ICS 13.030.50, 55.020 SLOVENSKÁ TECHNICKÁ NORMA September 2026

STN	**Obaly Návrh plastových obalov zameraný na recykláciu Časť 10: Proces hodnotenia recyklovateľnosti plastových obalov Protokoly pre PET fľaše**	**STN EN 18120-10** 77 0509

Packaging - Design for recycling of plastic packaging - Part 10: Recyclability evaluation process for plastic packaging - Protocols for PET bottles

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

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English Version

Packaging - Design for recycling of plastic packaging - Part 10: Recyclability evaluation process for plastic packaging - Protocols for PET bottles

Emballages - Conception des emballages plastiques en vue de leur recyclage - Partie 10 : Processus d'évaluation de la recyclabilité des emballages plastiques - Protocoles pour les bouteilles en PET

Verpackung - Recyclingorientierte Gestaltung von Kunststoffverpackungsprodukten - Teil 10: Verfahren zur Bewertung der Recyclingfähigkeit von Kunststoffverpackungen - Protokolle für Flaschen aus PET

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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 18120-10:2026) 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of an identical text or by endorsement, at the latest by October 2026, and conflicting national standards shall be withdrawn at the latest by October 2026.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.

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.

1 Scope

This document provides requirements for the evaluation process for bottles predominantly made of PET with respect to compatibility of the design with recycling processes.

Packaging components and ancillary elements made of other materials than PET are also covered by this document as they need to be evaluated for compatibility with the recycling processes.

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.

EN 15344:2025, *Plastics — Recycled plastics — Characterization of polyethylene (PE) recyclates*

EN 18120-1:2026, *Packaging — Design for recycling of plastic packaging — Part 1: Definitions and principles for design-for-recycling of plastic packaging*

EN 18120-4, *Packaging — Design for recycling of plastic packaging — Part 4: Guideline for PET bottles*

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)*

EN ISO 1628-5, *Plastics — Determination of the viscosity of polymers in dilute solution using capillary viscometers — Part 5: Thermoplastic polyester (TP) homopolymers and copolymers (ISO 1628-5)*

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

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

ASTM F2013, *Standard Test Method for Determination of Residual Acetaldehyde in Polyethylene Terephthalate Bottle Polymer Using an Automated Static Head-Space Sampling Device and a Capillary GC with a Flame Ionization Detector*

ISBT PTC-00002,[1] *Voluntary Test Method for PET Bottles*

[1] Published by the International Society of Beverage Technologists (ISBT). Available at https://www.isbt.com/resource/voluntary-test-methods-for-pet-bottles