

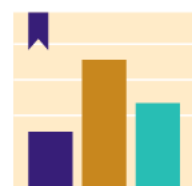


# End of waste

## Guide for businesses

Regulatory analysis for the main packaging materials in the CONAI System

March 2023





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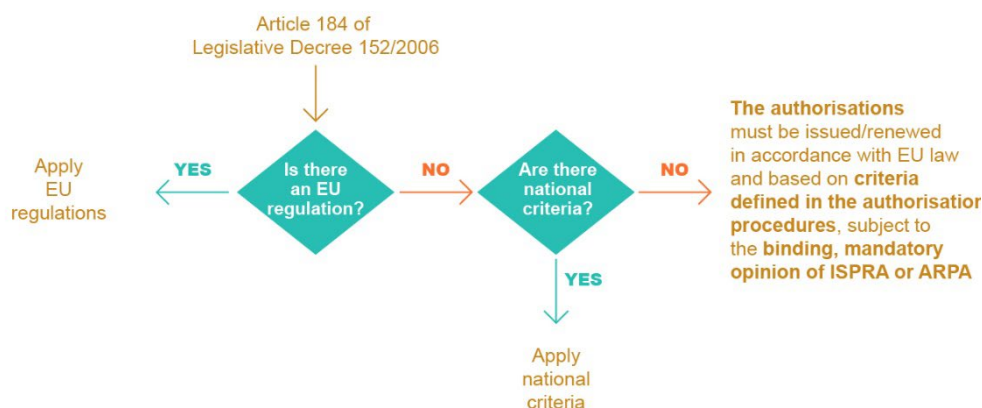
## FOREWORD

The end-of-life of waste is an issue of great importance in Italy, especially since, following the reform enacted by Legislative Decree 205/2010, Article 184-ter was introduced into the Consolidated Environmental Act.


The term “end of waste” refers to a process where waste, after going through a recovery process, loses its “waste” status and acquires “product” status. It is essential to define the limits of the scope of application of the waste framework, which leads to the separation of what is waste and what is no longer waste, in order to ensure the effectiveness of the legislative instruments necessary to achieve EU environmental objectives and to limit risks to environment and health that may result from incorrect management of production or consumption waste.

In essence, the rationale of the end-of-waste framework is to establish “high level” environmental criteria in order to improve the performance and characteristics of recovered products, thereby increasing consumer confidence in such products.

The EoW framework is applied based on the hierarchy of legislative sources



## CURRENT LEGISLATION ON END OF WASTE

 In order to apply the framework, four conditions defined in Article 184-ter of Legislative Decree 152/2006 must be met simultaneously. How is this done?

The substance or item is destined to be used for specific applications

The possibility for the output of the recovery process to be used must be actual, not potential. In other words, the substance or item must be usable in previously identified, known and definable scopes of application.

In this regard, for the substance or object acquiring end-of-waste status, the applicant must provide a detailed description of the permitted uses, and indicate the types of production process where the substance or item is used, the relevant stages and, if applicable, the percentages of substitution of the raw material.

There is a market or demand for such substance or item

The existence of a market or demand demonstrates that the good which results from the recovery process is unlikely to be abandoned or disposed of illegally, because it is considered useful by a plurality of people willing to buy it.

For this purpose, a description of the existing market or demand for that substance or item must be given (including in relation to the current market) and any agreements with users must be described (e.g. attaching commercial contracts, orders, etc.).

The substance or item meets the technical requirements for the specific applications and complies with existing regulations and standards applicable to products

The output of the recovery operation must have pre-determined characteristics (technical requirements), be able to guarantee the required performance under concrete conditions of use or consumption (specific applications) and comply with both applicable binding legislation (regulations) and the technical standards for that type of good (standards).

For this purpose, the applicable legislation must be described, such as, for example:

- EU-recognised international or national product standards
- specific national regulations (such as biomass regulations, etc.)
- national or European end-of-waste criteria
- private standards (specific agreements with users)

Once the applicable regulations have been defined, documentation must be provided to demonstrate that the substance/item acquiring end-of-waste status complies with the technical standards and, where possible, those technical standards must be compared with the ones for the replaced raw material. Any environmental standards required by the relevant technical regulations must also be indicated and, where the type of waste treated may pose direct risks to human health, health standards must be indicated.

The use of the substance or item will not lead to overall negative impacts on the environment or on human health

Documentation must be provided to demonstrate that the substance or item has no overall negative impacts on the environment or on human health compared to the raw material.

In this regard, the following may be alternatively assessed:

- qualitative/quantitative description of the environmental and health impacts of the substance, including based on published data
- assessment of these impacts by comparing the environmental and health characteristics of the substance
- use of limits deriving from national or European regulations, where applicable
- risk analysis based on uses in relation to environmental spheres

 In recent years, “end of waste” has encountered some implementation difficulties that have led to an abrupt slowdown in the development of this framework

Council of State  
Judgment No.  
1229/2018

The regulatory development of the framework began with the **Council of State’s Judgment No. 1229 of 28 February 2018**. In that judgment, the Council of State ruled that **ordinary authorisations** issued to waste recovery plants, pursuant to Article 208 of Legislative Decree 152/06, **could not** lead to end-of-waste status in all cases which are not governed by the few European Regulations and Ministerial Decrees. This caused a break in the progressive transition to the circular economy, a priority objective of EU environmental policy.

Notably, Judgment No. 1229/2018 had reserved exclusively to the **State** the possibility of determining the detailed criteria that, in the absence of European Regulations, make it possible to demonstrate compliance with the four preconditions for “end of waste”, referred to in Article 184-ter of Legislative Decree No. 152/06.

Paradoxically, following this judgment, this meant that only recovery plants, authorised in simplified form, could continue to generate products from waste. Meanwhile, larger plants or plants dedicated to processing types of waste not covered by the **Ministerial Decree of 5 February 1998, Ministerial Decree 161/2002** or European Regulations, despite having been subjected to a long and complex preliminary assessment procedure carried out by the various competent public administrations, were no longer able to turn waste into resources<sup>1</sup>.

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<sup>1</sup> It should be noted that the Council of State’s judgment was in direct conflict with Constitutional Court Judgment No. 75 of 12 April 2017.

The first legislative intervention resulting from the aforementioned judgment was included in Law No. 55 of 14 June 2019, converting the “Sblocca Cantieri” Decree

The “Sblocca Cantieri” Decree was in fact limited to confirming the assumption that in order for a type of waste to lose its “waste” status and acquire “product” status, the necessary declassification criteria referring to it had to be defined exclusively at EU or national level. Furthermore, Law No. 55/2019 provided nothing for existing authorisations, which were already issued based on “case-by-case” criteria defined by the competent administrations.

In the event, the content of this act was immediately criticised. The Association of Environmental Agencies AssoArpa itself, in a position paper of its own, had called for a new intervention that would result in more definite standards and, above all, define an adequate transitional regime.

The approval of Law No. 128 of 2 November 2019, converting the “Business Crisis” Decree, established a new wording of Article 184-ter of Legislative Decree 152/2006.

A key point of this legislation is that it states that, in the absence of specific criteria adopted through the usual Ministerial Regulations, authorisations for carrying out recovery operations are to be issued or renewed directly in compliance with the conditions established in Article 6 of Directive 2008/98/EC, and based on detailed criteria defined within the same authorisation procedures. **In other words, the Local Authorities resume the power to grant authorisations “case by case using the ordinary procedure** (as per Article 208 of the Consolidated Environmental Act (TUA) or Integrated Environmental Authorisation (AIA)), issuing or renewing them not only in accordance with the general conditions established in Paragraph 1, but also in accordance with prescriptions that must necessarily include the five points listed from Letters A to E of the renewed articles.

With regard to **simplified procedures** for recovery, the **Ministerial Decree of 5 February 1998 and Ministerial Decree 161/2002** continue to apply.

After Paragraph 3 of Article 184-ter of Legislative Decree 152/2006, further paragraphs were inserted.

These include **Paragraphs 3-bis and 3-ter**, which stipulate that the authorities responsible for issuing the authorisations referred to in Paragraph 3 must inform **ISPRA** (Italian Institute for Environmental Protection and Research) of the new adopted, re-examined or renewed authorisation procedures, so that the Institute or competent ARPA (Association of Environmental Agencies) may check, on a sample basis, the conformity of the operating and management methods of the plants. ISPRA or the Regional Environmental Protection Agency communicates the results of the verification to the Ministry of the Environment.

In the light of these latest provisions, the SNPA (National Environmental Protection System) has given itself unambiguous and homogeneous criteria that have been set out and disseminated through the **Guidelines** of 6 February 2020, on the basis of which ISPRA will proceed with the aforementioned control operations on authorisations on a “case-by-case” basis.



For its part, the new Paragraph 3-septies provides for the establishment of a “***national registry for the collection of issued authorisations and simplified procedures***”, which may be freely consulted by anyone, with maximum transparency and effectiveness.

Finally, Paragraph 8 of Article 14-bis emphasised the continued **validity of existing authorisations.**

The amendments  
made by  
Decree 116/2020

In implementation of EU Directives 2018/851 and 2018/852, the government issued **Legislative Decree No. 116 of 3 September 2020**, published in Official Gazette No. 226 of 11 September 2020, entering into force on 26 September 2020, introducing significant amendments to Legislative Decree 152/06.

Among these, mention must be made of the amendment to Article 184-ter enacted by Article 1 Paragraph 12 of Legislative Decree 116/2020. **The amendment no longer includes the operation of preparing for re-use among the recovery activities for the purpose of carrying out end-of-waste processes**, and consequently, waste ceases to be a waste when it has undergone a recovery operation, including recycling, and fulfils the specific criteria, to be adopted under the usual conditions.

In addition, **Paragraph 5-bis** was inserted at the end of Article 184-ter: “*Natural or legal persons who use a material that acquires end-of-waste status for the first time and has not been placed on the market, or who place a material on the market for the first time after it acquires end-of-waste status, must ensure that the material complies with the relevant requirements under the applicable regulations on chemical substances and related products. The conditions set out in Paragraph 1 must be fulfilled before the legislation on chemical substances and products may apply to the material that has acquired end-of-waste status*”.

Mandatory opinion of  
ISPRA or ARPA: the  
new 184-ter after the  
Simplification Decree  
(Legislative Decree  
77/2021)

Within a short time after Legislative Decree 116/2020, the “End of Waste” framework underwent another important amendment through the Simplification Decree (Legislative Decree 77/2021), which was subsequently confirmed by Conversion Law No. 108 of 29 July 2021. Reading the new text of Article 184-ter of Legislative Decree 152/2006, the following most relevant points emerge:

- in the absence of specific Ministerial Decrees or EU Regulations, after the amendments made by **Legislative Decree 116/20** and **Legislative Decree 77/21**, the authorisations under Articles 208, 209 and 2011 and under Title III-bis of Part Two of Legislative Decree 152/2006 **may still be issued or renewed on a “case-by-case” basis, but only:**

1) in compliance with the conditions set forth in Article 6 of Directive 2008/98/EC **and subject to the “mandatory and binding”** opinion of ISPRA or the locally competent ARPA (Paragraph 3 of Article 184-ter);

2) the same ISPRA or locally competent ARPA must carry out **“spot checks” to verify** whether they have correctly issued the authorisation, but without the provision of a time limit (Paragraph 3-ter of Article 184-ter).

This framework **started to apply to issuance or renewal procedures on 1 June 2021.**

## NATIONAL “END OF WASTE” DECREES IN PROGRESS

- Non-hazardous inert waste from **street sweeping** (already notified to the European Commission)
- Inert **construction and demolition** waste (already notified to the European Commission on 14 March 2022 and signed by the Minister for Ecological Transition on 15/07/2022)
- **Gypsum** waste from the demolition of plasterboard and gypsum, for the production of recovered gypsum products.
- **Fibreglass** and **sanitary glass** waste
- Paper mill **pulper** waste
- Spent vegetable oils
- Mixed **plastic waste**
- **Sludge** from the organic waste fraction
- **Blast furnace ash** and residues from steelworks
- Waste batteries and accumulators for the **production of lead crayons**
- **Textile** waste

## EOW REGULATIONS AND MINISTERIAL DECREES FOR THE PRINCIPLE PACKAGING MATERIALS

 The EoW Regulations and Ministerial Decrees have a common understanding that helps companies during the implementation and maintenance stages



Quality criteria for incoming waste

The applicant must describe the types of origin of the waste to be admitted to the plant, the relevant EER codes, stating the compatibility for the production of the substance or item that acquires end-of-waste status, both from a technical/performance point of view and from an environmental point of view, depending on its use.

For the purposes of verifying conformity, the chemical/physical and commodity characteristics of the waste admitted to the recovery process must also be assessed, including in relation to potential pollutants present according to the process of origin, taking into account the final requirements (technical and environmental standards) that must be possessed by the substance or item acquiring end-of-waste status.

Processes and treatment techniques for incoming waste

The recovery and/or recycling processes and techniques for producing the substance or item must be described in detail, including any process parameters that must be monitored to ensure that the substance or item meets technical and environmental standards.

Quality of the material obtained from the recovery operation

Description must be provided of the technical and environmental specifications (referred to above) that the substance or item acquiring end-of-waste status will have to comply with and, if relevant, other aspects, such as permitted uses, etc.

Management system

The applicant must describe the management system, which must contain all the elements necessary to certify the end-of-waste process (through the description of the entire waste process, from its delivery to the recovery plant to the production of the final product) and documentation of this system must be provided (including, for example, periodic reports, etc.), which demonstrates, for each batch, compliance with the conditions and criteria for end-of-waste status.

Declaration of conformity

A declaration of conformity form must be submitted, pursuant to Articles 47 and 38 of Presidential Decree No. 245 of 28 December 2000, containing all information such that, for each batch, compliance with the above conditions and criteria is certified.

The conformity sheet must contain:

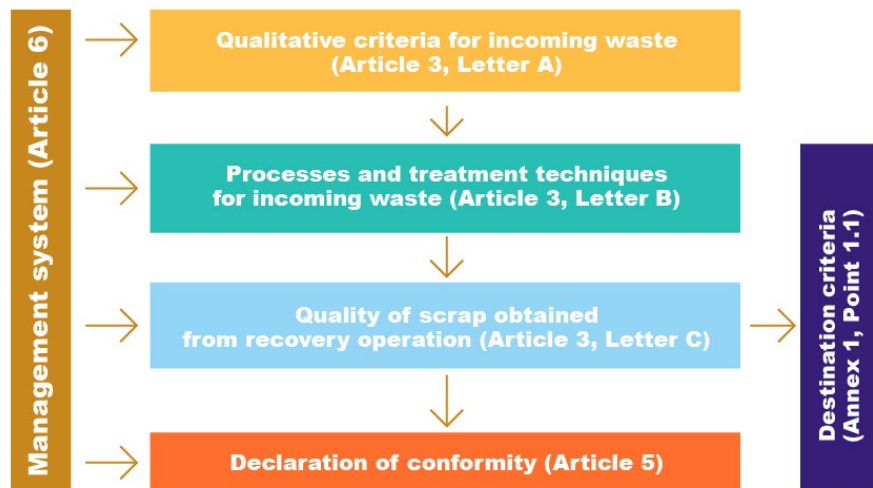
- company name of the producer
- characteristics of the substance or item acquiring end-of-waste status
- quantification of the reference batch
- analytical test reports for compliance with technical and environmental (and health, where applicable) standards

Destination criteria

The applicant may provide further details on the processes and productions resulting from the subsequent use of the product. In addition, should the product be classified under chemical substances, the relevant regulations (Regulation (EC) No. 1907/2006 REACH) must be applied for subsequent placing on the market. In fact, waste is not included in the scope of the REACH Regulation, but falls within its scope when the status changes from “waste” to “product”.

## End of waste in various supply chains Regulation 333/2011/EU Ferrous metals

**Article 3**  
Iron and steel scrap  
acquires end-of-  
waste status when  
transferred from the  
producer to another  
holder and certain  
conditions are  
fulfilled



Qualitative criteria  
for incoming waste  
(Article 3, Letter A)  
Annex I, Point 2

Only **waste containing recoverable iron and steel** may be used as material in the recovery operation.

**The following may not be used** as material in the recovery operation:

- **hazardous waste** (unless it can be demonstrated that processes and techniques have been applied to eliminate all hazardous characteristics)
- **filings, flakes and dust containing fluids** (oils or oil emulsions)
- **drums and containers**, except equipment from end-of-life vehicles, that **contain or have contained oils or paints**

- ✓ Iron or steel scrap was **separated** at source or during collection and kept separate, or incoming waste was treated to separate iron and steel scrap from non-metallic and non-ferrous elements.
- ✓ All the necessary **mechanical treatments** were carried out to prepare them for their final use directly in steel mills/foundries.

The following **specific requirements** apply to **wastes** containing **hazardous elements**:

- a) incoming material **from WEEE or VFU** has undergone all the treatments required by Article 6 of Directive 2002/96/EC and Article 6 of Directive 2000/53/EC
- b) chlorofluorocarbons in the disposed equipment were captured by a process approved by the competent authorities
- c) cables have been ripped/trimmed: if a cable contains organic coatings (plastics), these are removed using the best available techniques
- d) drums and containers are emptied and cleaned
- e) hazardous substances in waste not mentioned in Letter A have been effectively eliminated by a process approved by the competent authority

Quality of scrap  
obtained from the  
recovery operation  
(Article 3, Letter C)  
Annex I, Point 1

The **total amount of foreign (sterile) materials is  $\leq$  2%** in weight.

The following are considered foreign materials:

- **non-ferrous metals** (except alloying elements present in any ferrous metal substrate) and non-metallic materials such as **soil, dust, insulation and glass**
- **combustible non-metallic materials** (such as **rubber, plastic, fabric, wood** and other chemical or organic substances)
- larger **elements** (the size of a brick) that **do not conduct electricity** (such as **tyres, pipes filled with cement, wood or concrete**)
- **residues** from smelting, heating, surface preparation (including gouging), grinding, sawing, welding and oxygen cutting operations to which steel is subjected (such as **slag, mill scale**, dust collected in air filters, grinding dust, **sludge**)

They must not contain **excess iron oxide** (except for the usual quantities due to the open storage of prepared scrap), nor must they show, to the naked eye, **oils, oily emulsions, lubricants or grease** (except for negligible quantities that do not lead to dripping).

They must not exhibit any of the **hazard characteristics** listed in **Annex III of Directive 2008/98/EC** (*Hazard characteristics for waste*)<sup>2</sup>.

They must comply with the **concentration limits** set out in **Decision 2000/532/EC**.

They **must not** exceed the **values** set out in **Annex IV of Regulation 2004/850/EC**.

Destination criteria  
(Annex 1,  
Point 1.1)

Scrap is categorised according to customer, industry or standard specifications, for **direct use in the production of metal substances or items in steel mills and foundries**.

<sup>2</sup> The following provisions **do not** apply to the characteristics of **individual elements** in iron and steel alloys.



Declaration of  
conformity  
(Article 5)

The producer (or importer) must draw up a **declaration of conformity** for **each consignment of scrap metal**, containing:

- details of the producer/importer
- designation (or code) of the **scrap category**, in compliance with an industry specification or standard
- compliance of the consignment with the requirements of the above-mentioned industry specification/standard
- **weight** of the consignment in tonnes
- certificate of **proof of radioactivity**
- declaration of compliance with the **criteria** set out in Letters A, B and C of Articles 3 and 4 of Regulation 333/2011/EU

The producer/importer must:

- **transmit** the declaration to the **next holder** of the scrap consignment
- **retain a copy** of this declaration for **at least 1 year** from the date of issue

Quality  
management  
system  
(Article 6)

The producer must apply a **quality management system** (periodically verified by an external body) to demonstrate that the scrap complies with the criteria set out in Articles 3 and 4 of Regulation 333/2011/EU.

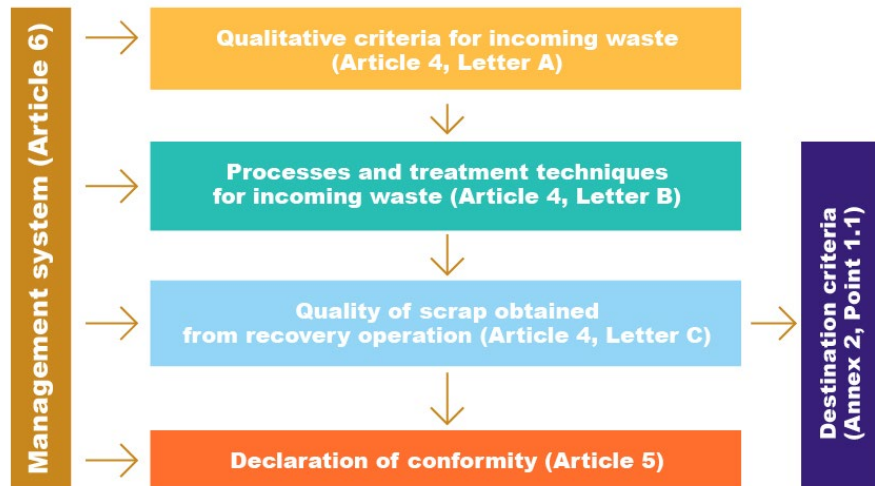
This system must document the following, among other things:

- acceptance control of waste used as material in the recovery operation
- monitoring of processes and treatment techniques
- monitoring the quality of scrap metal obtained (including sampling and analysis)
- effectiveness of radiation monitoring
- review and improvement of the quality management system
- staff training
- customer comments on scrap metal quality
- recording the results of checks carried out



## End of waste in various supply chains Regulation 333/2011/EU NON-ferrous metals

Article 4  
Aluminium scrap  
– including  
aluminium alloy  
scrap –  
acquires end-of-  
waste status  
when transferred  
from the  
producer to  
another holder  
and certain  
conditions are  
fulfilled



Qualitative  
criteria for  
incoming waste  
(Article 4, Letter  
A)  
Annex II, Point 2

Only waste containing **recoverable aluminium or aluminium alloys** may be used.

**The following may not be used** as material in the recovery operation:

- **hazardous waste** (unless it can be demonstrated that the techniques and processes listed in Point 3 of Annex II were applied to eliminate all hazardous characteristics)
- **filings, flakes and dust** containing **fluids such as oils or oil emulsions**
- **drums and containers**, except equipment from end-of-life vehicles, that contain or have contained **oils or paints**

- ✓ They were either **separated** at source or during collection and kept separate, or they were separated from extraneous fractions in a separation operation.
- ✓ All the necessary **mechanical treatments** were carried out to prepare them for direct use.

The following **specific requirements** apply to **wastes** containing **hazardous elements**:

- a) incoming material **from WEEE or VFU** has undergone all the treatments required by Article 6 of Directive 2002/96/EC and Article 6 of Directive 2000/53/EC
- b) chlorofluorocarbons in the disposed equipment were captured by a process approved by the competent authorities
- c) cables have been ripped/trimmed: if a cable contains organic coatings (plastics), these are removed using the best available techniques
- d) drums and containers are emptied and cleaned
- e) hazardous substances in waste not mentioned in Letter A have been effectively eliminated

The **total amount of foreign material is  $\leq 5\%$**  in weight or the **metal yield is  $\geq 90\%$** .

The following are considered foreign materials:

- **metals other than aluminium and aluminium alloys**
- **non-metallic materials** (such as soil, dust, insulation and glass)
- **combustible non-metallic materials** (such as rubber, plastic, fabric, wood and other chemical or organic substances)
- larger **elements** (the size of a brick) that **do not conduct electricity** (such as tyres, pipes filled with cement, wood or concrete)
- **residues** from aluminium and aluminium alloy smelting, heating, surface preparation (including gouging), grinding, sawing, welding and oxygen cutting operations to which steel is subjected (such as slag, dross, skimmings, dust collected in air filters, grinding dust, sludge)

Scrap aluminium or aluminium alloys **must not contain** polyvinyl chloride (**PVC**) in the form of coatings, paints or plastics and must **not** have visible evidence of oils, oily emulsions, lubricants or grease (except for negligible quantities that do not lead to dripping).

The following provisions **do not** apply to the characteristics of **individual elements** in aluminium alloys.

- They **must not** exhibit any of the **hazard characteristics** listed in **Annex III** of **Directive 2008/98/EC** (*Hazard characteristics for waste*).
- They must comply with the **concentration limits** set out in **Decision 2000/532/EC**.
- They **must not** exceed the **values** set out in **Annex IV** of **Regulation 2004/850/EC**.

Scrap is categorised according to customer, industry or standard specifications, for **direct use in the production of metal substances or items by refining or remelting**.

Declaration  
of conformity  
(Article 5)

The producer (or importer) must draw up a **declaration of conformity** for **each consignment of scrap metal**, containing:

- details of the producer/importer
- designation (or code) of the **scrap category**, in compliance with an industry specification or standard
- compliance of the consignment with the requirements of the above-mentioned industry specification/standard
- **weight** of the consignment in tonnes
- certificate of **proof of radioactivity**
- declaration of compliance with the **criteria** set out in Letters A, B and C of Articles 3 and 4 of Regulation 333/2011/EU

The producer/importer must:

- **transmit** the declaration to the **next holder** of the scrap consignment
- **retain a copy** of this declaration for **at least 1 year** from the date of issue

Quality  
management  
system  
(Article 6)

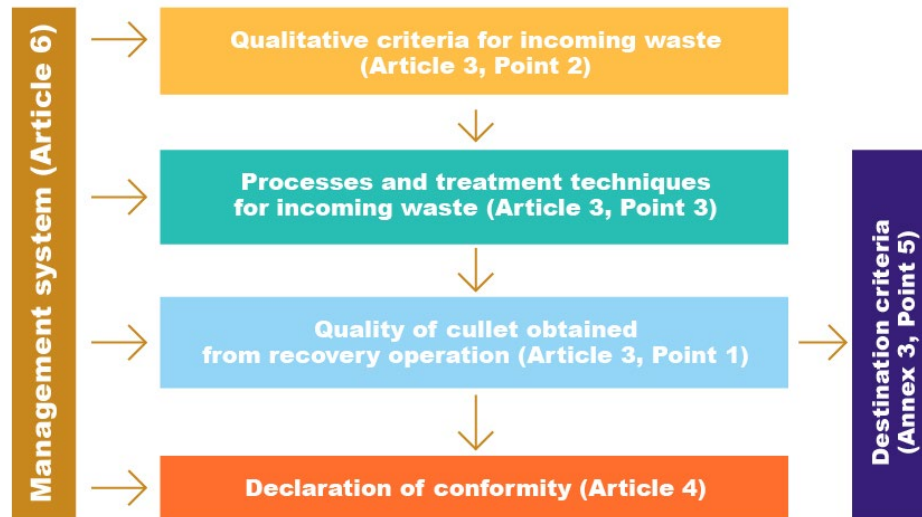
The producer must apply a **quality management system** (periodically verified by an external body) to demonstrate that the scrap complies with the criteria set out in Articles 3 and 4 of Regulation 333/2011/EU.

This system must document the following, among other things:

- acceptance control of waste used as material in the recovery operation
- monitoring of processes and treatment techniques
- monitoring the quality of scrap metal obtained (including sampling and analysis)
- review and improvement of the quality management system
- staff training
- effectiveness of radiation monitoring
- customer comments on scrap metal quality
- recording the results of checks carried out

## End of waste in various supply chains Regulation 1179/2012/EU GLASS cullet

**Article 3**  
 Glass cullet acquires end-of-waste status when transferred from the producer to another holder and certain conditions are fulfilled



Qualitative criteria for incoming waste  
 Article 3, Point 2  
 Annex I, Point 2

**Only** waste recoverable from the collection of **packaging glass**, **flat glass** or **lead-free tableware** may be used.

Glass cullet from the collection of recyclable material may unintentionally contain small amounts of other types of glass.

**The following may not be used:**

- waste containing glass from undifferentiated municipal solid waste or waste from healthcare facilities
- hazardous waste

Processes and treatment techniques for incoming waste  
 Article 3, Point 3  
 Annex I, Point 3

Waste containing glass must be collected, separated, processed and, from then on, kept permanently separated from other waste.

All treatments (such as crushing, sorting, separating or cleaning) needed to prepare the glass cullet for direct use (through remelting) in the production of glass substances or items must have been completed.

Quality of cullet  
obtained from the  
recovery operation  
Article 3, Point 1  
Annex I, Point 1

The content of **non-glass components** (foreign fractions) is:

- ferrous metals: ≤ 50 ppm
  - non-ferrous metals: ≤ 60 ppm
  - non-metallic and non-glass inorganic substances (ceramic, rock, porcelain and pyroceramics):
    - ≤ 100 ppm for glass cullet of dimension > 1 mm
    - ≤ 1,500 ppm for glass cullet of dimension < 1 mm
  - organic substances (paper, rubber, plastic, fabric, wood): ≤ 2,000 ppm.
- They **do not** exhibit any of the **hazard characteristics listed in Annex III of Directive 2008/98/EC**.
- They comply with the **concentration limits** set out in **Decision 2000/532/EC**.
- They **do not** exceed the **values** set out in **Annex IV of Regulation 850/2004/EC**.

Declaration  
of conformity  
(Article 4)

The producer (or importer) must draw up a **declaration of conformity** for **each consignment of glass cullet**, containing:

- details of the producer/importer
- designation (or code) of the **scrap category**, in compliance with an industry specification or standard
- compliance of the consignment with the requirements of the above-mentioned industry specification/standard
- **weight** of the consignment in kg
- declaration of compliance with the **criteria** set out Article 3, Paragraphs 1, 2 and 3 of Regulation 1179/2012/EU and Point 2, Letter B and 5 of Annex II
- declaration that the material in the consignment is intended exclusively for direct use in the production of glass substances or items by remelting

The producer/importer must:

- **transmit** the declaration to the **next holder** of the scrap consignment
- **retain a copy** of this declaration for **at least 1 year** from the date of issue

Destination criteria  
for glass cullet  
(Article 3, Point 5)

Glass cullet is to be used to produce **glass substances or items** through **remelting processes**.

Quality  
management  
system  
(Article 6)

The producer must apply a **quality management system** (**periodically** verified by an external body) to demonstrate that the cullet complies with the criteria set out in Articles 3 and in Regulation 1179/2012/EU.

This system must document the following, among other things:

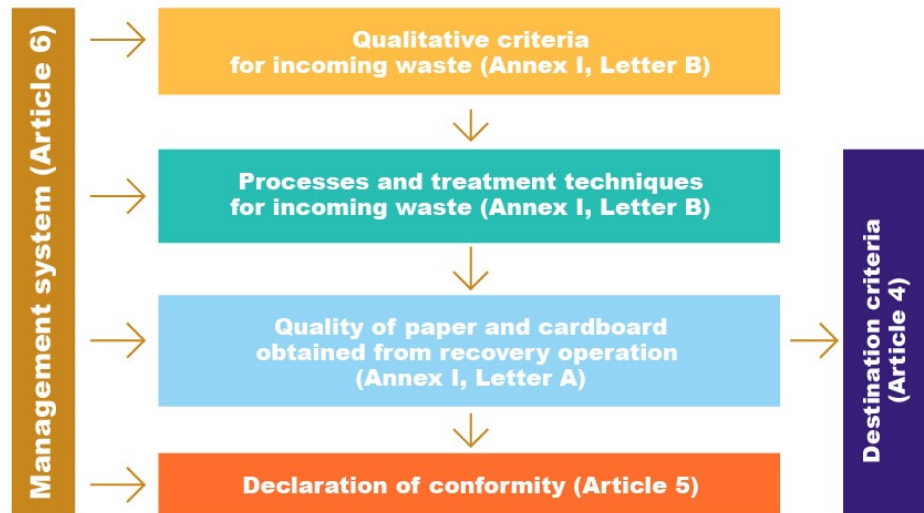
- monitoring the quality of glass cullet obtained from the recovery process (including sampling and analysis)
- acceptance control of waste used as material in the recovery operation
- monitoring of processes and techniques
- customer comments on scrap metal quality
- recording the results of checks carried out





## End of waste in various supply chains Ministerial Decree No. 188 of 22 September 2020 PAPER and CARDBOARD

Article 3  
Waste paper and cardboard loses its "waste" status and acquires "end of waste" status as recovered paper and cardboard if, as a result of recovery operations performed exclusively in accordance with UNI EN 643:2014, it meets the technical requirements set out in Annex I



Qualitative criteria for incoming waste Annex I, Letter B

For the production of recovered paper and cardboard, only the following types of waste are **permitted**:

- **15 01 01** paper and cardboard packaging
- **15 01 05** composite packaging
- **15 01 06** mixed packaging
- **20 01 01** paper and cardboard
- **19 12 01** paper and cardboard produced by mechanical treatment of waste from separate collection of municipal and special waste
- **03 03 08** waste from sorting of paper and cardboard destined for recycling, limited to waste from converting of cellulose-based products

Sorted paper and cardboard waste originating from **unsorted waste** is **not permitted**.

Processes and treatment techniques for incoming waste (Annex I, Letter B)

Reference **UNI EN 643 standard for conformity of recovery operations.**

Quality of paper and cardboard obtained from the recovery operation (Article 3 Annex I, Letter A)

The recovered paper and cardboard must **comply** with the requirements set out in the following table:

PARAMETERS	UNIT OF MEASUREMENT	MAXIMUM VALUES
Prohibited metals (excluding organic and food waste)	-	UNI EN 643
Organic waste (including food waste)	% in weight	< 0.1
Non-paper components	% in weight	UNI EN 643

Quality of paper and cardboard obtained from the recovery operation (Article 3 Annex I, Letter A)

**Verification of conformity** with these requirements must:

- take place **at least every six months** and always **when the quality characteristics of the incoming waste change\***
- be carried out by a **body certified** according to **UNI EN 9001** standard, and the samples taken according to the **methods** defined by the **UNI 10802** standard

**\* As set forth in Article 3-septies of Legislative Decree 152/2006 – Application of Ministerial Decree No. 188 of 2020:**

Conformity assessment of quality requirements must be performed at the first production of EoW paper [...] and every 6 months thereafter or as the quality characteristics of the incoming waste or the production process change.

Consequently, in the six-month period, the analysis does not have to be carried out on each individual production batch unless there are changes in the quality characteristics of the incoming waste and operating conditions.

Destination  
criteria  
(Article 4)  
Annex II

Recovered paper and cardboard can be used in the **manufacture** of paper and cardboard by the **paper industry** or in other industries that use them as **raw materials** (and that follow the UNI EN 643.2014 standard).

Declaration of  
conformity and  
retention of  
samples  
(Article 5)  
Annex III

Compliance with the criteria set forth in Ministerial Decree 188/2020 must be certified by the producer of recovered paper and cardboard by means of a **declaration in lieu of affidavit** (pursuant to Article 47 of Presidential Decree 445/2000) made **at the end of the production process of each batch**.

The declaration must be:

- **sent** electronically to the competent authority and to the locally competent ARPA
- **retained** at the production plant or at the registered office

In order to ensure compliance with the established criteria, the producer must retain a sample of recovered paper and cardboard for **1 year** at the recovery plant (or at its registered office) in compliance with Ministerial Decree 188/2020 and the UNI 10802 standard.

The way in which the sample is stored must ensure that **the chemical and physical characteristics** of the sample recovered paper and cardboard **are not altered** and that the analysis can be repeated.

The sample retention period is **reduced to 6 months** for companies with **EMAS and UNI EN ISO 14001** registration issued by an accredited body.

Management  
system  
(Article 6)

The producer of recovered paper and cardboard must apply a **quality management system** in accordance with **UNI EN 9001, certified** by an accredited body.

The management system must ensure compliance with the requirements of Ministerial Decree 188/2020 and must include:

- operating procedures for monitoring of conformity characteristics to the UNI EN 643:2014 standard
- sampling plan

The incoming waste **monitoring system** must ensure:

- ✓ **acceptance** of waste by staff with the appropriate level of education and training
- ✓ **examination of the documentation** accompanying the incoming waste load for the presence of **any contamination** by hazardous substances and the adoption of appropriate **monitoring measures (sampling and analysis)**
- ✓ **visual monitoring** of the incoming waste load
- ✓ **additional spot checks** whenever the analysis of documentation and/or visual monitoring indicate such a need
- ✓ **weighing** and recording of incoming load data
- ✓ **storage** of waste in a dedicated area
- ✓ written procedure for the management, traceability and reporting of **non-conformities**
- ✓ **quantification** and **recording** of incoming load data
- ✓ **product analysis** (to be provided at least once a year)

The incoming waste monitoring system must ensure that **specific measures** are **implemented**:

- **unloading** of paper and cardboard waste must take place under the supervision of **qualified staff**
- **foreign material** must be **identified** and sent to recovery operations different from those for the production of recovered paper and cardboard, i.e. sent for disposal
- the **storage area** where paper and cardboard waste is deposited must be **dedicated solely and exclusively** to such waste
- the storage area **must not allow mixing, even accidental**, of compliant paper and cardboard waste with other waste
- the subsequent **handling** of paper and cardboard waste must be carried out in such a way to **prevent it from being contaminated** by other waste or foreign materials
- **staff** in charge of sorting, separating and handling paper and cardboard waste are **qualified** and receive appropriate training

## END OF WASTE FOR PLASTICS: THE ROLE OF TECHNICAL STANDARDISATION

Start of the European Commission's work on the EoW framework on plastics

As part of the JRC projects, the document “*Scoping possible further EU-wide end-of-waste and by-product criteria*”<sup>3</sup> was published in 2022, which identifies the most suitable flows for the development of further EU-wide end-of-waste criteria. The assessment is based on data and information provided by stakeholders during the consultation period<sup>4</sup>.

**The European Commission therefore makes it clear that it intends to develop uniform end-of-waste (EoW) criteria for plastic waste by March 2024** and for textile waste thereafter.

Specifically, work should focus on:

- PET recovered/recycled from plastic waste
- LDPE and HDPE recovered/recycled from plastic waste
- Mixed fractions recovered/recycled from plastic waste
- EPS and XPS recovered/recycled from plastic waste
- PP recovered/recycled from plastic waste

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<sup>3</sup> <https://op.europa.eu/en/publication-detail/-/publication/b02130d2-a022-11ec-83e1-01aa75ed71a1/language-en>

<sup>4</sup> [https://environment.ec.europa.eu/news/commission-starts-develop-end-waste-criteria-plastic-waste-2022-04-05\\_en](https://environment.ec.europa.eu/news/commission-starts-develop-end-waste-criteria-plastic-waste-2022-04-05_en)

Technical standardisation plays a fundamental role in defining the destination criteria for plastics derived from recycling

The UNI 10667-1 standard classifies secondary raw materials obtained from recovery and recycling of plastic waste and refers to by-products of plastics. With the new 2022 update, the definitions were revised in accordance with Article 184-ter (end of waste) and Article 184-bis (By-product) of Legislative Decree No. 152/2006.

Further updates affected the following chapters of the current legislation:

- the list of treatments to which plastic waste may be subjected in order to become secondary raw material
- sub chapters dedicated to plastic by-products
- examples on the marking of secondary raw materials
- information sheet containing:
  - the designation and reference standard
  - the characteristics and respective measured values
  - the source flow of the waste (pre-consumer and/or post-consumer)
  - the treatments to which the waste has been subjected

Several technical standards are linked to Standard UNI 10667-1 for individual polymers

These currently include:

- Part 2: Polyethylene intended for various uses, originating from recycled industrial residues and/or pre- and/or post-consumer materials
- Part 3: Polypropylene intended for various uses, originating from recycled industrial residues and/or pre- and/or post-consumer materials
- Part 4: Polyvinyl chloride intended for various uses, originating from recycled industrial residues and/or pre- and/or post-consumer liquid containers
- Part 5: Plasticised polyvinyl chloride intended for various uses, originating from recycled industrial residues and/or pre- and/or post-consumer materials
- Part 6: Rigid polyvinyl chloride intended for various uses, originating from recycled industrial residues and/or unplasticised rigid pre- and/or post-consumer manufactured items
- Part 7: Polyethylene terephthalate flake intended for fibre production, originating from recycled post-consumer liquid containers
- Part 8: Polyethylene terephthalate flake intended for producing hollow tubes, originating from recycled post-consumer liquid containers
- Part 9: Polyethylene terephthalate flake intended for sheet and foil production, originating from recycled post-consumer liquid containers
- Part 10: Polystyrene originating from industrial residues and/or pre- and/or post-consumer materials, intended for various uses
- Part 11: Polyethylene and copolymers originating from agricultural foils and films, intended for various uses
- Part 12: Expanded polystyrene originating from industrial residues and/or pre- and/or post-consumer materials, intended for various uses
- Part 13: Fillers obtained from milling of industrial residues and/or post-consumer plastic composites
- Part 14: Mixtures of recycled polymeric and other cellulosic-based materials to be used as aggregates in cement mortars, bitumen and asphalts
- Part 15: Polyethylene terephthalate originating from post-consumer, industrial waste and residues from mechanical recycling, intended for chemical recycling by depolymerisation

- Part 16: Mixtures of heterogeneous polyolefin-based plastics originating from industrial residues and/or post-consumer materials, intended for various processing technologies
- Part 17: Mixtures of heterogeneous plastics originating from industrial residues and/or post-consumer materials, intended for use in metallurgical and steel processes
- Part 18: Mixtures of heterogeneous polyolefin-based plastics originating from industrial residues and/or post-consumer materials, intended for conversion into mixtures of solid, liquid or gaseous hydrocarbons to be used as liquid and/or gaseous fuels or for further industrial chemical processes
- Part 19: Polyethylene terephthalate originating from recycled PET waste, including multilayered with other polymers, intended for various processing technologies





## About CONAI?

CONAI, the National Packaging Consortium, is a private, non-profit consortium consisting of around 760,000 businesses that produce and use packaging.

The CONAI System is the response of private businesses to a problem of collective interest – the environment – in accordance with guidelines and objectives set by the political system.

CONAI cooperates with municipalities through specific conventions governed by the ANCI-CONAI national framework agreement, and for citizens represents the guarantee that the materials originating from separate waste collection are fully utilised through correct recovery and recycling processes.

