

STN	Obaly Návrh plastových obalov zameraný na recykláciu Časť 12: Proces hodnotenia recyklovateľnosti plastových obalov Protokoly pre pevné PE a PP obaly	STN EN 18120-12 77 0509
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Packaging - Design for recycling of plastic packaging - Part 12: Recyclability evaluation process for plastic packaging - Protocols for PE and PP rigid packaging

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. 08/26

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EUROPEAN STANDARD
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English Version

**Packaging - Design for recycling of plastic packaging - Part
12: Recyclability evaluation process for plastic packaging -
Protocols for PE and PP rigid packaging**

Emballages - Conception des emballages plastiques en
vue de leur recyclage - Partie 12 : Processus
d'évaluation de la recyclabilité des emballages
plastiques - Protocoles pour les emballages rigides en
PE et PP

Verpackung - Recyclingorientierte Gestaltung von
Kunststoffverpackungsprodukten - Teil 12 - Verfahren
zur Bewertung der Recyclingfähigkeit von
Kunststoffverpackungen - Protokolle für starre
Verpackungen aus PE und PP

This European Standard was approved by CEN on 9 February 2026.

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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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EN 18120-12:2026 (E)

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European foreword

This document (EN 18120-12:2026) has been prepared by Technical Committee CEN/TC 261 “Packaging”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by October 2026, and conflicting national standards shall be withdrawn at the latest by October 2026.

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 has been prepared under a standardization request addressed to CEN 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.

EN 18120-12:2026 (E)**Introduction**

The EN 18120 series, under the general title *Packaging — Design for recycling of plastic packaging*, which aims via a series of guidelines and protocols to establish consistency and improvement for the design for recycling of household, industrial and commercial plastic packaging, consists of the following parts:

- *Part 1: Definitions and principles for design-for-recycling of plastic packaging*
- *Part 3: Evaluation processes for the sortability of plastic packaging*
- *Part 4: Guideline for PET bottles*
- *Part 5: Guideline for PET rigid packaging (except bottles)*
- *Part 6: Guideline for PE and PP rigid packaging*
- *Part 7: Guideline for PE and PP flexible packaging*
- *Part 8: Guideline for PS and XPS rigid packaging*
- *Part 9: Guideline for EPS packaging*
- *Part 10: Recyclability evaluation process for plastic packaging — Protocols for PET bottles*
- *Part 11: Recyclability evaluation process for plastic packaging — Protocols for PET rigid packaging (except bottles)*
- *Part 12: Recyclability evaluation process for plastic packaging — Protocols for PE and PP rigid packaging*
- *Part 13: Recyclability evaluation process for plastic packaging — Protocols for PE and PP flexible packaging*
- *Part 14: Recyclability evaluation process for plastic packaging — Protocols for PS and XPS rigid packaging*
- *Part 15: Recyclability evaluation process for plastic packaging — Protocols for EPS packaging*

Design for recycling guidelines are a common way of evaluating the compatibility with plastic-packaging collection, sorting and recycling which enables the use of secondary raw materials that are of sufficient quality when compared to the original material, in state-of-the-art facilities.

They provide guidance on the level of compatibility, defined as:

- green: packaging constituents and components with full compatibility with state-of-the-art collection, sorting and recycling;
- yellow: packaging constituents and components with limited compatibility with state-of-the-art collection, sorting and recycling;
- red: packaging constituents and components which are not compatible with state-of-the-art collection, sorting and recycling.

The design for recycling guidelines provided in the EN 18120 series cover the design for recycling based on the knowledge available at the time of the development of this document and are representative of the

state-of-the-art. They consider packaging waste collection, sorting and recycling, so that the recycled plastic can substitute primary raw materials in packaging application or other applications. Compliance with the design guidelines in the EN 18120 series does not guarantee that the recycled plastic quality will be fit for purpose for a specific targeted end application or compliant with applicable regulations.

Packaging recyclability is the combination of design of recycling, proven collection, sorting and recycling in practice.

EN 18120-12:2026 (E)**1 Scope**

This document covers the design of any rigid packaging with the main body of the packaging unit predominantly made of PE or PP and the design of separate components predominantly made of rigid PE or rigid PP, with respect to compatibility of the design with state-of-the-art collection, sorting and recycling processes and useability of the recyclates in an application.

Packaging constituents and packaging components made of other materials than PE and PP are also covered by this document as they need to be evaluated on compatibility with PE or PP polymer recycling.

2 Normative references

The following documents are referred to in the text in such a way that 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.

EN 18120-1, *Packaging — Design for recycling of plastic packaging — Part 1: Definitions and principles for design-for-recycling of plastic packaging*³

EN ISO 178, *Plastics — Determination of flexural properties (ISO 178)*

EN ISO 527-1:2019, *Plastics — Determination of tensile properties — Part 1: General principles (ISO 527-1:2019)*

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

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 18314-1, *Analytical colorimetry — Part 1: Practical colour measurement (ISO 18314-1)*

EN ISO 1183-1, *Plastics — Methods for determining the density of non-cellular plastics — Part 1: Immersion method, liquid pycnometer method and titration method (ISO 1183-1)*

EN ISO 3451-1, *Plastics — Determination of ash — Part 1: General methods (ISO 3451-1)*

EN ISO 11357-1, *Plastics — Differential scanning calorimetry (DSC) — Part 1: General principles (ISO 11357-1)*

EN ISO 11357-3, *Plastics — Differential scanning calorimetry (DSC) — Part 3: Determination of temperature and enthalpy of melting and crystallization (ISO 11357-3)*

EN ISO 11358-1, *Plastics — Thermogravimetry (TG) of polymers — Part 1: General principles (ISO 11358-1)*

EN ISO 15512, *Plastics — Determination of water content (ISO 15512)*

ASTM D2457, *Standard Test Method for Specular Gloss of Plastic Films and Solid Plastics*

ASTM D2463, *Standard Test Method for Drop Impact Resistance of Blow-Molded Thermoplastic Containers*

ASTM D2659, *Standard Test Method for Column Crush Properties of Blown Thermoplastic Containers*

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