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Plastics - Sorted plastics wastes - Part 1: General characterisation

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 15347-1:2024 sisaldab Euroopa standardi EN 15347-1:2024 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 21.08.2024.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 15347-1:2024 consists of the English text of the European standard EN 15347-1:2024.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 21.08.2024.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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ICS 13.030.50, 83.080.01

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EUROPEAN STANDARD

EN 15347-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2024

ICS 13.030.50; 83.080.01

Supersedes EN 15347:2007

English Version

Plastics - Sorted plastics wastes - Part 1: General characterisation

Plastiques - Déchets de plastiques triés - Partie 1:
Caractérisation générale

Kunststoffe - Sortierte Kunststoffabfälle - Teil 1:
Allgemeine Charakterisierung

This European Standard was approved by CEN on 24 June 2024.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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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

Contents	Page
European foreword	3
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms, definitions and abbreviated terms	6
4 Requirements	7
4.1 General	7
4.2 Classification scheme	7
5 Quality assurance	11
Annex A (normative) Composition of the material	12
Bibliography	13

European foreword

This document (EN 15347-1:2024) has been prepared by Technical Committee CEN/TC 249 “Plastics”, the secretariat of which is held by SIS.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2025 and conflicting national standards shall be withdrawn at the latest by February 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 15347:2007.

EN 15347-1:2024 includes the following significant technical changes with respect to EN 15347:2007:

- the title was clarified; “sorted” has been added;
- the normative references have been updated;
- Table 1 “Required characteristics of sorted plastic wastes” and Table 2 “Optional characteristics of sorted plastic wastes” have been completely revised;
- Clause 5 “Quality assurance” has been reworded;
- the 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 (all parts), *Plastics — 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*

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

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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. Collection of waste is the starting point to enable plastics recycling.

The type of collection and sorting process of plastic waste will determine the composition and quality of a batch of plastics sent for recycling. When it comes to municipal waste, a deposit system or separate collection will ensure a lower risk of incidental contamination compared to a mixed waste collection, where different materials are collected together with the residual fraction. Municipal waste will commonly be sent to a sorting centre, where it will be separated per materials, focusing on targeted recycling streams. In the case of plastics, these streams generally follow the polymer types. The purity of the sorted waste can contribute to the quality of the final recycled plastic and determine the end application. The output of the sorting centre is typically a bale of targeted material that in the case of plastics will be sent to a plastic recycler.

Characterization of waste determines the composition of the batch, describing maximum or minimum thresholds for presence of contaminants of the main polymer of the sorted waste targeted for recycling. An accurate characterization can be used to determine suitability for a recycling process and specific end applications, as well as estimation of the value of the batch. Therefore, the information included in the product specification can be part of the purchase specifications from the recycler.

A standardized method for characterizing waste provides harmonized waste specifications to ensure a transparent transaction between a supplier and a customer of a plastic waste batch.

This document has been produced in accordance with the guidance produced by CEN on Environmental Aspects and in accordance with CEN/TR 15353.

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

1 Scope

This document provides a scheme for the characterization of sorted plastics wastes, laying out those properties for which the supplying party of the waste makes information available to the receiving party. This document provides for a division of information between “Required Data”, where a statement is required, and additional “Optional Data” as agreed between the supplying and receiving party.

This document is the general part of a series on sorted plastics wastes. This document does not cover the description of quality grades per polymer(s) and stream as well as test methods specific to each plastic waste stream; these aspects are addressed in the other parts of EN 15347.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

CEN/TR 15353, *Plastics - Recycled plastics - Guidelines for the development of standards for recycled plastics*

EN 17615, *Plastics - Environmental Aspects - Vocabulary*

EN ISO 1043-1, *Plastics - Symbols and abbreviated terms - Part 1: Basic polymers and their special characteristics (ISO 1043-1)*

3 Terms, definitions and abbreviated terms

For the purposes of this document, the terms and definitions given in EN 17615, CEN/TR 15353 and the following apply. The abbreviated terms related to recyclates given in EN ISO 1043-1 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp/>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

municipal plastic waste

plastic waste generated by households

Note 1 to entry: Often collected with waste from other sources, where such waste is similar in nature and composition to waste from households.

3.2

commercial plastic waste

plastic waste generated by the operation of trade, business professionals, commercial, institutions or government facilities with a composition different from what is typically a household waste

Note 1 to entry: Includes waste generated from the handling, transport, retailing, and stocking of products and services usually referred to as tertiary packaging.

Note 2 to entry: Includes electronic and electrical appliances wastes when these are returned to the shops that manage the disposal.

Note 3 to entry: Includes beverage plastic bottles part of Deposit-Return schemes, as the final holder of the product to be disposed of is the retail centre where these bottles are collected.