Criteria for the award of Recycled Material Verified Mark

Foreword

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

Criteria for the award of Recycled Material Verified 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, labor, 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.

Contents

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. Recycled Material Verified 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. Recycled Material Verified 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 Recycled Material Verified 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, Recycled Material Verified 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.

Recycled Material Verified 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 Recycled Material Verified Mark.

2. Scope

This document lays out the requirements of Recycled Material Verified certification for Electrical and Electronic Products made from recycled materials such plastic, metal, paper, fabric, glass, etc. It applies to the EEE product sub-categories and product types listed in Annex A. The minimum thresholds for recycled content in this annex were determined in collaboration with the respective standard technical committee and actual industrial production practices.

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 Recycled Material Verified Mark.

TÜV Rheinland has evaluated this product and its production to determine how much recycled material is contained in the finished product. Additionally, the type of recycled material is linked to the percentage. This assessment considers both the "pre-consumer" portion of recycling (during manufacturing) and the "post-consumer" portion (at disposal).

TÜV Rheinland has defined a catalogue of inspections, which establishes the minimum standards for the recycled material according to the product and environmental claims. The manufacturer's specifications are also checked. The catalogue of inspections is based on ISO 14021 Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) and reference with EN 15343, Plastics - Recycled Plastics - Plastics recycling traceability and assessment of conformity and recycled content.
The source and proportion of recycled materials are verified over the entire life cycle of the product. Production, material flow and supply chain are checked with on-site audits as well as document review.

The keyword “Recycled Material Verified” confirms that the product meets TÜV Rheinland's requirements.

3. 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.

- 2001/95/EC General Product Safety Directive
- ISO 14001, Environmental management systems – Requirements with guidance for use
- ISO 9001, Quality management systems – Requirements
- ISO 14020, Environmental statements and programs for products — Principles and general requirements
- ISO 14024, Environmental labels and declarations – Type I environmental labeling – Principles and procedures
- ISO/IEC 17029, Conformity assessment — General principles and requirements for validation and verification bodies
- ISO/IEC 17065, Conformity assessment – Requirements for bodies certifying products, processes and services
- ISO/IEC 17067, Conformity assessment – Fundamentals of product certification and guidelines for product certification schemes
- ISO 14021, Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling)
- EN 15343, Plastics - Recycled Plastics - Plastics recycling traceability and assessment of conformity and recycled content
- EU 2008/98/EC - on waste and repealing certain Directives
- RAL-UZ-30a - Products made from Recycled Plastics
- TCO Certified - Generation 9 for displays
- TCO Certified Edge - Displays 2.0
- IEEE 1680.1 - Environmental and Social Responsibility Assessment of Computers and Displays
- IEEE 1680.2 – Environmental Assessment of Imaging Equipment
- IEEE 1680.3 – Environmental Assessment of Televisions
- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)
- Restriction of the use of certain Hazardous Substances--2011/65/EU (RoHS) + (EU) 2015/863)
- Regulation (EU) 2019/1021 of the European Parliament and of the Council on persistent organic pollutants as regards Annex I
- Directive 2005/20/EC and amendments on Packaging and Packaging waste
- Regulation (EU) 2023/1542 of the European Parliament and of the Council of 12 July 2023 concerning batteries and waste batteries

4. Terms and definitions

To this document, the following terms and definitions apply.

Audit
Third-party evaluation conducted by an approved certification body against this Standard. An audit includes the review of documents and records (e.g., procedures, BOM, conversion factor, etc.), interviews and observations.

Bill of Materials (BOM)
A list of the raw materials, sub-components, components, parts, and quantities of each needed, to manufacture a final product.

Post-Consumer material
Material generated by households or by commercial, industrial, and institutional facilities in their role as end-users of the product that can no longer be used for its intended purpose. This includes returns of materials from the distribution chain.
Note: To be considered post-consumer, any material returned from the distribution chain must come from end-users.

Pre-Consumer material (Post-industrial waste)
Material diverted from the waste stream during the manufacturing process. Excluded is the reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

Recycled content
Proportion, by mass, of recycled material in a product or packaging. Only pre-consumer and post-consumer materials shall be considered as recycled content, consistent with the following usage of terms.

Recycled material
Material that has been reprocessed from recovered [reclaimed] material by means of a manufacturing process and made into a final product or into a component for incorporation into a final product.

5. Prerequisites

5.1 Legislative/regulatory requirements

Compliance shall be maintained with legal - safety requirements (generally accepted rules of engineering), essential usability requirements, and other requirements.

The applicant shall provide the certificate of national safety approval. The certificate shall not be older than 1 year.

5.2 Environmental compliance

All production facilities must assure compliance with the applicable national and local legal environmental law and regulations applicable to their processing/manufacturing stage.

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, the certificate shall not be older than 1 year.

5.3 Restriction of hazardous substances

The final product shall not contain hazardous substances based on REACH, RoHS and POP regulation at or above the specified concentration limits or according to the specified restrictions.

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.

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 regulatory.
The chemical test report must identify the product and/or materials and complies with substance scope and reporting limits set out in.
Testing reports are deemed valid for a period of 12 months from date of test sample submission up to the date of review.

5.4 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.

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

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

6. Recycled material content

6.1 Documentation

The client shall have a documented procedure(s) to demonstrate traceability for the materials and/or products within the scope of the audit.

Supplier letter(s) stating percentage of applicable content(s) supplied to manufacturer or to manufacturer's part supplier is must.

Table 1. Example material list

Category (product, article, packaging)	Component Name	Material Type (e.g. Plastic)	Material Name (e.g. PC)	Weight (g)	Supplier Name	Does the component contain recycled material?	Recycled Type (PCR, PIR)	Recycled Content (%)	Recycled material weight (g)

Leverage data collected from other recognized third-party certification standard is accepted, including International Sustainability & Carbon Certification (ISCC), RCS/GRS, etc.

Table 2. Example certification information

Category (product, article, packaging)	Component Name	Material Type (e.g. Plastic)	Material Name (e.g. PC)	Weight (g)	Supplier Name	Recycled Content (%)	Certificate	Certification company	Date of issue

In addition, the following specific documentation should be submitted,

- Manufacturing site address for all validated products
- Manufacturing process flowchart or description
- Production records from source material to final product
- Inventory records from incoming material to mass production product
- Segregation procedure
- Mass balance procedure

6.2 Audit

The audit focuses on the verification of the origin of waste, the traceability throughout recycling process and the calculation of recycled content in the output. The audit scheme covers the requirements to be met by organizations concerning traceability according to EN 15343, quality management systems and environmental and administrative operating performance for the recycling of waste, as well as chain of custody.

6.3 Calculation

Calculation of the percentages based on the article weight based on ISO 14021, clause 5.1 General and 7.8 Recycled content, calculated as

X(%)=A/P x 100

Where, X is the recycled content, expressed as a percentage
A is the mass of recycled material
*P is the mass of **material** or **product***

6.4 Claims

Following claims can be accepted,

- [Product/actual product name/packaging] contains a [minimum/average] of XX% [pre/post-consumer] recycled content.
- [Product/actual product name/packaging] contains a [minimum/average] of XX% recycled content, consisting of XX% recycled [raw material/component].

6.5 Surveillance

The monitoring audit is carried out annually and determines whether the procedures continue to be applied correctly, and whether the determination of the recycled content and the labeling of the product continue to meet the requirements of the certification program. In addition, the respective proportions of waste before use and proportions after use in the recycled content are determined.
The annual inspection is carried out in the form of audits on a sample to be determined by TÜV Rheinland, if necessary, in consultation with the auditor.

Annex A

Table 3. Thresholds for recycled content by sub-category and product type

Product Sub-Category	**Product Type**	**Examples of Commonly Used Virgin or Recycled Materials**	**Minimum Total % Recycled Content in the Product**
Visual	PC Display/Monitor /TVs	Steel, Plastics, Glass, Aluminum	10%
Audio	Home audio device	Steel, Plastics, Aluminum, Fabric, Neodymium(magnet)	25%
	Portable Audio Products/Smart Speakers	Steel, Plastics, Aluminum, Fabric, Neodymium(magnet)	20%
	TWS Earbuds / Bone conduction headphones	Steel, Plastics, Neodymium(magnet)	15%
	Over-ear headphones	Steel, Plastics, Fabric, Neodymium(magnet)	10%
Computers and Peripheral	All-in-One Computing /Laptop Notebook	Steel, Plastics, Aluminum, Glass	15%
	Printer/scanner	Steel, Plastics, Aluminum	10%
	Server & Storage & Router	Steel, Plastics	20%
	Power Supplies (e.g., chargers, power banks)	Plastics	15%
	Other Peripheral product (e.g. Keyboard & Mouse, Dongle)	Steel, Plastics	35%
Intelligent device	Smartphone & Tablets & E-reader	Plastics, Glass, Aluminum	20%
	Wearables	Plastics, Aluminum	15%
	Gaming Products	Plastics	10%
	Camera	Plastics	10%
Household Products/ Appliances	Kitchen appliances (e.g., Coffee Machines, Toaster)	Steel, Plastics, Aluminum, Steel	10%
	Household appliances (e.g., robot vacuum cleaner, air cleaner)	Steel, Plastics	10%
	Big Household products (e.g., Washing machine, Fridge)	Steel, Plastics	10%

Lighting	Table light / Lamps	Steel, Plastics	15%
Tools	Power tools, Garden tools, Electrical lawn mover	Plastics	10%
Electronic Accessories (Non-EEE)	Case/cover/Stand	Steel, Fabric, Plastics, glass, Neodymium(magnet)	20%
Batteries	Lithium-ion Rechargeable Cell	Li, Co, Ni	5%
Packaging	Package materials	Paper, Plastics, Fabric	10%