



JRC TECHNICAL REPORT

Manual for authorities awarding public contracts, based on EU Ecolabel criteria

*For the procurement of
printed paper, stationery
paper, and paper carrier bag
products*

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DRAFT

1. Introduction

Every year, over 250,000 public authorities in the EU spend around 14% of EU GDP¹ on the purchase of services, works and supplies², accounting for roughly EUR 1.8 trillion annually³. The public sector can use procurement to boost jobs, growth and investment, and to create an economy that is more innovative, resource and energy efficient and circular.

Green Public Procurement (GPP) is defined in the European Commission's Communication "Public procurement for a better environment"⁴ as "a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured."

This manual is intended to help public authorities integrate in their purchases a selection of EU Ecolabel criteria for [printed paper, stationery paper and paper carrier bags product\(s\)](#) as established by Commission Decision 2020/1803⁵ as to be able to purchase on the EU market goods and services with the best environmental performance. The manual may also serve as an aid to those market actors who wish to submit offers to public tenders containing environmental requirements.

The manual is published according to Regulation (EC) 66/2010 on the EU Ecolabel, art. 7.

This manual identifies, among the full set of EU Ecolabel criteria for the specific product group, the ones that are considered most suitable to be included in a public procurement process.

The selection is made considering three main principles as follows:

1. Compliance with the existing public procurement rules, in particular as regards the link to the subject-matter of the contract being awarded;
2. The criteria must be verifiable by public authorities, beyond the reliance on having been awarded the EU Ecolabel;
3. Highest environmental relevance as per the life-cycle assessment and the EU Circular Economy Action Plan⁶.

The recommendations proposed within the manual are considering the most dominant environmental impacts of the product group as per the life-cycle assessment stages. The relevant findings from the "Preliminary Reports" background research undertaken in the EU Ecolabel criteria for printed paper stationery paper, and paper carrier bag products revision process have been referred to for the proposed recommendations.

For more information, please consult the [project website](#).⁷

Should you happen to have any comments or proposals for the manual improvement, please contact [European Product Bureau](#)

¹ Gross Domestic Product

² https://ec.europa.eu/info/policies/public-procurement_en

³ Buying green! A handbook on green public procurement, 3rd edition, 2016.

⁴ [COM\(2008\) 400 final](#)

⁵ [OJ L 402, 1.12.2020, p. 53-72](#)

⁶ [EUR-Lex - 52020DC0098 - EN - EUR-Lex \(europa.eu\)](#)

⁷ <https://susproc.jrc.ec.europa.eu/product-bureau/product-groups/410/home>

2. Use of EU Ecolabel criteria in public procurement

The EU public procurement directives (Directive 2014/24/EU⁸ and Directive 2014/25/EU⁹) define the possibilities of using labels in public procurement. Labels can be used at different stages of the procurement process. At the verification stage, by providing a means of third party verification, labels can considerably help procurers to save time while ensuring that high environmental standards are applied in public procurement.

Labels can be required as means of proof in public procurement, provided that all of following conditions are fulfilled¹⁰:

- a) the label requirements only concern criteria which are linked to the subject matter of the contract and are appropriate to define characteristics of the supplies or services that are the subject matter of the contract;
- b) the label requirements are based on objectively verifiable and non-discriminatory criteria;
- c) the labels are established in an open and transparent procedure in which all relevant stakeholders, including government bodies, consumers, social partners, manufacturers, distributors and non-governmental organisations, may participate;
- d) the labels are accessible to all interested parties;
- e) the label requirements are set by a third party over which the economic operator applying for the label cannot exercise a decisive influence.

Contracting authorities requiring a specific label shall accept all labels that confirm that the works, supplies or services meet equivalent label requirements.

The EU Ecolabel is an EN ISO 14024 Type I Ecolabel voluntary certification scheme of environmental excellence. EU Ecolabel criteria are established through a Commission Decision for a defined product group¹¹. To be awarded with the EU Ecolabel, a product (good or service) must comply with all the requirements set in the Commission Decision. EU Ecolabel licences are granted by EU Ecolabel competent bodies¹².

The EU Ecolabel scheme fulfils the above points from b) to e). As regards point a), this document identifies the criteria that in most cases fulfil the requirements of point a) on the link to the subject matter of the contract. Contracting authorities, depending on how they define the subject matter of their contract, must verify on a case-by-case basis, the compliance with the requirements of point a).

For more detailed guidance, please refer to resources such as the EU public procurement directive ([Directive 2014/24/EU](#)), the [Buying Green! Handbook](#), and the [Public Procurement Guidance for Practitioners](#) published by the European Commission.

⁸ [EUR-Lex - 32014L0024 - EN - EUR-Lex \(europa.eu\)](#)

⁹ [EUR-Lex - 32014L0025 - EN - EUR-Lex \(europa.eu\)](#)

¹⁰ As specified in Art. 43 of [Directive 2014/24/EU](#) of the European Parliament and of the Council of on public procurement, and Art. 61 of [Directive 2014/25/EU](#) of the European Parliament and of the Council on procurement by entities operating in the water, energy, transport and postal services sectors

¹¹ More information on the EU Ecolabel can be found here: <https://ec.europa.eu/environment/ecolabel/>

¹² <https://ec.europa.eu/environment/ecolabel/competent-bodies.html>

Technical specifications

Technical specifications are the minimum compliance requirements that must be met by all tenders. Technical specifications provide a clear, accurate and full description of the requirement and standard to which tenderer should conform.

Technical specifications must not concern general corporate practices but only characteristics specific to the product being procured. A link to the subject matter can concern any stage of the product's life-cycle, including its supply-chain, even if not obvious in the final product, e.g., not forming a material part of the product. Offers not complying with the technical specifications must be rejected. Technical specifications are not scored for award purposes, they are strictly pass/fail requirements.

Assessing and verifying the compliance with GPP requirements of the tender is a key element of the technical specification that guarantee the success of the procedure and the achievement of the overall environmental objectives. Required evidence may include among others:

- Test reports, i.e. on drinkability;
- Monitoring data, i.e. regarding emissions from production sites;
- Ecolabels or other specified third-party certification;
- Description of systems in place, i.e. regarding quality or energy management.

3. Market analysis

- ▲ *A good knowledge of the market (e.g. the availability, cost and possible practical implications of greener alternatives) is essential to decide how best to include environmental criteria in a procurement process.*
- ▲ *Dialogue with market parties before the procurement process begins can help identify solutions, which the public authority may not have been aware of. It can also assist the market in meeting the criteria which will be applied in the procurement process, by providing information about the public authority's expected requirements.*
- ▲ *Letting the market know well in advance about tenders which will include environmental criteria is advisable. This will give suppliers sufficient time to prepare for your requirements and apply for the EU Ecolabel for their products.*

A market analysis of printed paper, stationery paper and paper carrier bag products available on the EU market was undertaken to assess market trends, initiatives and innovations. Data is usually available in an aggregated form thus the detailed analysis for the specific product type was not possible, in particular, data overlap was observed between printed matter and converted paper products:

- The EU printing industry generates an annual turnover of around €52 billion, where printing activities account for €44 billion¹³. Germany is a leading country with a production value over €10 billion. The EU printing industry is manufacturing a variety of products; those with high market share are printed advertising material (26%), commercial catalogues (8%), books, brochures and leaflets (16%), and newspapers and journals (16%) (Figure 1).
- Production volumes of converted paper products were at 3,507 tonnes in 2016. Italy was leading a single sold production market, representing almost 41% of the stationery paper products production volume (equivalent to EUR 948 million, or 31% of EU-28 sold production value). More specifically, for the envelopes sub-category, in 2016, Germany was the most important market representing 35% of the envelope production volume (equivalent to EUR 226 million) and 16% of the apparent consumption volume. In 2016, the total sold production in EU-28 of paper carrier bags with base less than 40 cm reached approximately million tonnes (EUR 2 billion in value). The

¹³ EUROSTAT, 2016.

breakdown of sold production (volume) reveals that the market is dominated by 36% by products that falls under miscellaneous statistical classification (17.23.14)¹⁴ "other paper and paperboard, used for writing or printing or other graphic purposes, printed, embossed or perforated". This group is followed by box files (17%), binders (13%), boxes wallets (11%), and exercise books (11 %) (Figure 2).

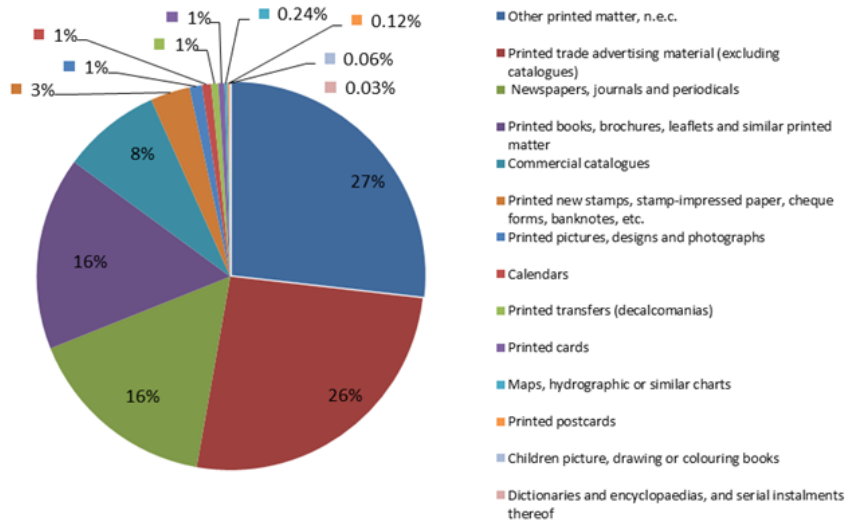


Figure 1. EU market value of printed paper by type of product (Source: EUROSTAT, 2016)

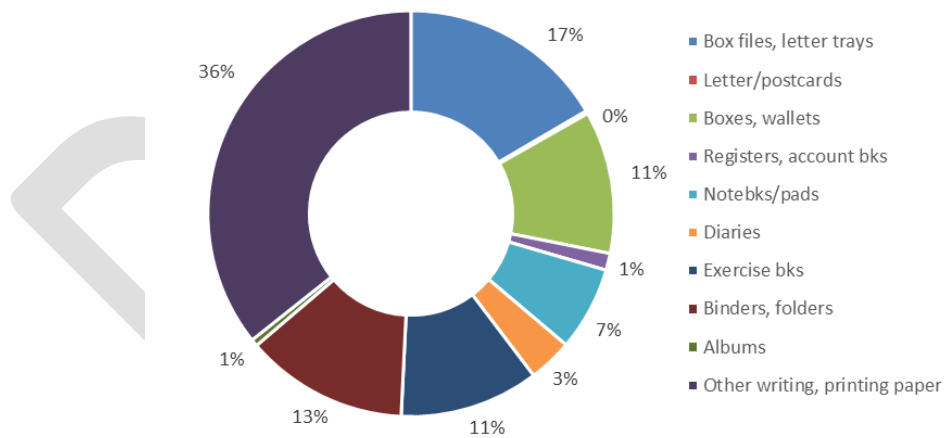


Figure 2. Market segmentation of converted paper products per product type in volume (kg) (Source: EUROSTAT, 2016)

The Main CPV Code¹⁵ that refers to printed paper, stationery paper and paper carrier bags is: 22000000 (Printed matter and related products). More detailed information on CPV codes can be found in Annex I to Regulation (EC) No 213/2008.

The EU Ecolabel presence on the market for converted paper products is constantly increasing. The criteria adopted in 2020 for printed paper, stationery paper and paper carrier bags products Decision (EU) 2020/1803 are the result of the merger and the update of two previous separate criteria sets: printed

¹⁴ EUROSTAT. Statistical Classification of Products by Activity in the European Union, Version 2.1

¹⁵ <https://simap.ted.europa.eu/web/simap/cpv>

paper (Decision 2012/481/EU) and converted paper (Decision 2014/256/EU). The validity of these two EU Ecolabel criteria sets will end in May 2022.

For more information about the products that have been awarded EU Ecolabel license, please see the EU Ecolabel “Facts and Figures” page¹⁶ and [the EU Ecolabel Product Catalogue](#).

For more information on market engagement, please see module 6 of the EU [GPP training toolkit](#).

A good knowledge of the market (e.g. the availability, cost and possible practical implications of greener alternatives) is essential to decide how best to include environmental criteria in a procurement process.

Dialogue with market parties before the procurement process begins can help identify solutions which the public authority may not have been aware of. It can also assist the market in meeting the criteria which will be applied in the procurement process, by providing information about the public authority’s expected requirements.

Letting the market know well in advance about tenders which will include environmental criteria is advisable. This will give suppliers sufficient time to prepare for your requirements¹⁷.

4. Environmental hotspots

The environmental performance of the product group was assessed by applying the Life Cycle Assessment (LCA) methodology that indicates the potential environmental impacts related to the product life cycle.

The key environmental areas of concern for the product group are strongly associated with paper substrate used in a product. Significant environmental impacts are also associated with: a) energy consumption during the production phase, b) Volatile organic compounds (VOC) emissions, and c) generation of waste.

 For more detailed information on the environmental impacts associated, please consult the [project website](#):

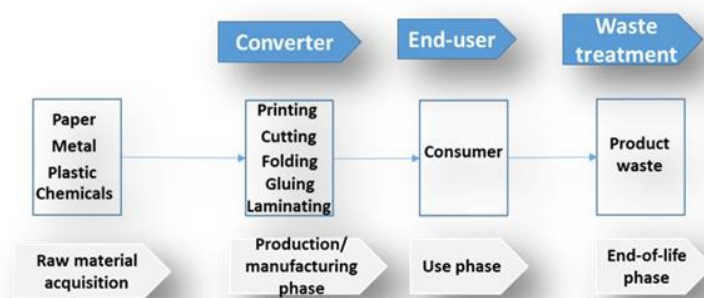


Figure 3. General illustration of the life cycle stages of a printed and converted paper product (Source: based on JRC, 2021)

The recommendations included in this manual are specifically designed to address the principal environmental impacts along the life cycle of products.

Environmental hotspots identified as relevant to public tenders, as per the 3 criteria presented in the Introduction, are summarised in the Table 1 below.

¹⁶ <https://ec.europa.eu/environment/ecolabel/facts-and-figures.html>

¹⁷ See the example of City of Copenhagen’s procurement policy for procurement of ecolabelled products and services: https://ec.europa.eu/environment/gpp/pdf/news_alert/Issue_100_Interview.pdf

The relevant improvement potential areas associated with different types of products are summarised below (based on JRC, 2021):

- Considering the entire life cycle of a product, the production of the paper substrate is the main contributor to all environmental impact categories considered. Paper making represents 45%–90% of GWP¹⁸ of products, such as for printed magazines or books. For envelopes, LCA studies indicate that between 26% and 90% of impacts depending on the impact category will occur at the upstream production phase that is mainly allocated to the pulp or papermaking process. The use of paper with a reduced environmental impact along the pulp and paper making process, the use of recycled fibre or boosting paper recyclability are indicative measures that are likely to mitigate that impact.
- The printing and production processes are life cycle stages representing impacts share between 20 to 37.5%. It is mainly due the energy consumption and use of chemicals, along with waste generation. The electricity used during the manufacturing (considering the EU electricity mix¹⁹) is an important contributor. LCA studies performing energy balance classified printing operations as the relevant hotspot (17%) contrasted with the energy used for paper manufacturing (79%). A reduction between 3 and 8% of the total environmental impact could be achieved with a 20-50% reduction of energy consumption in printing operations.
- Printing industry is one of the principal stationary sources of volatile organic compound (VOC) emissions due to the solvents use.
- Chemicals including ink appear to contribute very little to impacts of the raw material acquisition of paper products. For envelopes, inks contribute barely 3% to all impacts except for terrestrial eco-toxicity, where the contribution is 19%.

Table 1. Main environmental impacts identified across the life cycle of printed paper, stationery paper, and paper carrier bag products and mitigation measures identified (*Source:* Based on JRC, 2021)

Components	Main hotspots identified	Mitigation measures
Input materials		
Paper	<ul style="list-style-type: none"> ✓ Energy consumption; ✓ CO₂ emission; ✓ Emissions to air and water during pulp and paper production; ✓ Potential loss of biodiversity and forestry destruction; ✓ Chemicals consumption during pulp and paper production process; 	<ul style="list-style-type: none"> ✓ Procurement of paper products that make use of paper with lower environmental impact; ✓ Promoting the use recycled fibre; ✓ Ensuring paper recyclability/ environmentally-conscious product design.
Non-paper components	<ul style="list-style-type: none"> ✓ Product recyclability 	<ul style="list-style-type: none"> ✓ Reduce the variety of different materials in a product; ✓ Reduce the non-paper content in a product; ✓ Selection of appropriate parameters that determine the environmental impact of the product, i.e. metal content, plastic content, type of printing ✓ Ensure recyclability: deinkability²⁰, adhesives removability, or repulping²¹.
Production and manufacturing phase		

¹⁸ Global Warming Potential (GWP)

¹⁹ Electricity (European mix) equal to 0.0445 kWh (from Database Ecoinvent)

²⁰ **Deinkability** means removability of ink and/or toner from a printed product to a high extent by means of a deinking process. This will restore as well as possible the optical properties of the unprinted product (European Paper Recycling Council);

²¹ Repulping means conversion of paper back into pulp;

Components	Main hotspots identified	Mitigation measures
Printing, Cutting, Folding, Glueing, Lamination	<ul style="list-style-type: none"> ✓ Energy and water consumption in the production phase; ✓ Emission from processing i.e. VOCs ✓ Waste treatment (solid and liquid waste sorting and collection) ✓ Use of inks and adhesives that might hinder deinkability 	<ul style="list-style-type: none"> ✓ Procurement of paper products manufactured by means of processes with reduced VOCs emission; ✓ Procurement of paper products produced through processes characterised by controlled energy consumption and waste generation; ✓ Increase the use of renewable energy ✓ Best available techniques (BAT); ✓ Use of water –based inks or inks with reduced VOCs content ✓ Ensure product recyclability
Post consumer phase		
End of Life	<ul style="list-style-type: none"> ✓ Product recyclability 	<ul style="list-style-type: none"> ✓ Procurement of paper products designed for recyclability to ensure product circularity and so consumption of primary resources; ✓ User information ✓ Ensure product recyclability

5. EU Ecolabel - based criteria for public procurement of printed paper, stationery paper, and paper carrier bag products.

This section provides the procurer with the criteria that are based on Commission Decision (EU) 2020/1803 of 27 November 2020 establishing the EU Ecolabel criteria for printed paper, stationery paper, and paper carrier bag products that are valid until 31 of December 2028.

The selection of the proposed criteria stems from the cross-analysis of environmental hotspots and improvement potential identified within the EU Ecolabel revision process²² (these being transferred into EU Ecolabel criteria), and their suitability to adapt to the procurement process. For the purpose of this manual, the criteria proposed recognise the use of EU Ecolabel licence as proof of compliance.

For a number of recommendations, the proposed verification is the provision of test reports. For each criterion, the relevant test methods or other acceptable forms of verifications are indicated. When applicable, the criterion is followed by the complementary information on the equivalent verification methods.

As previously mentioned, the suitability of each EU Ecolabel criterion (Commission Decision (EU) 2020/1803) to be accommodated under the GPP scheme was analysed and screened against the three following selection parameters.

1. Be clearly linked to the subject-matter of the procurement contract being awarded²³.
2. Be verifiable by public authorities.
3. Be of high environmental relevance from the perspective of LCA analysis and the EU Circular Economy Action Plan.

Based on the above-mentioned parameters, the following EU Ecolabel criteria are proposed to be translated into GPP recommendation, as Technical Specifications:

- I. Criterion 1- Substrate;

²² Preliminary Background Reports: <https://susproc.jrc.ec.europa.eu/product-bureau//product-groups/410/documents>

²³ According to Article 43 of the EU public procurement directive (Directive 2014/24/EU), third-party environmental labels can be required in technical specifications, award criteria, or contract performance conditions as means of proof. However, their applicability always needs to be checked in relation to the actual subject matter and criteria used in your tender

- II. Criterion 3 – Recyclability;
- III. Criterion 5 – Waste;
- IV. Criterion 6 – Energy use.

Some tips on how the contracting authority can verify if the product is EU Ecolabel.

- ⚠ Check that the purchased product is listed in the catalogue of EU Ecolabel certified products place on the [ECAT website](#) and verify the correspondence of EU Ecolabel license. In case of any uncertainty, please contact a [national Competent Body](#).
- ⚠ In case of an expired certificate, request an update that demonstrate the validity of the certification.
- ⚠ Additionally: check invoices to verify if the name of the product purchased corresponds to that listed in the EU Ecolabel certification, check the quantity purchased,
- ⚠ On-going certification process cannot be considered as a proof of compliance.
- ⚠ For paper substrate used in printer paper, paper stationery or paper carrier bag product(s) the tenderer shall provide a copy of a valid EU Ecolabel certificate according to Annex I to Commission Decision (EU) 2019/70, or other equivalent means of proof from a paper supplier attesting the quantity of EU Ecolabel paper supplied or a pre-contractual agreement with the quantity of EU Ecolabel labelled paper that will be purchased to be printed or treated to assemble the paper product offered

Other EN ISO 14024 type I ecolabels that are relevant to the product group include²⁴:

- [The EU Ecolabel](#),
- [The Nordic Swan Ecolabel](#), Scandinavia
- [The Blue Angel](#), Germany
- [NF Environment](#), France
- [Umweltzeichen](#), Austria

Nevertheless, there is no other ISO type I label that is fully equivalent to the proposed criteria, which are based on EU Ecolabel requirements. For further information please see Table 2 and [Annex I](#)

Table 2. EU Ecolabel - based criteria for public procurement of printed paper, stationery paper, and paper carrier bag products in relation to selected ISO type I ecolabels

Product label	EU Ecolabel ²⁵	Nordic Swan ²⁶	Blue Angel ²⁷ DE-UZ 195	Blue Angel ²⁸ DE-UZ 14b	Blue Angel (DE UZ 217b) ²⁹
Proposed GPP criterion					
TS1: Substrate	✓	✓	✓	✓	✓
TS2: Recyclability	✓	✓	✓	✓	✓
TS3: Waste	✓	✓	✓	✓	X
TS4: Energy use	✓	✓✓	✓	X	X

**Note: the list type I Ecolabel is not exhaustive. The schemes were selected due to their correlation with the EU Ecolabel*

✓ = partially or potentially covered/further assessment required; ✓ = covered, ✓✓ = exceeded X = not covered

²⁴ A list of further ecolabelling schemes can also be obtained at the web site of the Global Eco-labelling Network (GEN) www.gen.gr.jp/product.html

²⁵ Commission Decision (EU) 2020/1803 of 27 November 2020 establishing the EU Ecolabel criteria for printed paper, stationery paper, and paper carrier bag products OJ L 402, 1.12.2020, p. 53–72, available at: <https://eur-lex.europa.eu/eli/dec/2020/1803/oj>

²⁶ Nordic Swan criteria for Printing Companies and Printed Matter, (Version 6.0; 17 March 2021 – 31 December 2026), available at: <https://www.nordic-ecolabel.org/product-groups/group/DownloadDocument?documentId=5507>

²⁷ Environmentally Friendly Printed Matters Basic Award criteria DE-UZ 195, Edition January 2021. <https://www.blauer-engel.de/en/products/paper-printing/print-houses-and-printed-matters-until-12-2021>

²⁸ Finished products made from recovered paper and cardboard. Basic Award Criteria DE-UZ 14b Edition January 2020 <https://www.blauer-engel.de/en/products/paper-printing/finished-products-made-from-recovered-paper-new/notebooks-edition-january-2020>

²⁹ Paper bags and boxes made out of recycled paper Basic Award Criteria DE-UZ 217b. Edition January 2021. <https://produktinfo.blauer-engel.de/uploads/criteriafile/en/DE-UZ%20217b-202101-en%20criteria-V1.pdf>

More information about requirements established by the schemes listed in Table 2 can be found in **ANNEX I**.

- ⚠ *Please consider that the labelling schemes may undergo regular updates that affect the validity of the information provided.*
- ⚠ *The applicability of alternative forms of verification or compliance's evidence always needs to be checked in relation to the actual subject matter and criteria used in a tender.*

Where environmental labels or certificates are not available or applicable, a full assessment and verification process needs to be conducted. Each criterion indicates information about, for example, relevant standards or test methods that could be required to ensure effectiveness.

Scope and definition

The scope and definition covers procurement by public authorities of printed paper, stationery paper, and paper carrier bag products. The definition and scope of the product group was agreed within the framework of the EU Ecolabel criteria revision project for the same product group (Commission Decision (EU) 2020/1803). For simplification reasons the scope proposed to be accommodate under GPP scheme reads as follows:

This GPP criteria recommendation addresses the procurement process of printed paper, stationary paper, and paper carrier bags.

For the purposes of this Manual, the scope of the product group is built on the EU Ecolabel criteria and comprises the following products:

- 1. Printed paper products that consist of at least 90 % by weight of paper, paperboard or paper-based substrates, except for books, catalogues, booklets or forms that shall consist of at least 80 % by weight of paper or paperboard or paper-based substrates.*
- 2. Envelopes that consist of at least 90% by weight of paper, paperboard or paper-based substrates;*
- 3. Paper carrier bags, including wrapping paper, that consist of 100 % by weight of paper, paperboard or paper-based substrates;*
- 4. Stationery paper products, including filing products, that consist of at least 70 % by weight of paper, paperboard or paper based substrates, except for suspension files and folders with metal fastener to which the ceiling does not apply.*

The plastic component cannot exceed 10% by weight, except for ring binders, exercise books, notebooks, diaries, and lever arch files where the plastic weight cannot exceed 13 %.

The metal weight cannot exceed 30g per product, except for suspension files, folders with metal fasteners, ring binders and lever arch files having a filing capacity of up to 225 sheets where it can be up to 75g and except for lever arch files having a filing capacity of more than 225 sheets, where it can be up to 170 g.

Criterion TS1: Substrate

Based on EU Ecolabel *Criterion 1- Substrate* as established by Commission Decision (EU) 2020/1803

Technical specifications
<p>TS1 Use of ecolabelled paper substrate</p> <p>Paper substrate used in a printer paper, stationery paper and paper carrier bag product(s) must have been awarded the EU Ecolabel for "Graphic paper" in accordance with Annex I to Commission Decision (EU) 2019/70, .</p> <p>Verification:</p> <p>For paper substrate used in printer paper, paper stationery or paper carrier bag product(s) the tenderer shall provide a copy of a valid EU Ecolabel certificate according to Annex I to Commission Decision (EU) 2019/70, or other equivalent means of proof²⁾</p> <p>Products, which have been awarded the EU Ecolabel for printer paper, paper stationery or paper carrier bag product(s), will be deemed to comply with the requirements.</p> <p>2) Equivalency means compliance check with the EU Ecolabel criteria for "Graphic paper," in accordance with Annex I to Commission Decision (EU) 2019/70.</p>

Criterion TS2: Recyclability

Based on EU Ecolabel *Criterion 3- Recyclability* as established by Commission Decision (EU) 2020/1803

Technical specifications
<p>TS 2.1 Adhesives removability</p> <p>Adhesive labels that constitute 0,50 % w/w or more of the final product shall prove the compliance with this requirement. Non-adhesive labels are exempted from fulfilling the criteria.</p> <p>Unless otherwise specified, adhesives may be used only if their removability can be proven with a score of at least 71 on the EPRC Adhesive Removal Scorecard.</p> <p>Water based adhesives are exempted from fulfilling this requirement.</p> <p>Pressure sensitive adhesive coatings shall be used only if their removability can be proven with at least a positive removability score according to the EPRC Adhesive Removal Scorecard.</p> <p>Verification:</p> <p>The tenderer shall provide a declaration of compliance with the requirement according to the guidelines of the European Paper Recycling Council (EPRC). The declaration shall be supported by adhesive removability test results according to INGEDE Method 12, or equivalent standard method(s) that are accepted as providing data of equivalent scientific quality.</p> <p>For water-based adhesives, a tenderer or adhesive manufacturer shall provide documentation showing that the adhesive used in the product is water –based. Safety data sheet of adhesive shall be accepted as prove of compliance only if it indicates that the adhesive used in the product is water –based.</p> <p>Adhesive applications listed in the Annex of the "Assessment of Printed Product Recyclability, Scorecard for the Removability of Adhesive Applications", are considered compliant with the requirement.</p> <p>Products, which have been awarded the EU Ecolabel for printer paper, paper stationery or paper carrier bag product(s) , will be deemed to comply with the requirements.</p>
<p>TS 2.2 Deinkability</p> <p>This criterion applies to printed paper products based on white paper.</p> <p>The deinkability shall be proven.</p> <p>The printed product is considered compliant with the requirement if all individual parameters analyzed have a positive score and the final score is at least 51 on the EPRC Deinkability Scorecard, or equivalent.</p> <p>Envelopes shall be exempted from performing deinkability test.</p>

Verification:

The tenderer or ink manufacturer shall provide a declaration of compliance with the deinkability requirements according to the guidelines of the European Paper Recycling Council (EPRC). The declaration shall be supported by deinking test results according to INGEDE Method 11, or equivalent standard methods that are accepted as providing data of equivalent scientific quality.

Printing technologies and material combinations listed in the Annex of the "Assessment of Printed Product Recyclability, Deinkability Score" shall be considered compliant with the requirements.

Testing of printing technologies or inks must be performed on the paper type(s) that is used in a product. The test certificate can be used for prints with the same ink on the same type of substrate if the ink coverage is equal or lower than on the tested product.

Products, which have been awarded the EU Ecolabel for printer paper, paper stationery or paper carrier bag product(s) , will be deemed to comply with the requirements.

1) Equivalency means compliance check with the EU Ecolabel criteria for printed paper, stationery paper, and paper carrier bag products as established in Commission Decision (EU) 2020/1803 European Paper Recycling Council website: <https://www.paperforrecycling.eu/publications/>

Additional considerations

Eco-design is a key aspect of Circular economy policy. It enforces waste prevention, resource efficiency and recycling. An appropriate product design enables manufacturing goods that could be recirculated as quality recyclates. The Criterion addresses different product categories, considering their differences, with the key objective of ensuring the material circularity. For paper products the objective is to enable obtaining recycled paper of similar quality that the original product. Deinkability and removability of adhesive are the key measures that provide information for the assessment of paper products recyclability:

The presence of adhesives in a final product may hamper the recycling process due to the possible formation of deposits that reduce the machine speed and require costly downtime for cleaning. Moreover, the deposits might cause quality defects and can interfere with subsequent printing and converting operations (Venditti et al, 2007). Whether the adhesive film is destroyed during the recycling process depends not only on the process conditions and physico-chemical properties of the adhesive formulation, but also on the geometry of the adhesive film (JRC, 2021).

As regards adhesives removability, INGEDE Method 12 is generally applicable to all adhesive films. Due to the lack of a standardised measurement method, water-based adhesives are exempted from the requirement.

The EPRC Assessment for the Removability of Adhesive Application³⁰ evaluates the results of the INGEDE Method 12 and converts them into scores on the Removal Scorecard;

- ✓ **Negative – Insufficient** removability;
- ✓ Score **0 to 50 – Tolerable** removability;
- ✓ Score **51 to 70 – Fair** removability;
- ✓ Score **71 to 100 – Good** removability.

Based on the EU Ecolabel criterion proposed on adhesives removability, adhesives can be used only if their removability can be proven with a score of at least 71 on the EPRC Adhesive Removal Scorecard.

As regards deinkability, The EPRC deinkability assessment applies to printed graphic products on originally white paper and converts results from INGEDE Method 11 (test method that analyses deinkability parameters) into the EPRC Deinkability Scorecard. INGEDE method 11 envisages the measurements of 6 parameters and, based on the results, a score is assigned for each singular parameter measured. Combining the individual scores of these parameters gives the deinkability score of a product, ranging from

³⁰ Assessment of Printed Product Recyclability, Scorecard for the Removability of Adhesive Applications. (2017). EPRC

-100 to +100. The deinkability of printing inks are proven if the printed matter on which they are used have a positive score according to the EPRC Deinkability Scorecard.

- ✓ **Negative (failed to meet at least one threshold)** - Not suitable for deinking (may be recyclable without deinking*)
- ✓ Score **0 to 50** – **Tolerable deinkability**;
- ✓ Score **51 to 70** – **Fair deinkability**;
- ✓ Score **71 to 100** – **Good deinkability**.

Based on the EU Ecolabel criterion proposed on deinkability, the printed product is considered compliant with the requirement if all individual parameters analysed as part of the INGEDE test method 11 have a positive score and the final score is at least 51 on the EPRC Deinkability Scorecard, or equivalent.

Table 3. Simulation of baseline scenario that considers 50% of the maximum scores for each analysed parameter to reach the final score of 51 (based on INGEDE Method 11)

Parameter	Points	Range of Parameter results
Y: Luminosity	18	$R_p > 53$
Colour a*: (green – red) of the CIELAB system a*	10	R_p
A50: Dirt particle area for particles larger than 50 µm (circle equivalent diameter)	8	$R_p \leq 1500$
A250: Dirt particle area for particles larger than 250 µm (circle equivalent diameter)	5	$R_p \leq 400$
IE: Ink elimination	5	$R_p \geq 55$
ΔY: Filtrate darkening	5	$R_p \leq 12$
Total removal points		51

*If the printed products are not deinkable according to the thresholds established by the EPRC scorecard, they can still be recycled and the fibres can be used for other grades of paper and board³¹.

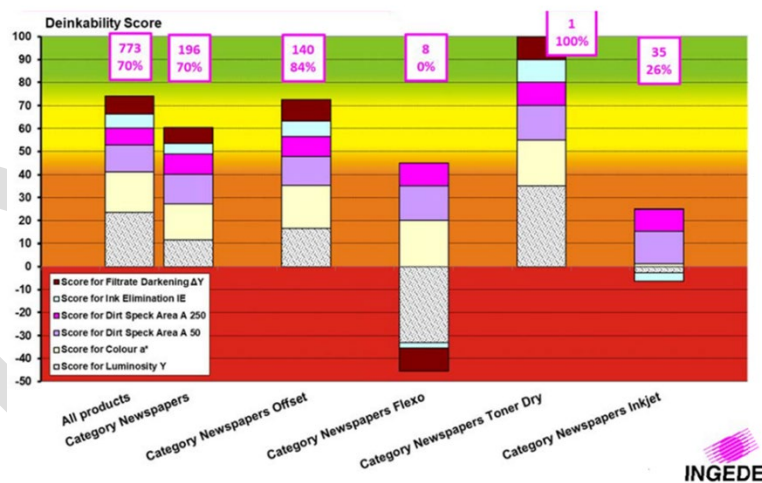


Figure 4. Deinkability scores for printing technologies and inks (Source: INGEDE)

³¹ Assessment of Printed Product Recyclability – Deinkability Score User’s Manual, Issue 2, January 2017

Additional information on recyclability requirement can be found in Chapter 3.3 (Criterion 3 – Recyclability) of Final Technical Report ([JRC, 2021](#)) that provides the supporting rationale and background research for EU Ecolabel criteria for Printed paper, stationery paper, and paper carrier bag products, as published in Commission Decision (EU) 2020/1803.

- 🔍 *The description of INGEDE test methods is available at [INGEDE website](#)*
- 🔍 *“[Guide to an Optimum Recyclability of Printed Graphic Paper](#)”, published by EPRC provides additional information on paper product recyclability*
- 🔍 *[The Scorecard for the Removability of Adhesive Applications](#) (European Paper Recycling Council) includes an annex for applications where there is sufficient experience and confidence that they will deliver good results on removability. Please look for the latest update available.*
- 🔍 *[Assessment of Printed Product Recyclability, Deinkability Score](#) (European Paper Recycling Council) include an annex that defines which printed products can be exempted from testing where there is sufficient experience and confidence that will deliver good results of deinkability. Deinkability assessment is applicable to all kinds of printed graphic products on white paper. Please look for the latest update available*

As to our best knowledge, there are no alternative standardised test methods that are correlated with INGEDE test Methods. The results of the Methods are converted into the EPRC score, which is considered an industry standard for the printed matter’s recyclability assessment.

The cost of analysis will most probably differ across Member States, only indicatively it can roughly be estimated based on information collected as: 790-1100 EUR for INGEDE Method 11, and 340 -475 EUR for INGEDE Method 12^{32,33, 34}.

Criterion TS3: Waste

Based on EU Ecolabel Criterion 4-Waste as established by Commission Decision (EU) 2020/1803

Contract performance clause
<p>TS.3.1 Waste Management system</p> <p>The facility where the product is manufactured shall have in place a system for handling waste, which addresses and documents the measures taken to reduce the amount of solid and liquid waste, including waste paper, ink waste, cleaning agent solution and dampening solution waste as defined by local or national regulatory authorities.</p> <p>The waste management system shall be documented or explained and shall include information on at least the following procedures:</p> <ul style="list-style-type: none"> - handling, collection, separation and use of recyclable materials from the waste stream; - recovery of materials for other uses, such as incineration for raising process steam or heating, or agricultural use; - handling, collection, separation and disposal of hazardous waste, as defined by the relevant local and national regulatory authorities; - continuous improvement objectives and targets relating to the reduction of waste generation and the increase of reuse and recycling rates. <p>Verification:</p> <p>The tenderer shall provide a declaration of compliance with this criterion, together with a description of the procedures adopted for waste management.</p> <p>The tenderer shall provide a waste management plan for each of the sites concerned. Where the waste management is outsourced, the sub- contractor shall provide a declaration of compliance with this criterion as well.</p>

³² Internal communication with stakeholders

³³ <https://info.storaenso.com/hubfs/Paper/recyclability%20tests.pdf>

³⁴ <https://industry.pulpandpaper-technology.com/suppliers/papiertechnische-stiftung/catalog/1512481830-pricelist.pdf>

Tenderers registered with EU Eco-Management and Audit Scheme (EMAS) and/or certified according to ISO 14001 shall be considered as having fulfilled this criterion if:

- 1) the inclusion of waste management for the production site(s) is documented in the company's EMAS environmental statement, or
- 2) the inclusion of waste management is sufficiently addressed by the ISO 14001 certification for the production site(s).

Products, which have been awarded the EU Ecolabel for printer paper, paper stationery or paper carrier bag product(s) , will be deemed to comply with the requirements.

1) Equivalency means compliance check with the EU Ecolabel criteria for printed paper, stationery paper, and paper carrier bag products as established in Commission Decision (EU) 2020/1803

Additional considerations

Criterion requires implementation of the comprehensive waste management plan. It also establishes the ceiling for the quantity of paper for recycling generated during product manufacturing. Waste management is an essential part of increasing resource efficiency and closing the loop in a circular economy.

Criterion TS4: Energy use

Based on EU Ecolabel *Criterion 4-Energy use* as established by Commission Decision (EU) 2020/1803

Selection criterion
<p>TS 4.1. Energy use</p> <p>The site where the product is manufactured shall have established an energy management system addressing all energy consuming devices (including machinery, lighting, air conditioning, cooling). The energy management system shall include measures for the improvement of energy efficiency and shall include information on at least the following procedures:</p> <ul style="list-style-type: none"> - establishing and implementing an energy data collection plan in order to identify key energy figures; - analysis of energy consumption that includes a list of energy consuming systems, processes and facilities; - identification of measures for more efficient use of energy; - continuous improvement objectives and targets relating to the reduction of energy consumption. <p>Verification: The tenderer shall provide a declaration of compliance for the production site, supported by a description of the energy management system.</p> <p>The tenderer certified according to ISO 50001, EN 16247 or an equivalent standard/scheme shall be considered as having fulfilled this requirement.</p> <p>The tenderer registered with EMAS shall be considered as having fulfilled this requirement if the inclusion of energy management in the scope of EMAS for the production site(s) is documented in the EMAS environmental statement.</p> <p>The tenderer certified according to ISO 14001 shall be considered as having fulfilled this criterion if the inclusion of energy management plan is sufficiently addressed by the ISO 14001 certification for the production site.</p> <p>Products, which have been awarded the EU Ecolabel for printer paper, paper stationery or paper carrier bag product(s) , will be deemed to comply with the requirements.</p>
<p>1) Equivalency means compliance check with the EU Ecolabel criteria for printed paper, stationery paper, and paper carrier bag products as established in Commission Decision (EU) 2020/1803</p>

Supportive documentation to demonstrate proof of compliance with the requirement shall include documentation that describes the procedures adopted for energy management system supported by one of the following:

1. Certification of EU Ecolabel for printed paper, stationery paper and paper carrier bag products according to Commission Decision (EU) 2020/1803 or other relevant ISO Type I ecolabel that meets the requirement (**Error! Reference source not found.**);
2. Documentation that demonstrates that a site is certified according to [ISO 50001](#), [EN 16247](#) or an equivalent standard/scheme;
3. Registration with [EU Eco-Management and Audit Scheme EMAS](#) provided that the inclusion of energy management in the scope of EMAS for the production site(s) is documented in the EMAS environmental statement.
4. [Documentation that demonstrates that a site is certified according](#) Certification according to [ISO 14001](#) providing that the inclusion of energy management plan is sufficiently addressed by the ISO 14001 certification for the production site.

Additional considerations

Criterion requires having established the comprehensive energy management plan that investigates energy performance and efficiency at the site. The energy audit identifies the areas with key impact on economic performance of the plant. This includes identification of the long-term energy management objectives. Resource efficiency and energy savings are listed among the pillars of the [Circular Economy Targets](#). This requires transition to the low-energy consuming production processes.

*A Study on Energy Efficiency in Enterprises: Energy Audits and Energy Management Systems*³⁵ provides additional information and practical guidance to Member States authorities responsible for the transposition and implementation of Article 8 and Annex VI requirements of the [Energy Efficiency Directive](#), including the establishment of transparent and non-discriminatory national minimum criteria for energy audits. Its specific focus is the application of national minimum criteria for energy audits

 **Please check:** [A Study on Energy Efficiency in Enterprises: Energy Audits and Energy Management Systems](#)

³⁵https://ec.europa.eu/energy/sites/ener/files/documents/eed-art8-study_on_minimum_criteria_for_energy_audits-wp3-final-clean.pdf

6. ANNEX I - Indicative information about the requirements established by selected ISO type I ecolabels schemes

Proposed GPP criterion	EU Ecolabel (EU) 2020/1803 ³⁶	Nordic Ecolabelling for Printing Companies and Printed Matter March 2021, Version 6.0 ³⁷	Blue Angel: Printed matter DE-UZ 195, January 2021, Version 1	Blue Angel: Finished products made from recycled paper DE-UZ 14b, January 2020, Version 3 ³⁸	Blue Angel: Paper bags and boxes made out of recycled paper DE-UZ 217b, January 2021, Version 1 ²⁹
TS1: Substrate	The paper substrate, including paperboard used in a final product shall bear the EU Ecolabel for 'Graphic paper' in accordance with Annex I to Commission Decision (EU) 2019/70	<p><u>Requirement Q4 and Q5</u></p> <ul style="list-style-type: none"> At least 60% of the printing company's total annual consumption of paper must be inspected or ecolabelled. In this calculation, Nordic Swan Ecolabelled paper has a weight of 1, inspected paper 0.9 and EU Ecolabelled paper 0.8. If only a single type of paper is used, 60% Nordic Swan Ecolabelled paper or 67% inspected paper or about 75% EU Ecolabelled paper will be required for the requirement to be fulfilled. The paper mill must document compliance with the requirements set for paper in the Appendix 1 in Paper Products - Basic Module. More information can be found from http://www.nordic-ecolabel.org/certification/paper-pulp-printing/ 	<ul style="list-style-type: none"> The paper or cardboard used in the manufacture of the printed matter must comply with the requirements of DE-UZ 14a (graphic paper and cardboard made from 100% recovered paper) or DE-UZ 72 (printing and publication papers primarily made of recovered paper) or DE-UZ 56 (recycled cardboard). Labels must comply with the requirements of DE-UZ 14b (finished products made from recycled paper). In the case of digital printing using electrophotographic processes, in which the paper is subjected to a thermal load, the paper must comply with the requirement in DE-UZ 14a Paragraph 3.13. 	The paper used for the products must be certified in accordance with DE-UZ 14a, while cardboard used for the products must be certified in accordance with DE-UZ 56. Accordingly, all of the paper fibres in the product according to Paragraph 2 must have been sourced 100% from recovered paper.	<ul style="list-style-type: none"> The paper used for the finished products must be certified in accordance with DE-UZ 217a or DE-UZ 14a. Accordingly, all of the paper fibres in the paper bags and boxes must have been sourced 100% from recovered paper.

³⁶ Commission Decision (EU) 2020/1803 of 27 November 2020 establishing the EU Ecolabel criteria for printed paper, stationery paper, and paper carrier bag products. *OJ L 402, 1.12.2020, p. 53-72, available at: <https://eur-lex.europa.eu/eli/dec/2020/1803/oj>*

³⁷ <https://www.nordic-ecolabel.org/product-groups/group/DownloadDocument?documentId=5507>

³⁸ <https://www.blauer-engel.de/en/products/paper-printing/finished-products-made-from-recovered-paper-new/notebooks-edition-january-2020>

Proposed GPP criterion	EU Ecolabel (EU) 2020/1803 ³⁶	Nordic Ecolabelling for Printing Companies and Printed Matter March 2021, Version 6.0 ³⁷	Blue Angel: Printed matter DE-UZ 195, January 2021, Version 1	Blue Angel: Finished products made from recycled paper DE-UZ 14b, January 2020, Version 3 ³⁸	Blue Angel: Paper bags and boxes made out of recycled paper DE-UZ 217b, January 2021, Version 1 ²⁹
TS2. Recyclability	<p><u>Criterion 3 – Recyclability</u></p> <p>Criterion 3.1. Removability of non-paper parts The non-paper parts of stationery paper product such as metal bars or plastic covers shall be easily removable</p> <p>Criterion 3.2 Repulpability The product shall be suitable for repulping.</p> <ul style="list-style-type: none"> Wet strength agents shall not be used except for paper carrier bags and wrapping paper, where they can be used only if the product repulpability can be proven (PTS method PTS-RH 021, the ATICELCA 501 evaluation system or equivalent) Lamination, including polyethylene and/or polypropylene, shall only be used to increase the durability 	<p><u>Annex I.2.4. Printing inks, -toners, -ink and varnishes:</u></p> <ul style="list-style-type: none"> Water based (hydrophilic) and crosslinked printing inks, -wet toners, -inks and -varnishes (e.g. flexo, inkjet, liquid toner, UV curable, HP Indigo) must: (1) be tested in accordance with INGEDE's test method no. 11 and obtain a result of above 0 points in accordance with EPRC's points system for all tested paper types, or (2) prove to be repulpable according to PTC method PTS-RH 021/97 or Aticelca 501:2019 evaluation system, or (3) prove to be repulpable without any reservations according to a deinking mill or paper recycling plant/mill evaluation system. <p><u>Adhesives</u></p> <ul style="list-style-type: none"> Water based adhesives, non-soluble hot melt adhesives and nonredispersible hot melt adhesives are exempted from this requirement. Adhesives (1) must be tested in accordance with INGEDE's test method no. 12 and obtain result of above 0 points in accordance with EPRC's points system for all tested paper types. Or (2) prove to be repulpable without any reservations 	<ul style="list-style-type: none"> The finished products must be deinkable and any adhesive applications on the products must be removable³⁹. The product must comply with the recyclability requirements of the European Paper Recycling Council (EPRC). The test methods for evaluating the recyclability of printed matter are: <ul style="list-style-type: none"> INGEDE Method 11: Deinkability test (version: January 2018) INGEDE Method 12: Testing of adhesive applications (version: January 2013). The evaluation of the recyclability of the product is carried out in accordance with the guidelines of the EPRC using scorecards for deinkability and the removability of adhesive applications, whereby the printing inks used in the product must score a least 51 points on the "Deinkability Scorecard" and the adhesive applications used in the product 	<p>The finished products must be deinkable and any adhesive applications on the products must be removable. The product must comply with the recyclability requirements of the European Paper Recycling Council (EPRC). The test methods for evaluating the recyclability of printed matter are:</p> <ul style="list-style-type: none"> INGEDE Method 11: Deinkability test INGEDE Method 12: Testing of adhesive applications <p>The evaluation of the recyclability of the product is carried out in accordance with the guidelines of the EPRC using deinking scorecards for deinkability and the removability of adhesive applications.</p>	<p>Recyclability (except for bags for organic waste) No verification of the product's recyclability is required for bags for organic waste because their intended use means that they are not fed back into the paper recycling loop. Bags for organic waste are thus exempt from this requirement.</p> <p>All other paper bags and boxes must display a sufficient level of recyclability. A differentiation is made here between "white" (possibly printed in a single colour or multiple colours) and brown (possibly printed) finished products.</p> <p>The recyclability of the products is assessed based on the following factors: repulpability, separability of</p>

³⁹ This does not apply to paper and kraft paper that has been made out of unbleached recovered paper from the kraft process for classification groups 4 and 5 according to DIN EN 643

Proposed GPP criterion	EU Ecolabel (EU) 2020/1803 ³⁶	Nordic Ecolabelling for Printing Companies and Printed Matter March 2021, Version 6.0 ³⁷	Blue Angel: Printed matter DE-UZ 195, January 2021, Version 1	Blue Angel: Finished products made from recycled paper DE-UZ 14b, January 2020, Version 3 ³⁸	Blue Angel: Paper bags and boxes made out of recycled paper DE-UZ 217b, January 2021, Version 1 ²⁹
	<p>of products with a life span of at least 1 year. Double lamination shall not be used in any product.</p> <p><u>3.3 Adhesives removability</u> This criterion applies to printed paper, stationery paper, and paper carrier bag products.</p> <ul style="list-style-type: none"> • Unless otherwise specified, adhesives may be used only if their removability can be proven with a score of at least 71 on the EPRC Adhesive Removal Scorecard. • Pressure sensitive adhesive coatings shall be used only if their removability can be proven with at least a positive removability score according to the EPRC Adhesive Removal Scorecard. • Water-based adhesives are exempted from fulfilling this requirement. <p><u>Criterion 3.4 Deinkability</u> This criterion applies to printed paper products and envelopes based on white paper.</p> <ul style="list-style-type: none"> • The deinkability shall be proven: (1) all individual parameters analyzed have a positive score 	<p>according to a deinking mill or paper recycling plant/mill evaluation system</p>	<p>must score at least 71 points on the "Adhesive Removal Scorecard" from the EPRC. In addition, the product should score at least 50% of the maximum number of points available for each individual criteria of INGEDE Method 11. Redispersible and water soluble adhesive applications are exempt from the test according to INGEDE Method 12. Non-redispersible and non water-based hot melt adhesive applications are permitted without verification of their recyclability if they meet the following conditions during application and this is confirmed on the technical data sheet.</p> <ul style="list-style-type: none"> • 		<p>adhesive applications and deinkability.</p> <p>Repulpability of the paper bags and boxes and separability of adhesive applications Repulpability Both white and also brown paper bags and boxes must comply with the recyclability requirements according to PTS Method RH 021/97 (version from October 2012) for category II (packaging paper and packaging material).</p> <p>As an exception to the recyclability requirements contained in PTS Method RH 021/97, the total dry residue (non-paper components of the product plus the sorting residue including non-repulpable paper components on a 0.7 mm perforated plate) must not exceed 15% by mass. The PTS Method rates the product design as being in need of improvement if it has a total dry residue of between 20% and 50%. This rating is not</p>

Proposed GPP criterion	EU Ecolabel (EU) 2020/1803 ³⁶	Nordic Ecolabelling for Printing Companies and Printed Matter March 2021, Version 6.0 ³⁷	Blue Angel: Printed matter DE-UZ 195, January 2021, Version 1	Blue Angel: Finished products made from recycled paper DE-UZ 14b, January 2020, Version 3 ³⁸	Blue Angel: Paper bags and boxes made out of recycled paper DE-UZ 217b, January 2021, Version 1 ²⁹
	<p>and (2) the final score is at least 51 on the EPRC Deinkability Scorecard, or equivalent.</p> <ul style="list-style-type: none"> • Envelopes shall be exempted from performing deinkability test, but internal printing shall only be used for the privacy reasons and in envelopes composed of paper with a grammage of less than 135 g/m², or with opacity level lower than 98 %. The internal printed surface shall be less than 80 % of the total interior surface minus the glued area and shall be printed with light colour shades. 				<p>relevant for these Basic Award Criteria.</p> <p>Separability of adhesive applications The adhesive applications must be assessed using a sheet adhesion test as part of the recyclability test according to PTS Method RH 021/97 (version from October 2012) for category II. The finished product (paper bags and boxes) must pass the sheet adhesion test.</p> <p>In contrast to printed matter,, there is currently no inventory requirement and no defined requirements for the adhesive applications used on finished products made from packaging paper. However, the use of sortable adhesive applications is preferable.</p> <p>Deinkability White paper bags and boxes with an imprint should be deinkable. The deinkability of the paper bags and boxes must be tested in accordance</p>

Proposed GPP criterion	EU Ecolabel (EU) 2020/1803 ³⁶	Nordic Ecolabelling for Printing Companies and Printed Matter March 2021, Version 6.0 ³⁷	Blue Angel: Printed matter DE-UZ 195, January 2021, Version 1	Blue Angel: Finished products made from recycled paper DE-UZ 14b, January 2020, Version 3 ³⁸	Blue Angel: Paper bags and boxes made out of recycled paper DE-UZ 217b, January 2021, Version 1 ²⁹
					with INGEDE Method 11.40 The deinkability of the product must be assessed in accordance with the guidelines issued by the EPRC (European Paper Recycling Council) using the deinkability scorecard (Assessment of Printed Product Recyclability – Deinkability Score User’s Manual) ⁴¹ for the product category “Low ink coverage products” based on the brightness of the unprinted base paper of ≤ 75% or > 75%.
TS3: Waste	<u>Criterion 5 – Waste</u> Criterion 5.1 Waste management system The facility where the product is manufactured shall have in place a system for handling waste, which addresses and documents the measures taken to reduce the amount of solid and liquid waste, including waste paper, ink waste, cleaning agent solution and dampening solution waste as	<u>Requirement 014</u> <ul style="list-style-type: none"> The printing company shall have in place a system for handling waste which addresses and documents the measures taken to reduce the amount of solid and liquid waste, including waste paper, waste from substrates other than paper, ink waste, cleaning agent solution and dampening solution waste as defined by local or national regulatory authorities. The system shall be documented and shall 	The waste management system must contain key figures that show the amount of waste paper and cardboard, as well as the amounts of paper and cardboard purchased and provided. If the maximum amount of waste is exceeded, the reasons for this must be analysed, documented and justified on a yearly basis.	X considered as less relevant in the production of substrate (paper)	X considered as less relevant in the production of substrate (paper)

⁴⁰ <https://www.ingede.com/ingindx/methods/ingede-method-11-2018.pdf>

⁴¹ <http://www.paperrecovery.org/publications/>

Proposed GPP criterion	EU Ecolabel (EU) 2020/1803 ³⁶	Nordic Ecolabelling for Printing Companies and Printed Matter March 2021, Version 6.0 ³⁷	Blue Angel: Printed matter DE-UZ 195, January 2021, Version 1	Blue Angel: Finished products made from recycled paper DE-UZ 14b, January 2020, Version 3 ³⁸	Blue Angel: Paper bags and boxes made out of recycled paper DE-UZ 217b, January 2021, Version 1 ²⁹
	<p>defined by local or national regulatory authorities. The waste management system shall be documented or explained and shall include information on specified waste management procedures:</p> <p>Criterion 5.2 Paper for recycling from printing facilities The amount of waste paper produced shall not exceed the specified threshold value</p> <p>Criterion 5.3 Paper for recycling from stationery paper product and carrier bags production sites The amount of waste paper produced shall not exceed the specified threshold value</p>	<p>include information on specified waste management procedures.</p> <ul style="list-style-type: none"> • The printing company may be awarded up to 10 points depending on the quantity of waste paper. The threshold values for each individual printing method are specified under the requirement. • The printing company may be awarded up to 5 points depending on the quantity of mixed waste in kg per tonne substrate (unsorted/unsuitable for recycling solid waste that is incinerated or goes to land fill). 			
TS4: Energy use	<p><u>Criterion 6 – Energy use</u></p> <p>The site where the EU Ecolabel product is manufactured shall have established an energy management system addressing all energy consuming devices (including machinery, lighting, air conditioning, cooling). The energy management system shall include measures for the improvement of energy efficiency and shall include information on specified procedures.</p>	<p><u>Requirement Q12</u></p> <p>Part A: The applicant shall state the printing company’s annual total energy consumption per tonne of purchased substrate. The amount of energy consumed at the printing company must be less than or equal to the established threshold values.</p> <p>Part B: The printing company must have an energy action plan for complying with reducing the energy consumption by a minimum of 25%.</p>	<ul style="list-style-type: none"> • Requirements for energy consumption • List of energy consumers <p>The list of energy consumers at the production site for the printed matter named in the application must include all energy consuming machines, devices, heating/air conditioning and lighting. The list of energy consumers must contain at least the following information:</p>	<p>X considered as less relevant in the production of substrate (paper)</p>	<p>X considered as less relevant in the production of substrate (paper)</p>

Proposed GPP criterion	EU Ecolabel (EU) 2020/1803 ³⁶	Nordic Ecolabelling for Printing Companies and Printed Matter March 2021, Version 6.0 ³⁷	Blue Angel: Printed matter DE-UZ 195, January 2021, Version 1	Blue Angel: Finished products made from recycled paper DE-UZ 14b, January 2020, Version 3 ³⁸	Blue Angel: Paper bags and boxes made out of recycled paper DE-UZ 217b, January 2021, Version 1 ²⁹
	<ul style="list-style-type: none"> The applicant certified according to ISO 50001, EN 16247 or an equivalent standard/scheme shall be considered as having fulfilled this requirement. The applicant registered with EMAS shall be considered as having fulfilled this requirement if the inclusion of energy management in the scope of EMAS for the production site(s) is documented in the EMAS environmental statement. The applicant certified according to ISO 14001 shall be considered as having fulfilled this criterion if the inclusion of energy management plan is sufficiently addressed by the ISO 14001 certification for the production site. 		<p>Maximum output of the energy consumers (in KW) and the estimated average output (in kW)</p> <p>Measurement or estimate of the annual operating times for the energy consumers (h)</p> <p>Sum of the calculated energy consumption values and the actual energy consumption values (in kWh)</p> <p>Identification of the largest energy consumers and corresponding improvement measures.</p> <p>The specific total energy consumption for the printed product named in the application must be determined based on this list. The specific total energy consumption should be determined on an annual basis and used to create year-on-year comparisons. If this key figure is higher than the previous year in the comparison, the reasons for this must be identified and stated.</p> <p>Compliance verification</p> <p>The applicant shall verify compliance with the requirement by submitting a list of energy consumers and submit information on the specific total energy consumption for a typical print run of the printed product. The applicant shall submit this key figure to RAL gGmbH on an annual basis and</p>		

Proposed GPP criterion	EU Ecolabel (EU) 2020/1803 ³⁶	Nordic Ecolabelling for Printing Companies and Printed Matter March 2021, Version 6.0 ³⁷	Blue Angel: Printed matter DE-UZ 195, January 2021, Version 1	Blue Angel: Finished products made from recycled paper DE-UZ 14b, January 2020, Version 3 ³⁸	Blue Angel: Paper bags and boxes made out of recycled paper DE-UZ 217b, January 2021, Version 1 ²⁹
			document the reasons for any increase in this key figure.		

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