Criteria for the award of Green Product Mark

Cookware

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.

1 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. 1 Scope

This document lays out prerequisites, product environmental criteria and product function characteristics that Cookware 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.

- 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
- Regulation (EC) No 1935/2004 on materials and articles intended to come into contact with food
- ISO 14067, Carbon footprint of products – Requirements and guidelines for quantification and communication
- ISO 14021, Environmental labels and declarations–Self-declared environmental claims (Type II environmental labelling)
- Packaging and packaging waste Directive 94/62/EC
- ECMA-341 Environmental Design Considerations
- REACH Regulation (EC) No. 1907/2006, and its amendments
- Regulation (EU) 2019/1021 on Persistent Organic Pollutants (POP)(recast)
- Chemicals Prohibition Ordinance (ChemVerbotsV-Chemikalienverbotsverordnung)
- AfPS GS 2019:01 on polycyclic aromatic hydrocarbons
- Full scope of DIN EN 12983-1 Cookware, domestic cookware for use on top of a stove, cooker or hob Part 1: General Requirements.
- DIN CEN/TS 12983-2 Cookware, domestic cookware for use on top of a stove, cooker or hob Part 2: Further general requirement and specific requirements for ceramic, glass and glass ceramic cookware. Clause 7.2 (thermal shock resistance of glass lid)
- DIN CEN/TS 12983-3 DIN CEN/TS 12983-2 Cookware, domestic cookware for use on top of a stove, cooker or hob Part 3: Cookware for use on induction heating sources. Clause 5.3 (take up of water by the base)
- 2 PfG-Q 1384 Cookware: Tests on quality and fitness for use characteristics

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 Cookware

Utensil, in the form of a hollow container, intended for use in the cooking of food or beverages on the top of a stove, cooker or hob, and/or in an oven. Such as pots, frypan, saucepan, casserole, saute pan, deep frying pan, grill pan, roaster and dutch oven.

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

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

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 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:

The Brand owner, manufacturer and the factory/third-party producer shall

- Fulfil the requirements of SMETA or BSCI by providing a documented proof of SMETA or BSCI audit report conducted at production facility of Green Mark certified products; or
- Fulfil the requirements of SA8000 by providing a valid SA8000 certificate issued by a SAAS-accredited certification body or a COC audit report issued by TÜV Rheinland; or
- Fulfil the requirements of RBA by providing a documented proof of RBA VAP audit report conducted at production facilities of Green Mark certified products; or
- Submit a report developed according to the GRI Sustainability Reporting Guidelines or GRI Sustainability Reporting Standards.

The documented proof/report shall be maximum of 12 months old at the time of application for Green Product Mark certification.

4.2 Product safety

Compliance shall be maintained with safety 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:

EU market:

Compliance shall be maintained base on 2001/95/EC General Product Safety Directive. For the test specification the standard DIN EN 12983-1, DIN CEN/TS 12983-2 clause 7.2 (thermal shock resistance of glass lid), DIN CEN/TS 12983-3 (take up of water by the base), 2 PfG-Q 1384 (applicable clauses per claimed information) are used in its entirety in the latest version.

The applicant shall provide test reports issued by TÜV Rheinland. Testing reports are deemed valid for a period of 1 year. Reports should be issued for the complete finished product. Component reports shall not be accepted.

Other markets:

To be advised upon request based on specific markets' regulations toward this specific cookware type.

5 Product environmental criteria

5.1 Protection of human and environmental health

Restriction of hazardous substances

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 % for each article and each packaging material
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 % for each homogenous material of the product
Alkylphenols and Alkylphenolethoxylates	With reference to Regulation (EU) No 1907/2006	100 mg/kg each (NP/OP) / 100 mg/kg each (NPEO/OPEO)
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
Flame retardants (PBBs, PBDEs, TRIS, TEPA)	Reference to Regulation (EU) No 1907/2006	1000 mg/kg (All materials except metals, glass, ceramic and wood)
Cadmium	Regulation (EU) No 1907/2006	100 mg (materials not covered by RoHS)
Lead	Regulation (EU) No 1907/2006	90 mg/kg (accessible materials not covered by RoHS)
PAH (Polycyclic Aromatic Hydrocarbons)	15 PAH according to AfPS GS 2019:01 PAK	Requirements set by AfPS
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%

Requirement	Regulation	Limit
		Post-consumer recycled plastic packaging: minimum percentage: 5%.
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.
Nickel release	Regulation (EU) No 1907/2006	<0.5 µg/cm²/week Conducted on metallic parts intend to come into direct and prolonged contact with skin.
Short chain Chlorinated Paraffins C10-C13 (SCCP)	Regulation (EU) No 2019/1021 on persistent organic pollutants (POP) Annex I	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 (EU) No 2019/1021 on persistent organic pollutants (POP) Annex I	Refers to 0.01 % in each finished material of the article and each packaging (made of EPS and PS foams)
Food contact materials and Products	Lebensmittel-, Bedarfsgegenstaende- und Futtermittel-gesetzbuch (LFGB)	Each material has its specific maximum permissible limits.
	Regulation (EC) No 1935/2004	Sensorial Examination (Taste) < 3
	Regulation (EU) No 10/2011	Overall Migration <10 mg/dm2 or 60 mg/kg Specific Migration of Heavy Metals according to Annex II Each plastic material has specific maximum permissible limits.
	Kunststoffe im Lebensmittelverkehr, Empfehlungen des Bundesinstituts für Risikobewertung (BfR)	Colorfastness - No deviation after testing Each plastic and silicone material as well as paper, cardboard, has specific maximum permissible limits
	EDQM Document on Metals and alloys used in food contact materials and articles	Specific maximum permissible migration limits for certain heavy metals from metal articles.
	Austrian Ceramic Regulation BGBl. Nr. 893/1993 & BGBI.II Nr.259/2006	Specific maximum permissible migration limits for heavy metals in Ceramic material in contact with food
Food grade (for food contact materials) except	Italian Ministerial Decree of 21 March	Please refer to national law

Requirement	Regulation	Limit
German markets	1973 and its amendments	
	DGCCRF N°2004-64 of May 6, 2004 and its amendments	Please refer to national law

Methodology for assessing and demonstrating compliance:

The applicant provides a certificate(s) or accredited test report, which shows compliance with the legal requirement of each respective substance. TÜV Rheinland reviews that limits are kept. Alternatively, TÜV Rheinland evaluates the values by the provided product data from the manufacturer.

The TRLP (TÜV Rheinland LGA Products GmbH) reserves the right to accept existing reports issued by accredited laboratories.

5.2 Sustainable use of resources

- If any metal parts which declared as using recycled metal, at least 90% of recycled metal should be used, if possible
- The food contact plastics parts is not allow to use recycled material, unless the recycling process is approved by EFSA.
- If any non-food contact plastics parts which declared as using recycled plastic with weight more than 100g, at least 80% of recycled material should be used, if possible
- If the product does not contain plastic parts weighing >100 g, "Not Applicable" may be declared.
- Visual documentation such as photos documenting material type marking on each plastic part which declared as using recycled plastic with weight more than 100g.
- Certification or statement issued by 3rd party has to be submitted to demonstrate the recycled materials production process were traceable.

5.3 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:

Option 1: The applicant shall provide a report, statement or certificate of Product Carbon Footprint (PCF) based on ISO 14067 or PCF Scheme, Green Product Scheme (Green Product Scheme shall include carbon emissions issues), such as Taiwan Carbon Label, EPEAT, TUV New Test Mark, etc. The report, statement or certificate shall be verified by an independent third-party.

Option 2: The applicant shall provide a report, statement or certificate of Life Cycle Assessment(LCA) using ISO 14040 and ISO 14044 or LCA Scheme, Green Product Scheme (Green Product Scheme shall include carbon emissions issues), such as EPD, EcoLeaf, EPEAT, TUV New Test Mark, etc. The report, statement or certificate 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 14067, ISO 14044 or Scheme requirements):

- the methods used to carry out the PCF or LCA are consistent with this international standard or Scheme requirements,
- 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
	PCF or LCA Methodology and practice	Years of Experience	0 – 2	3 – 4	5 – 8	9 – 14	> 14
		Experiences of participation in PCF or LCA work	0 – 4	5– 8	9 – 15	16 – 30	> 30
	Technologies or	Years of experience in	0 – 2	3 – 5	6 – 10	11 – 20	> 20

Topic		Criteria	Score (points)				
			0	1	2	3	4
	other activities relevant to the study	private sector	(within the past 10 years)	(within the past 10 years)	(within the past 20 years)		
		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 PCF or 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 PCF or LCA studies or other environmental applications) · 1 point: Qualified trainer in environmental audit course.				

5.4 Timber from Responsible sources (if applicable)

Timber Material Sourcing from Responsible Management Forest (FSC)

A) The organization shall hold a valid FSC certificate, which includes would-be Green Mark products in the certified scope.

B) The FSC trademarks shall be applied in conformity with FSC official requirements.

Verification requirements:

A) The latest FSC audit report shall be available.

B) The material purchase records and production records (with exception trader) shall be available.

C) The FSC trademark approval letter from relevant CB and usage picture shall be available.

6 Product function characteristics

6.1 Information for User

Following information for user shall be publicly available:

– Information that the product has been awarded the Green Product Mark, including a summary of the major features for award of the Green Product Mark on a separate page and a link to www.tuv.com/world/en/green-product-mark.html

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

6.2 Design for recyclable (if applicable)

The applicant shall design products to ensure that they can be dismantled. Disassembly shall be possible with standard tools and shall not require special training.

Methodology for assessing and demonstrating compliance: The applicant shall guarantee that the product disassembly instructions are publicly available, if necessary.

6.3 User guide information (if applicable)

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

- Necessary recycling information of plastic parts > 100 g, when the marking for recycling according to ISO 11469 or equivalent is not possible
- 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.