

# SGS GREEN MARK – RECYCLED CONTENT REQUIREMENTS SUMMARY

Product scope	Recycled content requirement	Certification Criteria (details)	Validity	Surveillance requirement
All Hardlines Products	Containing at least 20% or more recycled materials	<p><u>General Requirement</u></p> <ul style="list-style-type: none"> <li>Recycled material or recycled material product, and the related organizations*, shall be fully compliant with the requirements in Appendix 1 including restricted chemical testing of the examined materials / products, and assessing the facility by documents review and onsite assessment.</li> <li>The minimum requirement of the recycled content calculated by mass balance accounting of the recycled material or recycled product shall be complied.</li> </ul> <p><i>* The organizations or facilities engaged in the value chain of the certified materials/products, that SGS needs to ensure the chain of custody for validating the amount of recycled content.</i></p> <p><u>Sample Verification</u></p> <p>The recycled product to be certified needs to be sent to an SGS approved lab for testing. It may be submitted by the facility or collected by SGS during the audit and submitted to the appropriate lab. The testing requirements are mentioned in Appendix 1.</p> <p><u>Organizations subject to Verification</u></p> <p>The need to verify the management of recycled content by the different organizations within the product supply chain shall be based on the different applicant roles defined in Appendix 2.</p> <p>Organizations which need onsite verification shall fully comply with the requirements in Appendix 3.</p> <p><u>Document Review</u></p> <p>For initial certification, the document review needs to comply with the requirements summarized in Appendix 4.</p>	Three Years	<p><u>Restricted Substance Requirement</u></p> <p>Test(s) stated in Appendix 1 shall be conducted and the requirement shall be fulfilled. SGS shall conduct onsite random sampling of related samples in the production line for verification testing by an SGS approved lab. This sample collection and testing frequency matches the surveillance timing mentioned in Manufacturing Record Review Requirement section below.</p> <p>For the onsite sampling of products, at least two copies shall be collected for each product model in question, one for testing and one as a spare/backup. The sampling volume for each copy is determined according to testing requirements. All selected samples will be sealed in the factory.</p> <p>SGS reserves the right to have the final decision on which sample(s) to collect.</p> <p><u>Manufacturing Record Review Requirement</u></p> <p>The latest manufacturing documents of recording input and output materials and their amount and weight shall be provided by applicant for mass balance calculation.</p> <p>The surveillance must be done on the second and third year after certification issuance. The interval between two surveillance times cannot exceed 12 months. Applicant shall apply for the surveillance by sending the surveillance application form to SGS.</p> <p>If there is no new batch of samples being manufactured after initial certification,</p>

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		<p>For new products applied:</p> <p>If the new products use the same recycled content materials from the same sources as the initially certified product(s), documents for mass balance calculation will be reviewed by the certification team, but an additional onsite audit will not be required. Applicant needs to submit the new application within 12 months after issuing the initial certification.</p> <p>If the new products use any new/different recycled content materials or recycled content from any new/different sources than products already certified, an additional onsite audit will be required, and additional production process-related documents shall be sent to SGS certification team to evaluate.</p> <p>Mass balance documentation needs to provide data on the production process, and if the production has begun, up to a year's production data. If there is any variation in the percentage of recycled content from month to month or during the year, SGS will evaluate whether to certify to a lower percent recycled content, based on the duration, frequency, and amount, etc., of the variation.</p>		<p>applicant shall provide a written declaration on it.</p> <p>If there are significant changes in key production process, key raw materials or auxiliary materials or their suppliers, then additional onsite verification together with document review for the key changes shall be conducted.</p> <p>All entities in the supply chain having product or material with recycled content certified by SGS must notify SGS of such changes.</p>
Softlines related Products / materials containing recycled PET from PET bottle	At least 5% or more	<p><u>General requirement</u></p> <ul style="list-style-type: none"> <li>Recycled PET material or recycled PET product and the related organizations* shall be fully compliant with the requirements in recycled PET verification testing section of Appendix 1 and the restricted chemical testing of the examined materials / products in Appendix 5.</li> <li>A positive result shall be obtained for the recycled PET material/product from bottles test, according to the SGS in-house method (SGS rPET 100-2022).</li> </ul>	<p>One year for product</p> <p>Three years for raw material (i.e., pellet,</p>	<p><u>Green Mark for complete product</u></p> <p>It is not required to have surveillance because the validity period is only one year.</p> <p><u>Green Mark for raw materials</u></p> <p>However, for the upstream recycled material suppliers, which need to be verified, the validity is 3 years. The verification test and the restricted</p>

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		<ul style="list-style-type: none"> <li>The minimum requirement of the recycled content calculated by mass balance accounting of the recycled material or recycled product shall be complied.</li> </ul> <p><i>* The organizations or facilities engaged in the value chain of the certified materials/products, that SGS needs to ensure the chain of custody for validating the amount of recycled content.</i></p> <p><u>Sample Verification</u> The recycled product to be certified needs to be sent to an SGS approved lab for testing. It may be submitted by the facility or collected by SGS during the audit and submitted to the appropriate lab. The testing requirements are mentioned in Appendix 5.</p> <p><u>Organizations subject to Verification</u> The need to verify the management of recycled content by the different organizations within the product supply chain shall be based on the different applicant roles defined in Appendix 6.</p> <p>Organizations which need onsite verification shall fully comply with the requirements in Appendix 3.</p> <p><u>Document Review</u> For initial certification, the document review needs to comply with the requirements summarized in Appendix 4.</p> <p>For new products applied:  If the new products use the same recycled content materials from the same sources as the initially certified product(s), documents for mass balance calculation will be reviewed by the certification team, but an additional onsite audit will not be required. Applicant needs to submit the new application within 12 months after issuing the initial certification.</p>	fiber, and yarn products)	substance requirement is included for surveillance.  <u>Restricted Substance Requirement</u>  Test(s) stated in Appendix 5 shall be conducted and the requirement shall be fulfilled. SGS shall conduct onsite random sampling of related samples in the production line for verification testing by an SGS approved lab. This sample collection and testing frequency matches the surveillance timing mentioned in Manufacturing Record Review Requirement section below.  For the onsite sampling of products, at least two copies shall be collected for each product model in question, one for testing and one as a spare/backup. The sampling volume for each copy is determined according to testing requirements. All backup samples will be sealed in the factory.  SGS reserves the right to have the final decision on which sample(s) to collect.  <u>Manufacturing Record Review Requirement</u>  The latest manufacturing documents of recording input and output materials and their amount and weight shall be provided by applicant for mass balance calculation.  The surveillance must be done on the second and third year after certification issuance. The interval between two surveillance times cannot exceed 12 months. Applicant shall apply for the

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		<p>If the new products use any new/different recycled content materials or recycled content from any new/different sources than products already certified, an additional onsite audit will be required, and additional production process-related documents shall be sent to SGS certification team to evaluate.</p> <p>Mass balance documentation needs to provide data on the production process, and if the production has begun, up to a year's production data. If there is any variation in the percentage of recycled content from month to month or during the year SGS will evaluate whether to certify to a lower percent recycled content, based on the duration, frequency, and amount, etc. of the variation.</p> <p><u>Verification test</u></p> <p>Test method is specified in SGS rPET 100-2022</p>		<p>surveillance by sending the surveillance application form to SGS.</p> <p>If there is no new batch of samples being manufactured after initial certification, applicant shall provide a written declaration on it.</p> <p>If there are significant changes on key production process, key raw materials or auxiliary materials or their suppliers, then additional onsite verification together with document review for the key changes shall be conducted.</p> <p>All entities in the supply chain having product or material with recycled content certified by SGS must notify SGS of such changes.</p>
Recycled Material for Electrical and Electronics Product	At least 5% or more	<p><u>General Requirement</u></p> <ul style="list-style-type: none"> <li>Recycled PET material or recycled PET product and the related organizations* shall be fully compliant with the requirements in recycled PET verification testing section of Appendix 1 and restricted chemical testing of the examined materials / products in Appendix 7.</li> <li>The minimum requirement of the recycled content calculated by mass balance accounting of the recycled material or recycled product shall be complied.</li> </ul> <p><i>* The organizations or facilities engaged in the value chain of the certified materials/products, that SGS needs to ensure the chain of custody for validating the amount of recycled content.</i></p> <p><u>Sample Verification</u></p> <p>The recycled product to be certified needs to be sent to an SGS approved lab for testing. It may be submitted by the</p>	Three Years	<p><u>Restricted Substance Requirement</u></p> <p>Test(s) stated in Appendix 7 shall be conducted and the requirement shall be fulfilled.</p> <p>SGS shall conduct onsite random sampling of related samples in the production line for verification testing by an SGS approved lab. This sample collection and testing frequency matches the surveillance timing mentioned in Manufacturing Record Review Requirement section below.</p> <p>For the onsite sampling of products, at least two copies shall be collected for each product model in question, one for testing and one as a spare/backup. The sampling volume for each copy is determined according to testing</p>

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		<p>facility or collected by SGS during the audit and submitted to the appropriate lab. The testing requirements are mentioned in Appendix 7.</p> <p><u>Organizations subject to Verification</u></p> <p>The need to verify the management of recycled content by the different organizations within the product supply chain shall be based on the different applicant roles defined in Appendix 2.</p> <p>Organizations which need onsite verification shall fully comply with the requirements in Appendix 3.</p> <p><u>Document Review</u></p> <p>For initial certification, the document review needs to comply with the requirements summarized in Appendix 4.</p> <p>For new products applied:</p> <p>If the new products use the same recycled content materials from the same sources as the initially certified product(s), documents for mass balance calculation will be reviewed by the certification team, but an additional onsite audit will not be required. Applicant needs to submit the new application within 12 months after issuing the initial certification.</p> <p>If the new products use any new/different recycled content materials or recycled content from any new/different sources than products already certified, an additional onsite audit will be required, and additional production process-related documents shall be sent to SGS certification team to evaluate.</p> <p>Mass balance documentation needs to provide data on the production process, and if the production has begun, up to a year's production data. If there is any variation in the percentage of recycled content from month to month or during the year SGS will evaluate whether to certify to a lower percent recycled content, based on the duration, frequency, and amount, etc. of the variation.</p>		<p>requirements. All backup samples will be sealed in the factory.</p> <p>SGS reserves the right to have the final decision on which sample(s) to collect.</p> <p><u>Manufacturing Record Review Requirement</u></p> <p>The latest manufacturing documents of recording input and output materials and their amount and weight shall be provided by applicant for mass balance calculation.</p> <p>The surveillance must be done on the second and third year after certification issuance. The interval between two surveillance times cannot exceed 12 months. Applicant shall apply for the surveillance by sending the surveillance application form to SGS.</p> <p>If there is no new batch of samples being manufactured after initial certification, applicant shall provide a written declaration on it.</p> <p>If there are significant changes on key production process, key raw materials or auxiliary materials or their suppliers, then additional onsite verification together with document review for the key changes shall be conducted.</p> <p>All entities in the supply chain having product or material with recycled content certified by SGS must notify SGS of such changes.</p>

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## Appendix 1

**Product Category:** For non-food contact materials (e.g., plastic, coating, textile, leather, metal)

### RESTRICTED SUBSTANCE REQUIREMENT

For non - food contact materials (e.g., plastic, coating, textile, leather, metal)

- I. Recycled materials in the product to be certified shall not exceed 0.1% (w/w) of each substance in the Candidate List of Substances of Very High Concern (SVHC) for authorization published by the European Chemicals Agency (ECHA).

**Product Category:** Food Contact product

### RESTRICTED SUBSTANCE REQUIREMENT

For food contact materials

- I. *Polyethylene terephthalate (PET) plastic*
  - Recycled PET plastic and recycled PET plastic in product to be certified shall not exceed the requirements stated in below table.

Restricted substance / attributes	Requirement	Test method	Remark
Non-intentionally added substances (NIAS) + Risk assessment	Pass conclusion from toxicology risk assessment	Latest version of EN 13130 series, followed by GC-MS analysis and toxicology risk assessment	

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### II. Metal

- Recycled metal and recycled metal in product to be certified shall not exceed the extractable heavy metal requirements stated in “Metals and alloys used in food contact materials and articles – A practical guide for manufacturers and regulators” published by the European Directorate for the Quality of Medicines & HealthCare.

Heavy Metal	1 <sup>st</sup> and 2 <sup>nd</sup> migration (mg/kg)	3 <sup>rd</sup> migration (mg/kg)	Heavy Metal	1 <sup>st</sup> and 2 <sup>nd</sup> migration (mg/kg)	3 <sup>rd</sup> migration (mg/kg)
Silver	0.56	0.08	Zinc	35	5
Aluminum	35	5	Arsenic	0.014	0.002
Cobalt	0.14	0.02	Barium	8.4	1.2
Chromium	1.75	0.25	Beryllium	0.07	0.01
Copper	28	4	Cadmium	0.035	0.005
Iron	280	40	Mercury	0.021	0.003
Manganese	12.6	1.8	Lithium	0.336	0.048
Molybdenum	0.84	0.12	Lead	0.07	0.01
Nickel	0.98	0.14	Antimony	0.28	0.04
Tin	700	100	Thallium	0.0007	0.0001
Vanadium	0.07	0.01	-	-	-

- Stainless steel composition (if recycled material contains claimed stainless steel grading)
  - For European market, stainless steel grading will be verified against BS EN 10088 series.
  - For markets other than Europe, stainless steel grading will be verified against ASTM A 959.

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### III. Paper

- Recycled paper and recycled paper in product to be certified shall not exceed the requirements stated in below table.

Restricted substance / attributes	Requirement	Test method	Remark
Migration of Fluorescent Whitening Agent in Water, 3% Acetic acid, Alkaline salt solution, Vegetable oil	Grade 5	Latest version of EN 15519	
Specific Migration of Bisphenol A in 95% Ethanol	0.05 mg/kg; Not detected (Detection limit: 0.01 mg/kg) for infants and young children article	Latest version of EN 648	



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## IV. Glass

- Recycled glass and recycled glass in product to be certified shall not exceed the requirements stated in below table.

Restricted substance / attributes	Requirement	Test method	Remark
Leachable Lead and Cadmium	<p>Category 1 (articles which cannot be filled and articles which can be filled, the internal depth of which does not exceed 25 mm)</p> <p>Lead: 0.8 mg/dm<sup>2</sup></p> <p>Cadmium: 0.07 mg/dm<sup>2</sup></p> <p>Category 2 (all other articles that are not in Categories 1 or 3)</p> <p>Lead: 4.0 mg/L</p> <p>Cadmium: 0.3 mg/L</p> <p>Category 3 (cookware, packaging and storage vessels having a capacity of more than 3L)</p> <p>Lead: 1.5 mg/L</p> <p>Cadmium: 0.1 mg/L</p>	Latest version of EN 1388 series	

**Product Category: Product made from recycled PET bottles**

- I. Recycled PET verification test
  - Test method refers to SOP CTS-SL-273-1 and analyzed by HPLC-DAD.
  - For initial certification, all the products applied shall be sent to SGS.
  - For samples collected onsite during the surveillance, at least one product per product certification unit shall be tested.
  - If new products are applied during the effective period of the verification report, all the products shall be sent to SGS lab. The examined recycled material/ product shall pass the verification test. Positive result shall be obtained for the recycled PET material/product from bottles according to the test method required in this document.
  - For recycled PET products which were certified shall be sent to SGS approved labs for testing.

## Appendix 2

### ORGANIZATION FOR VERIFICATION

Below organizations management of recycled content shall be verified according to the different applicant roles defined in this document:

- a) If the applicant is a manufacturer which manufactures recycled material, the recycled material manufacturer shall be verified onsite.
- b) If the applicant is a processor of recycled materials, the processor and the manufacturer of recycled materials shall be verified onsite.
- c) If the applicant is an OEM/ODM factory, the OEM/ODM factory, processor and recycled material manufacturer shall be verified onsite.
- d) If the applicant is a brand owner, the brand owner, OEM/ODM factory, processor and recycled material manufacturer shall be verified onsite.
- e) For any tier of the supply chain listed in a) through d) above, where multiple facilities owned by the same company are processing the recycled content material at the same tier in the supply chain, and the facilities are covered by the same management system:
  - i. If there are 5 or less facilities at this tier, an on-site audit shall be conducted for each that account for >5% of the production volume.
  - ii. If there are six or more facilities, the first five with the highest production will be handled as outlined in e) i. above and for facilities 6 and beyond, on-site or remote audits shall be conducted at SGS's discretion.
  - iii. In general, for facilities accounting for <5% of production volume a remote audit shall be conducted.
- f) For any tier of the supply chain listed in a) through d) above, where multiple facilities are processing the recycled content material at the same tier in the supply chain, but are owned by different companies, each shall be verified onsite, unless they account for <5% of the production volume where upon on-site or remote audits shall be conducted at SGS's discretion.

## Appendix 3

### ONSITE VERIFICATION CHECKLIST

#### 1. Management system criteria

##### 1.1 General Management System Criteria

- 1.1.1 The organization shall demonstrate that it is a registered legal entity with legal permission to operate and shall maintain a listing of the name, location, and processes performed at each site, along with documentation of legal permission to operate for all processing sites.
- 1.1.2 The organization shall operate a management system that ensures that all applicable criteria of the ECCS Recycled Content Protocol are fully implemented. The organization shall establish, implement, and maintain documented procedures and/or work instructions covering the reclaimed or recycled materials (product) production.
- 1.1.3 The organization shall maintain a documented management plan that describes processes, including the points of risk as well as a material and process flow diagram. (The risk of contamination of recycled and non-recycled materials needs to be clarified)
- 1.1.4 The organization shall appoint a management representative to be responsible for the overall conformity with the Recycled Materials Process.
- 1.1.5 The organization shall provide the certification body with access to complete, up-to-date, and accurate information, along with access to their operations to demonstrate conformity with the ECCS Recycled Content Protocol. Including:
  - a) Access to all parts of the physical site;
  - b) Access to all documents and records related to conformity with the Recycled Content Protocol which may include financial records;
  - c) Access for auditors to interview personnel without restriction and without observation by management representatives and;
  - d) Equivalent access to all sites and associated subcontractors included in the certificate.
- 1.1.6 The organization shall conduct a regular (at least annual) internal inspection process to evaluate their own conformity with the ECCS Recycled Content Protocol. The internal inspection shall be documented along with any non-conformities identified.

##### 1.2 Training

- 1.2.1 The organization shall maintain and communicate clearly defined roles and responsibilities for all responsible personnel that may have an impact on the implementation of recycled content.  
The staff responsible for each procedure impacted by the recycled content shall be given proper and regular training (at least once a year) with regards to the implementation, and documented training records shall be maintained.

##### 1.3 Volume Reconciliation

- 1.3.1 The organization shall maintain a system that controls and quantifies volumes of claimed input and output materials at all times. Including:
  - a) Complete and up-to-date records of the description, quantities, origins, and/or destinations of all recycled materials purchased, sold, received, or delivered;
  - b) Transaction evidence for any incoming recycled materials; and
  - c) Volume reconciliations performed.(The verification is based on real orders. At least three completed production records need to be verified.)
- 1.3.2 The organization shall conduct an ongoing volume reconciliation per lot or batch production to balance the quantities of each recycled material purchased, in stock, and sold.  
The volume reconciliation calculation shall be conducted based on the standardized weight of the materials, except when final products are the inputs. Where the final products are the input, the number of items is permitted.

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The organization shall specify the equations used for the volume reconciliation and recycled content claims, including an example of the equations being applied.

1.3.3 The organization shall define the expected waste factors for each processing step. Where waste factors vary, separate waste factors shall be defined to cover all products and processing steps related to recycled content. The organization shall specify the basis for determining waste factors. The volume reconciliation calculation shall take into account inventory levels, waste, rejected goods, and recycled materials sold without recycled claims.

1.3.4 The organization shall review the volume reconciliation at least annually to ensure that information is correct. This shall include:

- Taking a physical inventory of any recycled materials in stock, including inputs, materials in the production process, and outputs;
- Comparing the actual waste factors to the expected waste factors. Deviations of more than five percent from the expected waste factors shall be investigated;
- Consideration of recycled material sold without recycled claims;
- Comparing the production of recycled and non-recycled material to the site's production capacity; and
- Maintaining a record of the reviewed volumes.

If the organization uses a continuous production method where batch level segregation of product is not possible, volume reconciliation may be permitted on an alternative basis.

### 1.4 Record Keeping

1.4.1 The organization shall maintain complete, up-to-date, easily auditable, and understood records to demonstrate conformity with all criteria of the Recycled Content Protocol. All records used in the implementation and/or verification shall be retained by the Organization for a minimum of five years.

### 1.5 Outsourcing

1.5.1 The organization may outsource the handling and processing of recycled materials to subcontractors. In this case, the organization is acting as a contracting organization. The organization shall maintain full responsibility for conformity with the ECCS Recycled Content for outsourced materials. Subcontractors shall not have common ownership with the contracting organization.

1.5.2 The organization shall classify each subcontractor as either:

- An associated subcontractor who is not independently certified to the ECCS Recycled Content Certification, and who is audited as needed under the organization's certificate; or
- An independently certified subcontractor, who holds a certificate to the ECCS-Recycled Content Certification independent from the organization.

1.5.3 The organization shall maintain a list of all subcontractors who may be used to store or process recycled materials, including the subcontractor's name, address, contact details, and outsourced processing steps. For independently certified subcontractors, the list shall also include the subcontractor's certificate and certificate expiry date.

1.5.4 The organization shall receive approval from the certification body and an updated certificate prior to outsourcing to a new subcontractor.  
The organization shall establish management requirements for new subcontractors, including selection and review requirements, and establish and regularly update the list of subcontractors.

1.5.5 The organization shall have a valid contract with each associated subcontractor which identifies the work to be outsourced and specifies that the subcontractor shall:

- Meet all applicable certification criteria of the ECCS Recycled Content Protocol;
- Maintain physical separation of the recycled material from all other materials present at the subcontractor's site;
- Agree to allow the organization's certification body to conduct audits of the subcontractor in accordance with the ECCS Recycled Content Protocol;

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- d) Not make any claims related to the ECCS Recycled Content Protocol, including claims of the subcontractor being certified to the Standard or any use of the ECCS Recycled Content Protocol; and
- e) Not further outsource any processing or storage of the recycled material.
- f) Meet all applicable certification criteria of the ECCS Recycled Content Protocol under their own certified system;
- g) Within seven calendar days, inform the organization of any change in their certification status, including suspension, withdrawal, expiry, or recertification; and
- h) Provide the organization with an updated certificate upon recertification.

1.5.6 If the organization is acting as a subcontractor for another contracting organization who is certified to the ECCS-Recycled Content Certification, the organization shall notify SGS of the arrangement and shall ensure that all criteria in the contract with the contracting organization are met.

## 2. Processing and Handling Criteria

### 2.1 General Product Certification Criteria

2.1.1 The organization (at least reclaimer) shall hold a valid SGS recycled content verification report whenever recycled materials are labelled with assured claims, shipped, or sold. Blending, mixing, and processing may occur between an audit and the time a SGS ECCS Recycled Content Certification (e.g., certificate, verification report, testing report) is issued with the SGS's prior approval. Otherwise, the materials shall not be considered to be certified.

### 2.2 Managing Inputs

2.2.1 The organization shall maintain a complete list of suppliers of recycled materials, including each recycled materials supplier's certificate number.

2.2.2 The organization that receives qualified recycled materials as inputs shall inspect the documents accompanying the inputs to confirm that the description, quantity, quality, blend and mix percentage, and source described in the document match the products received. For recycled materials already certified to the ECCS Recycled Content Protocol, a certificate shall accompany the recycled materials, confirming they were produced by an organization certified to the ECCS-Recycled Content Certification.

The organization shall provide copies of all of the above documents for the incoming reclaimed or recycled materials.

2.2.3 The Pre-Consumer and Post-Consumer Recycled Material Content percentage shall be recorded separately for each batch at every certified site and recorded on the certificate.

2.2.4 For all recycled materials entering the supply chain which are not yet certified to the Standard, there shall be verification or certification documentation that confirms the identity of the recycled material as an accepted input according to the ECCS-Recycled Content Protocol and Product Rules. This documentation shall at minimum include:

- a) The name and address of the supplier;
- b) The quantity, quality, and description of the product(s);
- c) Reference to claims being made about the material(s);
- d) Shipping document(s);
- e) financial record(s) of the purchase

2.2.5 In addition, entities involved in Material Recycling shall:

- a) Verify that all sources of recycled material have legal authorization to operate for the relevant function and hold copies of the relevant documents.
- b) Inspect all incoming shipments of recycled material to confirm that they are not virgin material;
- c) confirm the correct identification as Pre- or Post-Consumer.
- d) Retain records of inspections.

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- 2.2.6 For recycled materials moving from one site to another within the same organization (all the sites covered in one certificate) there shall be corresponding records that reference the initial recycled materials, the quantity, quality, blend and mix percentage, and description of the recycled materials being received, sufficient to identify the corresponding certificate.
- 2.2.7 Material Recyclers who collect recycled material from their own processing shall retain the following records to verify their volume of recycling:
  - a) Records of all materials entering the recycling process.
  - b) Description of recycled material and the stage where the waste was collected.
  - c) Any other relevant transfer notes.

### 2.3 Material Handling and Processing

- 2.3.1 The Organization shall demonstrate control over the flow of Products within the unit (e.g., processing/manufacturing steps performed), recipes used, composition, and stock quantities
- 2.3.2 The recycled materials shall be clearly identified as they move through production at all times. This may include, but is not limited to, direct labeling of recycled material, machines, storage vessels, or storage areas.
- 2.3.3 The recycled material shall be separated from non-recycled material at all times, except as allowed by Section 2.4 (Blending and Mixing).
- 2.3.4 The machinery shall be free of non-recycled material prior to use for recycled material, if not, doing so may result in a contamination which affects the deviation of the volume reconciliation.
- 2.3.5 The storage of recycled material shall be managed in order to identify and segregate recycled material from non-recycled material. Procedures shall be in place to prevent commingling or substitution of the recycled material with other materials or products.
- 2.3.6 Extra precautions shall be taken where recycled materials are being shipped, stored, or processed alongside non-recycled materials of the same type, to ensure that no accidental commingling or substitution occurs.  
The same requirements shall apply to the recycled material with different characteristics.

### 2.4 Blending and Mixing

- 2.4.1 Blending and mixing of recycled materials with non-recycled materials is allowed and shall be managed at a batch level.
- 2.4.2 When blending and mixing recycled materials with non-recycled materials, or different recycled materials with different percentages of certified content, the organization shall prepare composition calculations which include the following:
  - a) Documentation of all input materials to the product or specified component resulting from the blending or mixing, including their material, material composition, weight of product used, and recycled percentage;
  - b) Calculation of the percentage of recycled content and content per raw material based on the weight and recycled percentage of each input along with a material composition test report;
  - c) Consideration of loss factors per input material and product; and
  - d) Demonstration that the final calculated content is representative of the actual recycled material present following processing.In cases where there is the possibility of differential rates of production loss between recycled and virgin inputs, Certified Organizations shall address this through their mass balance formula for each material to show that calculations were done to account for the differences.
- 2.4.3 Composition calculations may be made per batch or per article included within the batch.  
Trims may be excluded from composition calculations of textile products and footwear when they are not the recycled material and when the total trims do not account for more than ten percent of the total product weight.

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### 2.5 Transport and Sale

- 2.5.1 The organization shall ensure that the products containing recycled material shall be transported to other units, including wholesalers and retailers, only in appropriate packaging, containers, or vehicles that are closed/sealed in such a way that substitution and contamination of the content is not possible without manipulation or damage to the container.
- 2.5.2 All shipments of recycled materials shall be labeled with identification that clearly links them to the relevant invoices or shipping documents. Alternatively, this information may be presented on an accompanying document, as long as such documents can be undeniably linked with the packaging, container, or transport vehicle of the recycled material.
- 2.5.3 The organization shall provide documented proof of the recycled material's sale, which may include but is not limited to:
  - a) Invoices, purchase orders, financial records, and shipping documents (e.g., government transportation documents) that show outgoing products have been sold to the named buyer of the products;
  - b) The identity of the recycled materials, quality, and quantities;
  - c) Invoices, shipping documents (e.g., government transportation documents), financial records, and documents of purchase of the reclaimed or recycled materials inputs;
  - d) Composition calculations;
  - e) A balanced volume reconciliation;
  - f) The identity of any subcontractors who handled the material while it was owned by the organization; and
  - g) Any other documentation.

### 3. Volume Reconciliation Check:

- a) For post-Production site, number of materials may be more appropriate than the weight of the materials when conducting a Volume Reconciliation Check.
- b) Yearly recycled material input quantity in last 12 months (or longest period if less than 12 month) shall be checked. Please describe here.
- c) Yearly recycled materials used as input quantity in last 12 months (or longest period if less than 12 months) shall be checked. Please describe here.
- d) Yearly claimed product (output) quantity for last 12 months (or longest period if less than 12 months) shall be checked. Please describe here.
- e) The volume reconciliation equation used to calculate recycled content shall be available for checking. (An example of the equation being applied can be requested)
- f) Actual Conversion rate of production or process from input to output is within 5% deviation of expected amount.
- g) The stock quantity of recycled materials (used as input) shall be checked at beginning and end of the term.
- h) The recycled content shall be calculated by mass balance. Please describe the percentage here.
- i) The calculated recycled content is consistent with the standard required percentage.



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## Appendix 4

### DOCUMENTS REVIEW

- Documents shall be kept as evidence of the management and traceability of the recycled materials/ products for at least five years which includes input management, material handling and processing, transport, and sale.
- For recyclers, which are the recycled materials suppliers, valid documents of the source of the reclaimed materials, transaction documents and records of all materials entering the recycling process shall be kept. See table below for the list of valid documents.

Document Name	Requirements
Business license & organization structure chart to be certified.	Business license (Original or Duplicate) & organization structure chart
Recycled Material Usage Plan	Objectives and indicators for recycled content usage The indicators should have measurable parameters and reflect continuous improvement
Recycled product specification	Product name is in accordance with certificates Certified Product List / Specification form / BOM List / Product Process Flow Chart
Quality manual and & Procedure	Organization structure, appoint management representative, management procedures for recycled materials, production flow chart and layout
Staff training in production	Training records for all staff who may have impact on the implementation of production, regarding the definition of roles and responsibilities, and the Recycled Product system plan in general
Recycled product order contract review record	Order contract, clearly record customer order requirements: including product composition, raw and auxiliary materials compliance, quality requirements, and packaging.
Complete list of recycled material suppliers	Complete list of raw materials suppliers, shall including recycled materials suppliers
Recycled material supplier evaluation record	SGS ECCS-Recycled Content certified recycler and recycled material user supplier: certificate (within validity)
Raw Material Records	Recycled raw material purchasing date, invoice, transportation records, contract between reclaimed material supplier, and purchase entry - use - stock qty records
Recycled raw material acceptance inspection record	Inspection records of recycled material packages, label, quantity, transportation vehicles, etc.
Recycled raw material in and out records	Recycled raw materials storage and entry account, including source, batch number, specifications, storage time and quantity, outbound time, destination, quantity, and inventory quantity
Recycled product related production risk point assessment and control actions records	Isolation and identification for each process, storage, and other steps (such as easy to pollute, easy to mix batches, etc.)
Recycled product related production Traceability Record	For each certified product, a complete set of production batch records, from material input, production, quality control, finished product to storage records
Recycled content calculation	Recycle content calculation work instruction, and related records (considering the statistics of each process input and product balance, loss rate especially when different materials have different loss rates in the production process)

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	Volume reconciliation records on annual basis to check if the enough input to produce the outputs taking into account loss during production
Recycled product related quality inspection and testing report review	Recycled product related quality inspection and testing report review
Recycled product related delivery inspection record	Inspection includes product packing, identification, transportation compliance
Recycled product label	ECCS Recycled Content Mark can only be used when recycle content more than or equal to 5% for softlines and electronic and electrical products, 20% for Hardlines products.
Recycled product sales records	VAT invoices and delivery notes (domestic sales), commercial invoices and bills of lading (foreign trade) for recycled products
Recycled product transaction documentation	Recycled products manufactured in accordance with ECCS Recycled Content requirements must keep valid transaction documentation
Recycled product related order total balance statistics record	Balance statistics of recycled product order input and output ( last 12 months ) : product – material (recycled and non-recycled) - stock - sales - loss
Customer complaints and handling records regarding recycled products	Customer complaints and handling records regarding recycled products

- For recycled materials user, all the recycled materials entering the supply chain shall have a valid ECCS Recycled Content Certification issued by SGS.
- Reclaimed material or recycled material content percentage shall be recorded separately for each batch, or production run segment, at every facility.
- Documents recording input and output materials and their amount and weight shall be kept for mass balance calculation.

# SGS GREEN MARK – RECYCLED CONTENT REQUIREMENTS SUMMARY

## Appendix 5

### RESTRICTED SUBSTANCE REQUIREMENT

Recycled PET material and recycled PET product to be certified shall not have restricted substances listed below. The test method is specified in AFIRM RSL Version 07, 2022.

Restricted substance	Requirement	Test method	Remark
Bisphenols – BPA	1 mg/kg	Required in AFIRM RSL	Only applicable to rPET pellet and fibre
Chlorinated Benzenes and Toluene	Total: 1 mg/kg (Not including 1,2-dichlorobenzene. The requirement is 10 mg/kg)	EN 17137:2018	Applicable for product manufactured by recycled PET fibre users.
Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs), including all isomers	Total APs: 10 mg/kg Total APs + APEOs: 100 mg/kg	Required in AFIRM RSL	
Azo-amines and Aryl Amine salts	20 mg/kg each	EN ISO 14362-1:2017	
Bisphenols	1 mg/kg	Required in AFIRM RSL	
Dyes Forbidden and Disperse	30 mg/kg each	DIN 54231:2005	
Extractable heavy metals (Sb, As, Ba, Cd, Cr, CrVI, Co, Cu, Pb, Hg, Se)	According to AFIRM RSL	Required in AFIRM RSL	
Flame retardants	10 mg/kg each	EN ISO 17881-1:2016, EN ISO 17881-2:2016	
Formaldehyde	Adults and children: 75 ppm Babies: 16 mg/kg	EN ISO 14184-1:2011	
Organotin- Compounds	According to AFIRM RSL	CEN ISO/TS 16179:2012 or EN ISO 22744-1:2020	
Polycyclic Aromatic Hydrocarbons (PAHs)	According to AFIRM RSL	AFPS GS 2019	

## SGS GREEN MARK – RECYCLED CONTENT REQUIREMENTS SUMMARY

Restricted substance	Requirement	Test method	Remark
Phthalates	500 mg/kg each Total: 1000 mg/kg	EN ISO 14389:2014	
Perfluorinated and Polyfluorinated Chemicals (PFCs)	According to AFIRM RSL	EN ISO 23702-1	
Quinoline	50 mg/kg	DIN 54231:2005	

## Appendix 6

### ORGANIZATION FOR VERIFICATION FOR RPET SCHEME

Below organization shall be verified according to the different applicant roles defined in Recycled Content Protocol:

- a) If applicant is a recycler which manufactures the rPET pellet, the rPET pellet manufacturer shall be verified onsite;
- b) If applicant is a recycled material user which manufactures the rPET fibre, the rPET pellet manufacturer and rPET fibre manufacturer shall be verified onsite;
- c) If applicant is a recycled material user which uses rPET fibre to manufacture, or processing related other products (e.g., yarn, fabric, final product), the rPET pellet manufacturer, rPET fibre/yarn manufacturer, and applicant shall be verified onsite. Document check for mass-balance shall be arranged for the other manufacturer(s) not mentioned above.
- d) For any tier of the supply chain listed in a) through c) above, where multiple facilities owned by the same company are processing the recycled content material at the same tier in the supply chain, and the facilities are covered by the same management system:
  - i. If there are 5 or less facilities at this tier, an on-site audit shall be conducted for each that account for >5% of the production volume.
  - ii. If there are six or more facilities, the first five with the highest production will be handled as outlined in d) i. above, and for facilities 6 and beyond, on-site or remote audits shall be conducted at SGS's discretion.
  - iii. In general, for facilities accounting for <5% of production volume a remote audit shall be conducted.
- e) For any tier of the supply chain listed in a) through d) above, where multiple facilities are processing the recycled content material at the same tier in the supply chain, but are owned by different companies, each shall be verified onsite, unless they account for <5% of the production volume where upon on-site or remote audits shall be conducted at SGS's discretion.

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## Appendix 7

### RESTRICTED SUBSTANCE REQUIREMENT

Recycled material and recycled material in product to be certified shall not exceed the hazardous substances requirement stated in EU RoHS Directive 2011/65/EU and its amendment.

Restricted substance	Requirement	Test method	Remark
Lead	1000 mg/kg	Latest version of IEC 62321	
Cadmium	100 mg/kg		
Mercury	1000 mg/kg		
Hexavalent Chromium	1000 mg/kg		
Polybrominated biphenyls (PBB)	1000 mg/kg		
Polybrominated diphenyl ethers (PBDE)	1000 mg/kg		
Bis(2-ethylhexyl) phthalate (DEHP)	1000 mg/kg		
Butyl benzyl phthalate (BBP)	1000 mg/kg		
Dibutyl phthalate (DBP)	1000 mg/kg		
Diisobutyl phthalate (DIBP)	1000 mg/kg		