

Plastics - Sorted plastics wastes - Part 6: Quality grades of sorted polystyrene (PS) wastes and specific test methods

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 15347-6:2025 sisaldab Euroopa standardi EN 15347-6:2025 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 28.05.2025.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 15347-6:2025 consists of the English text of the European standard EN 15347-6:2025.</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 28.05.2025.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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ICS 13.030.50, 83.080.20

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EUROPEAN STANDARD

EN 15347-6

NORME EUROPÉENNE

EUROPÄISCHE NORM

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ICS 13.030.50; 83.080.20

English Version

Plastics - Sorted plastics wastes - Part 6: Quality grades of sorted polystyrene (PS) wastes and specific test methods

Plastiques - Déchets de plastiques triés - Partie 6 :
Grades de qualité des déchets de polystyrène (PS) triés
et méthodes d'essai spécifiques

Kunststoffe - Sortierte Kunststoffabfälle - Teil 6:
Qualitätsstufen von sortierten Polystyrol(PS)-Abfällen
und spezifische Prüfverfahren

This European Standard was approved by CEN on 21 April 2025.

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
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European foreword

This document (EN 15347-6:2025) 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 November 2025, and conflicting national standards shall be withdrawn at the latest by November 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 is part of CEN publications on plastics recycling, listed 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*
- EN 18064 (all parts), *Plastics — Quality recommendations and basis for specifications for application of plastic recyclates in products*
- EN 18065, *Plastics — Recycled plastics — Classification of recycled plastics based on Data Quality Levels for use and (digital) trading*
- EN 18067, *Plastics — Recycled plastics — Characterization of acrylonitrile-butadiene-styrene (ABS) recyclates*
- CEN/TR 15353, *Plastics — Recycled plastics — Guidelines for the development of standards for recycled plastics*
- CEN/TR 18160, *Plastics recycling — Classification of plastic recyclates as post-consumer recyclates (PCR) and post-industrial recyclates (PIR)*

This document has been prepared under a standardization request addressed to CEN and CENELEC by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

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 organisations 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

Polystyrene (PS) is mainly used in the packaging sector, and usually for food contact applications. Furthermore, PS can be air-filled to create EPS (expanded polystyrene) and XPS (extruded polystyrene), mainly used in packaging applications. Due to its resistance to high impact, it is also often used as protective packaging to electronics and home appliances. Characteristics are specified for products part of the packaging and building and construction sectors. PS as EPS and XPS is also used in building and construction applications for insulation in walls, roofs and floors.

PS waste is generally collected via separate collection schemes – commonly comingled together with other plastics and materials such as aluminium and cardboard (depending on EU Member State) which will be sorted in sorting centres at a later stage in established recycling streams for recycling. PS will be sorted separately or together with other mixed plastics where it can be separated later at the recycler with additional sorting steps.

The collection of household PS is organized via separate collection – usually comingled with other plastics and other materials such as aluminium and cardboard (depending on EU Member State) that will be later sorted out in different recycling streams at a later stage in a sorting centre prior reaching the recycler. Packaging used in commercial or industrial applications such as fish boxes can be collected via closed loop systems or private schemes where the PS waste will be directly sent to a PS recycler. In those cases, PS waste will commonly be pressed into blocks to remove the air on site to facilitate the transport of the waste.

PS waste from building and construction originated in demolition sites will be collected via private schemes and it will be sent directly to the recycler.

PS, XPS and EPS plastic waste is characterized to determine the composition and quality of the batch. A clear and harmonized waste specification facilitates a transaction between the supplier and purchaser and establishes standard characteristics to monitor during any sorting or preparation of waste operations.

This document complements the general characterization of waste described in EN 15347-1 and adds additional clarification when it comes to the required and optional requirements of PS, XPS and EPS waste. Characteristics are specified for products part of the packaging and building and construction sectors.

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 specifies the quality grades for sorted polystyrene (PS) wastes as well as specific test methods laying out those properties for which the supplying party of the waste makes information available to the receiving party. PS waste quality grades are based on pre-determined sets of characteristics, taking into account sectorial and market specificities and related information needs and tests methods. The 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 does not apply to the general characterization addressed in EN 15347-1.

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 15347-1:2024, *Plastics — Sorted plastics wastes — Part 1: General characterisation*

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, EN 15347-1 and CEN/TR 15353 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/>

4 Requirements

4.1 General

The characteristics of a batch of PS sorted plastics waste to be provided to the purchaser by the supplier are given in Table 1, 3, 5 or 7 and Table 2, 4, 6 or 8, 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: Recommended additional information for the characterization of plastic wastes.

NOTE In case of transboundary movement, reference can be made to the Basel convention (on transboundary movement of wastes) and to relevant European regulations.