ICS 13.030.50 SLOVENSKÁ TECHNICKÁ NORMA September 2025

STN	**Plasty** **Recyklované plasty** **Charakterizácia recyklátov z polystyrénu (PS)**	**STN** **EN 15342** 64 8107

Plastics - Recycled Plastics - Characterization of polystyrene (PS) recyclates

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/25

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EUROPEAN STANDARD
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EN 15342

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ICS 13.030.50 Supersedes EN 15342:2007

English Version

Plastics - Recycled plastics - Characterization of polystyrene (PS) recyclates

Plastiques - Plastiques recyclés - Caractérisation des recyclats de polystyrène (PS)

Kunststoffe - Kunststoff-Rezyklate - Charakterisierung von Polystyrol (PS)-Rezyklaten

This European Standard was approved by CEN on 28 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
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 15342:2025) 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of an identical text or by endorsement, at the latest by December 2025, and conflicting national standards shall be withdrawn at the latest by December 2025.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 15342:2007.

This document includes the following significant changes with respect to EN 15342:2007:

— Scope has been clarified;

— Normative references have been updated;

— Terms and definitions have been updated. In Clause 3, reference to EN 17615 has been added;

— Clause 4 “Symbols and abbreviations” has been added;

— Clause 5 “Characterization of PS recyclates” (formerly Clause 4) and Table 1 “Characterization of PS recyclates” have been completely revised;

— In Clause 6 “Quality assurance” (formerly Clause 5) requirement regarding traceability has been added;

— Annex A: Content of test report has been changed;

— Bibliography was updated.

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 00249A5G[1], *Plastics recycling — Classification of plastic recyclates as postconsumer recyclates (PCR) and postindustrial 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.

[1] Under preparation.

Introduction

Recycling of plastics waste is one type of material recovery process intended to save resources (virgin raw materials, water, and energy), while minimizing harmful emissions into air, water and soil. The environmental impact of recycling is 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.

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

During their use phase, products are temporarily out of industrial control. Consequently, at the end user stage, it is often impossible to trace back each individual product and whether it has been used correctly through its life cycle.

1 Scope

This document specifies the main characteristics and associated test methods for assessing of polystyrene (PS) recyclates intended for use in the production of semi-finished/finished products.

It is intended to support parties involved in the use of PS recyclates to agree on specifications for specific and generic applications.

This document does not cover the characterization of plastics wastes, which is covered by the EN 15347 series, neither traceability topics which are covered by EN 15343.

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.

ASTM D1895, *Standard Test Methods for Apparent Density, Bulk Factor, and Pourability of Plastic Materials*

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

EN 15343, *Plastics — Recycled Plastics — Plastics recycling traceability and assessment of conformity and recycled content*

EN 17615, *Plastics — Environmental Aspects — Vocabulary*

EN ISO 60, *Plastics — Determination of apparent density of material that can be poured from a specified funnel (ISO 60)*

EN ISO 179-1, *Plastics — Determination of Charpy impact properties — Part 1: Non-instrumented impact test (ISO 179-1)*

EN ISO 179-2, *Plastics — Determination of Charpy impact properties — Part 2: Instrumented impact test (ISO 179-2)*

EN ISO 180, *Plastics — Determination of Izod impact strength (ISO 180)*

EN ISO 472, *Plastics — Vocabulary (ISO 472)*

EN ISO 527-1, *Plastics — Determination of tensile properties — Part 1: General principles (ISO 527-1)*

EN ISO 527-2, *Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics (ISO 527-2)*

EN ISO 527-3, *Plastics — Determination of tensile properties — Part 3: Test conditions for films and sheets (ISO 527-3)*

EN ISO 527-4, *Plastics — Determination of tensile properties — Part 4: Test conditions for isotropic and orthotropic fibre-reinforced plastic composites (ISO 527-4)*

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

EN ISO 1133-1, *Plastics — Determination of the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics — Part 1: Standard method (ISO 1133-1)*

EN ISO 1133-2, *Plastics — Determination of the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics — Part 2: Method for materials sensitive to time-temperature history and/or moisture (ISO 1133-2)*