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Operational guidelines

**New fee bands
for cellulose-based
composite packaging
from July 2025**

**Updated
16 April 2025**



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*This document is the English translation of CONAI's Operational guidelines.
In case of disputes, the original Italian text shall prevail.*



1

Background and rationale for the new fee bands

The new European Packaging and Packaging Waste Regulation (PPWR) prescribes that the financial contributions paid by producers to fulfil their Extended Producer Responsibility obligations shall be modulated in accordance with the recyclability performance classes, as defined in specific delegated acts which are in the process of being implemented.

In Italy, very significant steps have already been taken in the direction desired by the new Regulation.

In 2019 CONAI and Comieco introduced EPR Fee modulation through the application of an additional fee (EPR Fee supplement) for paper-based composite packaging suitable for containing liquids (“CPL”), in order to improve the effectiveness of the recovery process for this type of packaging, through the consolidation and development of collection, sorting and recycling activities.

The project continued in the following years, and on 1 January 2022 fee modulation entered into force – again through the **application of an EPR Fee supplement** – including for **other types of paper and cardboard-based composite packaging (other than CPL)** and, specifically, for composite packaging with a paper component of less than 80% of the total weight of the packaging. The aim of this is to correlate the fee with their actual recyclability and the emerging costs associated with managing their end of life.

The new fee bands for cellulose-based composite packaging that will be introduced from 1 July 2025 now have a **dual objective**:

- **Strengthening the EPR Fee modulation process**, introducing an EPR Fee supplement also for composite packaging with a paper component between 80% and 90% of the total weight of the packaging;
- **Enhancing the recyclability certification process adopted by firms**, introducing significant discounts for composite packaging (other than CPL), whose level of recyclability has been determined according to the Aticelca 501 system.

Aticelca 501 is a method for assessing the recyclability of materials and products made mainly of cellulose based on laboratory tests conducted according to the UNI 11743:2019 standard, and it guarantees **a more accurate and scientific definition of the recyclability of composite packaging, compared to the mere criterion of the percentage by weight of the paper component present in the packaging.**

The new fee bands therefore represent a further step towards **a greater correlation of the EPR Fee with the degree of recyclability of the packaging and a further incentive for eco-sustainable design.**



2

The new fee bands

The fee band for composite packaging made predominantly from cellulose, other than CPL, is **determined using the following two alternative criteria:**

- 1.** Based on the weight of the paper component in the total weight of the NON-CERTIFIED packaging;
- 2.** Based on the result of the Aticelca 501 assessment of the packaging (CERTIFIED), in which specific bands are identified offering significant discounts.

From 1 July 2025, there will be **eight fee bands for cellulose-based packaging**, according to the following table:

Fee band	Weight of paper component	Result of Aticelca assessment	Overall EPR Fee	
			From January 2025	From July 2025
	%		€/t	€/t
Band 1 – Single-material	≥ 95		Base 65.00	Base 65.00
Band 2 – Type A composites	≥ 90 and < 95	Level A	Base 65.00	Base 65.00
Band 3.1 – Type B1 composites (CERTIFIED)		Level B	Base 65.00	Base + Type B1 EPR Fee supplement 65.00 + 10.00
Band 3.2 – Type B2 composites (NON-CERTIFIED)	≥ 80 and < 90		Base 65.00	Base + Type B2 EPR Fee supplement 65.00 + 25.00

Fee band	Weight of paper component	Result of Aticelca assessment	Overall EPR Fee	
			From January 2025	From July 2025
	%		€/t	€/t
Band 4 – CPL	Not relevant	Not relevant	Base + CPL EPR Fee supplement 65.00 + 20.00	Base + CPL EPR Fee supplement 65.00 + 70.00
Band 5.1 – Type C1 composites (CERTIFIED)		Level C	Base + Type C EPR Fee supplement 65.00 + 110.00	Base + Type C1 EPR Fee supplement 65.00 + 65.00
Band 5.2 – Type C2 composites (NON-CERTIFIED)	≥ 60 and < 80		Base + Type C EPR Fee supplement 65.00 + 110.00	Base + Type C2 EPR Fee supplement 65.00 + 110.00
Band 6 – Type D composites	< 60	Non-recyclable	Base + Type D EPR Fee supplement 65.00 + 240.00	Base + Type D EPR Fee supplement 65.00 + 240.00

In particular:

- The first band remains dedicated to single-material packaging, where the paper component is equal or greater than 95%;
- The second band remains dedicated to **Type A** composite packaging, where the weight of the paper component is between 90% and 95% of the total weight of the packaging, i.e. certified at Level A of the Aticelca 501 assessment system;
- The band dedicated to **Type B** composites, where the weight of the paper component is between 80% and 90% of the total weight of the packaging, and which until now has been exempted from the application of an EPR Fee supplement, is divided into two: Band 3.1 for composites certified at Level B of the Aticelca 501 assessment system (**B1**) and Band 3.2 for those not certified (**B2**);
- Band 4 remains dedicated to composites suitable for containing liquids (**CPL**), also known as beverage cartons;
- The band for **Type C** composite packaging is also split, with the paper component weighing between 60% and 80% of the total weight of the packaging: those certified at Level C of the Aticelca 501 assessment system will be considered **Type C1** (Band 5.1), and those not certified will be considered **Type C2** (Band 5.2);
- A final band is dedicated to **Type D** composites, where the weight of the paper component is less than 60% of the total weight of the packaging or is not specified.

An experimental period of 1 year is planned starting from the entry into force of the new fee bands (1 July 2025), and an initial analysis of the results (also from an economic point of view) after six months, with regard to the effectiveness of the proposed scheme and the progressive implementation of the contribution system based on the recyclability assessment with the Aticelca 501 method.



3

Who is responsible for determining the fee band

The correct fee band must be assigned based on the finished packaging that will be placed “full” onto the market, therefore also considering any other components (inks, varnishes, lacquers, glues, labels, plastic layers, metallisation, staples and other non-cellulosic components in general), even if they are added during the product packaging phase. Consequently, **the entity responsible for assigning the correct fee band is the company that is aware of the above information.**

At the time of the “first transfer” of the packaging (relevant for the application of the EPR Fee on the invoice), **the producer/trader is required to ask the user client for the necessary information** to assign the correct fee band, unless already aware of it. To this end, with the support of Comieco, CONAI will make available a copy of the certificates necessary for a correct flow of information between the producer/trader and the user of the packaging, given their joint responsibility for identifying the exact fee band to be attributed to the packaging undergoing “first transfer”.

In cases other than “first transfer”, the importer of packaging (empty or full), both from EU and non-EU countries, **is the subject required to acquire all the information necessary** to identify the relevant fee band in the case of declaring the EPR Fee in the ordinary procedure. For the purposes of declaring the EPR Fee using the simplified procedures reserved only for full packaging (provided that the conditions are met), neither the weight of the paper component for cellulose-based packaging nor the recyclability assessment are currently relevant.

The weight of the paper component can normally be found in the **technical data sheet** of the empty packaging provided by the producer.

In order to take advantage of the new contribution incentives provided from 1 July 2025 for Type B1 and C1 composite packaging (CERTIFIED), **it is therefore necessary to perform a recyclability assessment using the Aticelca 501 system.** For the purposes of determining the fee band **the outcome of the assessment is sufficient; the concession to use the “RECYCLABLE WITH PAPER – Aticelca® 501” mark is not required; nor is the mark required to be present on the packaging.**

This certification may also be considered valid for the same types of composite packaging purchased from a different supplier, provided that the packaging has substantially similar characteristics (same type of material, weight proportions between components and production technologies used) to those of the sample previously tested, which can also be verified based on actual data, with suitable documentary evidence.



4

Extension of the results of the Aticelca 501 recyclability assessment to packaging with similar characteristics

General criteria

In order to optimise the number of laboratory tests to establish the level of recyclability of multiple composite cellulose-based packaging with similar characteristics using the Aticelca 501 method, a **simplification principle** can be applied, based on the following **definitions**:

1. PACKAGING FAMILY

The term “family” refers to the set of packaging whose components are made with the same materials and the same production processes.

2. WORST-CASE SCENARIO

The “worst-case scenario” is the situation in which the ratio of non-cellulosic components (such as inks, varnishes, lacquers, glues, labels, plastic layers, metallisation, staples and other non-cellulosic elements) to cellulosic components is the highest within the family.

3. IMPROVEMENT SCENARIO

An “improvement scenario” is a situation in which the ratio of non-cellulosic components (such as inks, varnishes, lacquers, glues, labels, plastic layers, metallisation, staples and other non-cellulosic elements) to cellulosic components is lower than in the worst-case scenario.

The “worst-case scenario” packaging can be identified as a representative sample of a family of packaging, as the greater presence of non-cellulosic components could have a decisive influence on the assessment of recycling efficiency.

Simplification principle

The result of a recyclability assessment of a representative sample of the “worst-case scenario”, subjected to analysis by a qualified laboratory according to the UNI 11743:2019 test method and whose results are verified according to the Aticelca 501 assessment system, can be applied to the entire family, without having to carry out further analyses.

Example

Two packages (A and B) have the same fibrous component and the same glue points. Package A has a label with a larger surface area than package B. In this case the non-fibrous components of A, intended as the adhesive component provided by the label, are greater than those of B, and therefore A is considered as a package with the worst-case scenario.

The definition of a “worst-case scenario” sample allows the level of recyclability determined by the analysis to be extended to all cases where the fibrous fraction is improved, where the non-fibrous components making up the packaging are the same. On the other hand, it is not possible to improve the level of recyclability obtained from a given packaging belonging to a family without carrying out a new laboratory test that certifies that it belongs to a different recyclability class. If the classification of a new sample is shown to be an improvement on a significant sample of that family, it will be possible to use the tested packaging as a new representative sample, thus creating a new family. Some case studies are examined in detail below.

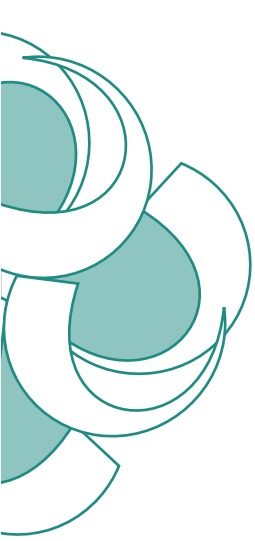
Specific cases of greater diffusion

- **Three-dimensional packaging with different shapes.** Given the same type and composition of materials, the “worst-case scenario” can be assessed by analysing the shape that involves the greatest use of glue or other elements with respect to the cellulose fraction. This normally happens for packaging with the longest perimeter (given the same surface area, a long, narrow rectangle has a longer perimeter than a square). In the case of heat-sealing, however, since no material is added, it is possible to choose a sample of any shape.

- **Paper of different weights** with barrier coatings, plastic layers or other components that cannot be separated by hand (such as windows, handles, closures, etc.). In order to prepare for the “worst-case scenario”, the packaging with the lowest paper weight can be analysed. In this way the level of recyclability achieved by the analysed sample can be considered representative of the entire family of materials to which it belongs, i.e. all packaging that is the same in terms of nature, origin and type of paper, and with the same coatings, plastic layers or other components that cannot be manually separated, and having a higher grammage. In other words, a “worst-case scenario” should always be identified as the sample with the lowest weight ratio between paper or cardboard and the non-fibrous component.
- **Coloured paper**¹: as a “worst-case scenario” it is sufficient to analyse the material with the highest print coverage and colour intensity, using the same printing technology.
- **Subsequent processing of composite packaging** that has already undergone Aticelca 501 testing, which affects the composition (for example, if glues, labels, caps or other prints of a different nature or other non-fibrous components are added), means the test must be repeated. Printing of the expiry date or batch number on the packaging is not considered to be a subsequent process that affects the composition. As a “worst-case scenario” it is sufficient to analyse the packaging which, proportionally, is composed of the greatest quantity of glue, labels, caps or ink with respect to the weight of the fibrous component. If several non-fibrous components are added, it will be necessary to identify a “worst-case scenario” for each combination of non-fibrous components that have the greatest weight in relation to the paper or cardboard.

1

If the nature of the substance that produces the colour (mass colouring or using a single printing technique) is unchanged



5

FAQ Examples of special cases

If you have any questions, please consult the following FAQ (which will also be available in the relevant section of www.conai.org).

If you require further information, you may contact the **toll-free number 800337799 within Italy** or fill in the online form in the “Contact us” section of www.conai.org, selecting the topic “*Modulated paper fee*” (you can also attach any supporting files in JPG, PDF, DOC or TXT format).

1. Is it possible to perform the separability test before the recyclability test?

It is possible to subject paper packaging to a recyclability test according to the Aticelca 501 system without a component that has been designed to be manually separated by the consumer (for example a window, a handle, a peelable layer, etc.). From 1 January 2024, it is mandatory to prove that this component can actually be separated manually by the consumer with sufficient ease by carrying out the test according to the Aticelca 502 method. A component is considered separable if it reaches at least Level C according to the Aticelca 502 method.

In the absence of such evidence, verification of recyclability according to the Aticelca 501 system must be conducted on the entire packaging, including the component designed to be separable. This obligation does not apply to any components that must necessarily be removed by the consumer in order to use the material or product or, in the case of packaging, to access the product it contains.

This obligation also excludes any components that are not physically attached to the paper-based material or product. Physically attached means parts that are glued, embedded, stapled, clipped, etc.

2. Is it possible for the recyclability assessment using the Aticelca 501 assessment system to be inconclusive?

Yes. In the event that it is not possible to carry out all the stages of the test method in accordance with the UNI11743:2019 standard or it is not possible to determine one or more measurement parameters due to the nature and/or characteristics of the sample of material or product, the laboratory will report this circumstance in the assessment report. As it is not possible to have all the elements necessary to carry out a complete evaluation including all the required parameters, the assessment report will not express the “general assessment of recyclability” based on levels A+, A, B, C as provided for in chapter 7 letter c) of the Aticelca 501 assessment system.

Examples of these eventualities are:

- a.** resistance to pulping prevents the pulper from functioning or there is a risk of damaging the equipment;
- b.** presence of flakes or dense foams prevents the transfer of the mixture to the subsequent phases;
- c.** presence of metal particles or wet-strength resins that distort the reading of the macrostickies.

In these cases where it is not possible to carry out an assessment, the fee band to which the packaging belongs will be assigned based on the criterion of the weight of the paper component out of the total weight of the packaging (criterion 1, chapter 2 of this document) applying the relevant discounts for that band (B1 and C1), thus rewarding companies that have submitted their packaging for recyclability testing.

Example

Packaging with a paper component weight of between 80%-90% subjected to laboratory testing with a “non-evaluable” recyclability result will fall under the “3.1 – Type B1 composites (certified)” fee band. Packaging with a paper component weight of between 60%-80% with a “non-evaluable” recyclability result will fall under the “5.1 – Type C1 composites (certified)” fee band.

3. If I already have an Aticelca certification, can I use it? Are the tests carried out using the Aticelca method before it became the UNI 11743 standard valid, or do they need to be repeated?

The recyclability assessments carried out using the Aticelca 501 recyclability assessment system from the 2017 version (Aticelca 501:2017) have no expiry date, provided that the packaging maintains the characteristics of the analysed sample. It is therefore not necessary to repeat the test over the years or following revisions of the Aticelca 501 assessment system as long as the packaging retains its technical characteristics.

4. What should I do in the case of imported empty packaging that has undergone a laboratory test other than the UNI 11743 test?

If the packaging has been subjected to a test other than UNI 11743, but is able to provide parameters compatible with those used by the Aticelca assessment system, including the assessment of adhesive particles (as in the case of the CEPI complete recyclability test version 2 and subsequent versions), and the test has been carried out by a laboratory qualified by Aticelca, it is possible to ask the laboratory to issue a new test report in which, using the measured data, the recyclability is assessed according to the Aticelca 501 assessment system.



ANNEX 1 – The Aticelca assessment system

Assessment table updated as of 16 April 2025

(extracted from the Aticelca 501 recyclability assessment system).

https://www.aticelca.it/1/valutazione_aticelca_501/

ATICELCA 501:2025 RECYCLABILITY ASSESSMENT SYSTEM¹

General assessment of recyclability	Recyclable with paper				Non-recyclable with paper
	Level A+	Level A	Level B	Level C	
Coarse waste (%) 2	< 1.5	1.5 – 10.0	10.1 – 20.0	20.1 – 40.0	> 40.0
Area of adhesive particles ø < 2000 µm (mm ² /kg)	< 10,000	< 10,000	10,001 – 50,000	10,001 – 50,000	> 50,000
Flakes % 3	< 5.0	5.0 – 15.0	15.1 – 40.0	> 40.0	-
Adhesiveness 4	Absent	Absent	Absent	Absent	Present
Optical non-uniformity	Level 1	Level 2	Level 3	Level 3	-

1

Recyclability refers to the product's **ability to be processed in an effective and efficient manner from a technological and economic point of view, in order to reuse the cellulose fibres it contains through the most common paper production technologies currently used for processing paper for recycling** [UNI 11743]. If the sample is classified as “Non-recyclable with paper”, this material or product is not suitable for separate collection with paper. It can, however, be used in other industrial processes or sent to energy recovery.

2

In the case of paper that is resistant to pulping and that is not laminated with plastic, aluminium or other non-paper materials, if the coarse waste after conducting the test for 10 minutes is more than 40%, it is permissible to consider the result obtained by conducting the test for 20 minutes. This circumstance is only permitted if the flakes do not contain fragments of plastic, aluminium or other non-paper materials. When the coarse waste result is less than 40% in the 20-minute test, it is permitted to use Level C for the purposes of applying the assessment criteria, for the “coarse waste” parameter only. **If the sample is a composite containing a solid component that cannot be separated manually and consists mainly of one or more plastic polymers** (i.e. synthetic polymers or chemically modified natural polymers), **if it is accompanied by a technical data sheet proving that this component consists of 80% or more polyethylene, the value of the coarse waste is decreased by 5 percentage points.**

For example, if the coarse waste measured by the laboratory test is 20%, the value to be used for comparison with Table 1 is 15%. If, on the other hand, the technical data sheet does not prove that this value has been reached, or in the absence of a technical data sheet, the coarse waste value remains unchanged.

3

When flakes of clearly identifiable non-cellulose material are prevalent, the flakes parameter is not assessed, but the value is added to the coarse waste (calculated on the weight of the starting product).

4

If the presence of fibres in the second accepted mixture is reduced to the point that it is not possible to form a whole sheet according to the measurement procedure (of the UNI 11743:2019 standard or the CEPI method), to be used for the adhesion test and the evaluation of optical non-uniformities, the assessment “non-recyclable with paper” is assigned. This element must be reported in the test report.

NOTE

The parameter with the worst value indicates the class to which the sample belongs.

For further information and details, see www.aticelca.it where you can also consult the updated list of [qualified laboratories](#).



ANNEX 2

Guidelines for facilitating the recyclability of cellulose-based packaging

The following indications are intended to provide assistance in the design of paper and cardboard packaging with a view to its recyclability. These indications are not binding as it is also necessary to take into account other equally important requirements in the design of packaging, such as the functionality of the packaging itself, the scope of use, the target market and the expected end of life.

These indications do not include any legal regulations applicable at a national and European level on packaging, with which compliance is independent of this guideline and remains the full responsibility of the company.

- For the same weight, the higher the cellulose content, the less waste there will be in the recycling phase (waste includes not only plastic or other non-cellulose materials, but also any fibres that may remain attached).
- The combination of paper and cardboard with fillers and chemical additives must be done in such a way as not to hinder recycling, avoiding substances considered “highly problematic” and/or that can accumulate in successive recycling cycles. In particular, reference is made to the quantity of inorganic fillers, as a high ash content could negatively affect the mechanical strength of the recycled paper, and to moisture-resistant or siliconising agents, which could preclude pulping and therefore compatibility with commonly used recycling processes.
- The introduction of barriers may have negative effects on recyclability, such as, for example, a reduction in yield due to the reduction of the share

of recoverable fibres, an increase in pulping time, a reduction in coarse and fine sorting capacity and an impact on wastewater quality (COD, BOD, etc.), as well as downtime caused by viscous deposits and an impact on the visual appearance of the finished recycled paper product.

- Specifically, barriers caused by metallisation may have an effect on visual appearance, as well as potential stickiness issues that may result in the packaging itself not being recyclable/non-valuable.
- In the case of coating, lamination or bonding with materials of a different nature to the predominantly cellulose one, directly applied to the cellulose substrate or by means of an intermediate adhesive layer, it is preferable for the treatments not to be applied on both sides of the packaging. This is because the hydrophobicity of the coatings makes it extremely difficult to separate the cellulose fibres from the rest of the material, resulting in the entire product ending up as waste.
- The use of plastic polymers (i.e. synthetic polymers and chemically modified natural polymers) must be as limited as possible, in respect of the properties necessary for barrier packaging (oxygen, water vapour, fats, etc.) and for functioning on packaging lines. It is also preferable to use polyolefins, particularly PE and PP, as they represent a fraction that can be recovered from paper mill waste and sent to recycling.
- Normally inks and varnishes do not cause particular problems during the recycling processes in question. However, it is important to reduce the quantity of ink used inside the packaging and to avoid the use of UV inks, favouring the use of water-based ones. Opt for inks that do not use substances and mixtures in their production that fall under the risk categories listed in Groups A and B of the EuPIA “Exclusion Policy for Printing Inks and Related Products”.
- If non-water-soluble glues are used, it is preferable that they do not fragment into particles smaller than 0.10-0.15 mm, so that the relevant systems can promptly identify and separate them. The use of adhesives applied uniformly and resulting in a thin layer should be limited, as they may be less resistant to the shear forces introduced during pulping, resulting in the presence of very small particles that are impossible to remove during the sorting phase. If using thermoplastic adhesives (hot-melt), it is important that they have a softening point of over 45 °C. As for cold seal adhesives, since they are generally plasticised at temperatures typical of wet cycles, if the application involves peelable solutions it is advisable to make sure that the adhesive remains attached to the component of the peelable packaging, especially if it is made of a predominantly non-cellulosic material.
- It is advisable to include systems in the design phase that bind the packaging parts together, avoiding the use of adhesives or other fixing systems applied at a later stage, and to minimise the use of fixing systems (tapes, staples, etc.) and adhesives (glues).

- Excessive use of adhesive tape should be avoided, as it has a strong impact on the pulping process. If necessary, it is better to use paper tape or, if made of other materials, tape that can be removed manually. PVC tape should be avoided in all cases.
- If adhesives are used to hold cellulose components together with other materials, given the same performance of the finished packaging, it would be preferable for the bonding agent to allow for easy manual separation by the user (see Aticelca test method 502:2022) when the product is used or when it is disposed of in separate collection. If this is not possible, it would still be preferable for materials other than paper to be able to detach from the fibres during the pulping process, thus making the fibres available for recycling. PVC components should be avoided where possible.
- For packaging that contains food products, it is preferable to limit contamination to small areas of the packaging and make it easy to separate the dirty part from the clean part, together with clear instructions on how to dispose of it correctly.
- If the packaging is intended for food and is subject to the presence of residues at the end of its life that are not easily removable, it is advisable to design it so that it can be correctly managed in the organic waste chain, making it biodegradable and compostable according to the UNI EN 13432 standard.

For further information, you may consult the “*Guidelines to facilitate the recycling of cellulose-based packaging*” available in the relevant section of www.progettarericiclo.com.



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