accessory) shall not content any substance of below:

- Substances of Very High Concern (SVHC) under the REACH regulation,
- Phthalates,
- Organotin compounds,
- SCCP(Chlorinated paraffins),
- Flame retardants (HBCDD),
- Polycyclic aromatic hydrocarbons (PAHs),

- Cadmium,
- Lead,
- Chromium (VI),
- Mercury,
- Polybrominated biphenyls (PBB) ,
- Polybrominated diphenyl ethers (PBDE),
- DBP,
- DEHP,
- DIBP.

Documentation verification

Following documents shall be verified:

1. A test report according to above standard directive or regulations that issued by TÜV Rheinland, or by a laboratory accredited by one of ILAC MRA signatories according to ISO/IEC 17025.

5.2. Evaluation of product climate resilience

The producer shall quantify/assess the life cycle carbon 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:

1. Product Carbon Footprint (PCF) Evaluation

Option 1: The applicant shall provide a report of Product Carbon Footprint (PCF) based on ISO 14067. The report shall be verified by an independent third-party.

Option 2: The applicant shall provide a report of Life Cycle Assessment (LCA) 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):

- the methods used to carry out the PCF or LCA are consistent with this international standard,

- the methods used to carry out the PCF or 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, PCF or LCA methodology and practice, and knowledge of technologies or other activities relevant to the study).

Table 1: Scoring system for eligible reviewers/review teams

(source: Product Environmental footprint Guide)

Topic		Criteria	Score (points)				
			0	1	2	3	4
Mandatory criteria	Review, verification and audit practice	Years of experience	0 - 2	3 - 4	5 - 8	9 - 14	> 14
		Number of reviews	0 - 2	3 - 5	6 - 15	16 - 30	> 30
	LCA Methodology and practice	Years of Experience	0 - 2	3 - 4	5 - 8	9 - 14	> 14
		Experiences of participation in LCA work	0 - 4	5 - 8	9 - 15	16 - 30	> 30
	Technologies or other activities relevant to the study	Years of experience in private sector	0 - 2 (within the past 10 years)	3 - 5 (within the past 10 years)	6 - 10 (within the past 20 years)	11 - 20	> 20
		Years of experience in public sector	0 - 2 (within the past 10 years)	3 - 5 (within the past 10 years)	6 - 10 (within the past 20 years)	11 - 20	> 20
Other	Review, verification and audit practice	Optional scores relating to audit	▪ 2 points: Accreditation as third party reviewer for at least one EPD Scheme, ISO 14001, or other EMS. ▪ 1 point: Attended courses on environmental audits (at least 40 hours). ▪ 1 point: Chair of at least one review panel (for LCA studies or other environmental applications). ▪ 1 point: Qualified trainer in environmental audit course.				

2. PCF Information disclosure

1. The results of the PCF shall be publicly available and can be download free of charge from brand owner's website.
2. The results of the PCF shall base on the product model.

Note: For models have not yet on sale, the link of PCF result can be temporary, but the result disclosure must be finished when the model is on sale.

Documentation verification

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Following documents shall be verified:

1. A Product Carbon Footprint (PCF) report issued by TÜV Rheinland, or by an independent third-party.
2. A link to the downloaded PCF results.

5.3. Product recycled material content

1. Recycled material content for product

1). Plastic materials

Product shall contain any recycled plastic, ITE-derived post-consumer recycled plastic, or bio based plastic, measured as a percentage of total amount of plastic (by weight) in the product. Both PCR and PIR are accepted.

Due to recycled material may affect optical performance, there are not minimal content limit for plastic material.

2). Glass materials

Product shall contain on average, a minimum of 30% of any combination recycled recycled glass material, measured as a percentage of total amount of plastic (by weight) in the product. Both PCR and PIR are accepted.

2. Recycled material content for packaging

1). Recycled content in paper (Wood-based fiber) packaging

The paper packaging or paper part in packaging, the paper (Wood-based fiber) material shall contain of 100% recycled content by total weight.

Following parts are exempt of requirment:

- Labels
- Tape, glue, or staples used to construct or close packaging
- Pallets or pallet assemblies

2). Recycled content in non-paper (non-Wood-based) packaging (Optional)

If packaging composed of recycled, and/or bio-based, and/or sustainably forested content, packaging shall contain, on average, a minimum total percentage of 90% by weight of any combination of the following materials:

- Recycled content
- Bio-based plastic, excluding biodegradeable, bio-based plastic
- Non-wood bio-based fiber material, and/or

- Sustainably forested material

Non-wood, bio-based material may include, but is not limited to: bagasse, bamboo, mushroom, straw, agricultural waste or byproduct.

3. Recycled material content for accessory

The accessory of product shall content recyclable material or biodegradable material.

Documentation verification

Following documents shall be verified:

1. Material recycled evolution report or certificate.
2. Material list. (See appendix 1)

6. Product function characteristics

6.1. Major features (Optional)

The major features of the Green Product as claimed by the manufacturer shall be verified for the feasibility.

Methodology for assessing and demonstrating compliance:

The applicant shall provide the test report or related proof documents and TÜV Rheinland carries out a verification of these documents.

Appendix 1 - Material List

GREENMARK CERTIFICATION FORM

Appendex 1 - Compnent List

Category	Component Name	Material Type	Material Name	Weight (g)	Supplier Name	Does the component contain recycled material?	Recycled Type (PCR, PIR)	Recycled Content (%)	Recycled material weight (g)
									0
									0
									0
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