



# SLOVENSKI STANDARD

## oSIST prEN 15347:2022

01-maj-2022

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**Polimerni materiali - Reciklirani polimerni materiali - Karakterizacija odpadkov  
sortiranih polimernih materialov**

Plastics - Recycled plastics - Characterisation of sorted plastics wastes

Kunststoffe - Kunststoff-Rezyklate - Charakterisierung von sortierten Kunststoffabfällen

Plastiques - Plastiques recyclés - Caractérisation des déchets de plastiques triés

Ta slovenski standard je istoveten z: **prEN 15347**

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**ICS:**

13.030.50

Recikliranje

Recycling

83.080.01

Polimerni materiali na  
splošno

Plastics in general

**oSIST prEN 15347:2022**

**en,fr,de**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**DRAFT**  
**prEN 15347**

March 2022

ICS 13.030.50; 83.080.01

Will supersede EN 15347:2007

English Version

## Plastics - Recycled plastics - Characterisation of sorted plastics wastes

Plastiques - Plastiques recyclés - Caractérisation des déchets de plastiques triés

Kunststoffe - Kunststoff-Rezyklate - Charakterisierung von sortierten Kunststoffabfällen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 249.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European foreword

This document (prEN 15347:2022) has been prepared by Technical Committee CEN/TC 249 “Plastics”, the secretariat of which is held by NBN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 15347:2007.

This document includes the following significant changes with respect to EN 15347:2007:

- Title was clarified, “sorted” has been added;
- Normative references have been updated;
- Table 1 “Required characteristics of sorted plastic waste” and Table 2 “Optional characteristics of sorted plastic wastes” have been completely revised;
- Clause 5 “Quality assurance” has been revised;
- Bibliography has been updated.

This document is one part of a series of CEN publications on Plastics Recycling, which is structured as follows:

- EN 15342, *Plastics — Recycled Plastics — Characterization of polystyrene (PS) recyclates*
- EN 15343, *Plastics — Recycled Plastics — Plastics recycling traceability and assessment of conformity and recycled content*
- EN 15344, *Plastics — Recycled Plastics — Characterization of Polyethylene (PE) recyclates*
- EN 15345, *Plastics — Recycled Plastics — Characterization of Polypropylene (PP) recyclates*
- EN 15346, *Plastics — Recycled plastics — Characterization of poly(vinyl chloride) (PVC) recyclates*
- EN 15347, *Plastics — Recycled Plastics — Characterization of sorted plastics wastes*
- EN 15348, *Plastics — Recycled plastics — Characterization of poly(ethylene terephthalate) (PET) recyclates*
- CEN/TR 15353, *Plastics — Recycled plastics — Guidelines for the development of standards for recycled plastics*

## Introduction

Recycling of plastics waste is one type of material recovery process intended to save resources (virgin materials, water and energy), while minimizing harmful emissions into air, water and soil as well as any impacts on human health. In order to be meaningful, the environmental impact of recycling should be assessed over the whole life cycle of the recycling system (from the waste generation point to the disposal of final residues). To ensure that recycling constitutes the best environmental option for treating the available waste, some prerequisites should preferably be met:

- recycling scheme being contemplated should generate lower environmental impacts than alternative recovery options;
- existing or potential market outlets should be identified that will secure a sustainable industrial recycling operation;
- collection and sorting schemes should be properly designed to deliver recyclable plastics waste fractions fitting reasonably well with the available recycling technologies and with the (changing) needs of the identified market outlets, preferably at minimum costs to society.

This document has been produced in accordance with the guidance produced by CEN on Environmental Aspects and in accordance with CEN/TR 15353, Plastics — Recycled plastics — Guidelines for the development of standards for recycled plastics.

NOTE CEN/TR 15353 considers the general environmental aspects which are specific to the recycling process.

It is often impossible to trace back each individual product at the end user stage and to check whether the product has been used correctly through its life. Consequently products are out of industrial control for a period of time. It is possible that during this period contamination with other materials may occur that could affect the product's suitability for recycling into the intended application.

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## 1 Scope

This document provides a scheme for the characterization of sorted plastics wastes, laying out those properties for which the supplier of the waste shall make information available to the purchaser, and appropriate test methods where applicable. The scheme provides for a division of information between “**Required characteristics**”, where a statement is required and additional “**Optional characteristics**” which the supplier should provide based on the contractual agreements.

This document is applicable without prejudice to any existing legislation.

NOTE This document does not cover the characterization of plastics recyclates.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

prEN 17615, *Plastics — Environmental Aspects — Vocabulary*

## 3 Terms, definitions and abbreviated terms

For the purposes of this document, the terms and definitions given in EN ISO 472 and CEN/TR 15353 apply. The abbreviated terms related to recyclates are given in EN ISO 1043-1.

## 4 Requirements

### 4.1 General

The characteristics of a batch of sorted plastics waste that should be provided to the purchaser by the supplier are given in Table 1 and Table 2, and are divided into two types:

- Required characteristics, needed to characterize plastic wastes in general, and required for all batches of sorted plastic waste.
- Optional characteristics, information on which may add value to the batch of waste.

NOTE Plastics waste arise in many different forms and can be a single polymer type or a mixture, depending on how the waste has been collected. A batch of waste material can, therefore, include wastes from a single source, such as industrial waste, or window frames from building demolition, or a mixture of types as in unsorted domestic waste. The forms in which the waste is collected can be equally varied. A batch of waste material offered for sale can be a quantity as collected, or can have been sorted by the collector to add value to it. The wide range of possible forms and compositions of plastics waste offered for sale makes it important for there to be a standardized means of characterizing them so that there is a transparent transaction between seller and purchaser. For instance, sorted plastic waste, as it leaves the sorting facility, is typically a bale of unwashed plastic products. However, other delivery forms are possible.

### 4.2 Classification scheme

The supplier of a batch of sorted plastics waste shall provide to the purchaser a statement of the characteristics of the waste under the headings in Table 1 and Table 2.

Where the plastics waste originates from a single source and comprises a single polymer type, then the properties of that original material can be reported, provided it is clearly stated that they are the properties of the virgin material rather than that of the waste.

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Where properties have been measured on representative samples from the batch of sorted plastics waste, this shall be stated. Other tests may be carried out by agreement between the purchaser and supplier and the results shall be reported.

The supplier may provide, or the purchaser request information on substances which may present impediments to recycling and their concentrations in the waste, with details of the way the information was obtained – via traceability or by analysis, quoting any analytical methods used. The purchaser may indicate those substances for which he/she requires information.

To secure the legal use of the recyclate, the supplier has to provide the necessary information concerning the material composition of the waste, as specified by the purchaser.

**Table 1 — Required characteristics of sorted plastic wastes**

Property	Suitable statements/Comments
Main Polymer Present	Most important polymer component of the waste and the minimum percentage by weight.
Products	Indicate the products, which are composing the sorted material and their percentage by weight (For example, as film, bottles, profiles, etc.)
Pre/Post-consumer	Indicate the type of sorted plastics waste according to prEN 17615.
Origin	Indicate the origin: Commercial and Industrial Waste, Household Waste, Agricultural Waste.
Source	Indicate the source: Agriculture, Building and Construction, Packaging – Household, Packaging – Transport and Industry, “Housewares, Leisure, Sports etc.”, WEEE, ELV, Others (specify).
Colour	Indicate the dominating colour and its minimum share. Additional information on other colours and their respective shares can be added if applicable e.g. Natural, Black, White, Opaque, Single Colours or Mixed Colours and information on shade, e.g. light blue
Other Polymers Present	Any other polymers known to be present and the maximum percentage by weight.
Metals	Indicate the maximum percentage by weight of ferrous and non-ferrous metals.
Paper/Cardboard	Indicate the maximum percentage by weight of paper and cardboard.
Moisture	Indicate the maximum percentage by weight of moisture (according to contractual agreement)
Other contaminants	Indicate the maximum percentage by weight of each other contaminants. For this purpose, food waste contaminations may be aggregated to a single type of contaminant ‘food waste’.
Prohibited impurities	List the prohibited impurities, which should not be present.
Weight/seize	Indicate the weight and size of the bale, big bag or briquettes
Delivery form	Indicate if the sorted plastics waste is in bulk, bales, briquettes, big bags or another format. If within these forms, the sorted plastics are other than whole products, specify the shape, e.g. flakes, large pieces, film-on-roll, etc.
Strapping	Indicate the type of strapping used in case of baled sorted waste.
Supplier name	Indicate the name of the supplier
Supplier address	Indicate the address of the supplier



Table 2 — Optional characteristics of sorted plastic wastes

The supplier should provide as much information as possible It shall be stated whether any properties reported are those of the original prime material or have been measured on representative samples from the sorted plastics waste.	
Non-food contact	Indicate the maximum percentage by weight of articles from non-food applications.
Truck load	Indicate the minimum tonnages transported.
Flexible plastics	Indicate the maximum percentage by weight of flexible plastics.
Wood	Indicate the maximum percentage by weight of wood.
Foam	Indicate the maximum percentage by weight of foam.
Rubber	Indicate the maximum percentage by weight of rubber.
Minerals	Indicate the maximum percentage by weight of minerals.
Glass	Indicate the maximum percentage by weight of glass.
Salt residue	Indicate the maximum percentage by weight of salt residue.
Additional sorting information	Indicate any additional information on collection, sorting and/or any other preparation step.

## 5 Quality assurance

In order that the purchaser of the sorted plastic waste may have confidence in the quality of the supply, the supplier shall maintain records of the quality control carried out, including incoming materials, processes and finished sorted plastics waste.

NOTE A quality management system certified to EN ISO 9001 can be a suitable guarantee of consistent quality of the supplied sorted plastics waste.

The specification and the standard deviation or range of values within and between batches of material shall be agreed between the supplier and the purchaser.

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