



**SLOVENSKI STANDARD**  
**SIST-TP CEN/TR 15353:2007**

**01-september-2007**

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**Polimerni materiali - Reciklirani polimerni materiali - Smernice za pripravo standardov za reciklirane polimerne materiale**

Plastics - Recycled plastics - Guidelines for the development of standards for recycled plastics

Kunststoffe - Kunststoff-Rezyklate - Leitfaden für die Entwicklung von Normen für Kunststoff-Rezyklate

Plastiques - Plastiques recyclés - Lignes directrices pour l'élaboration de normes relatives aux plastiques recyclés

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**ICS:**

13.030.50	Recikliranje	Recycling
83.080.01	Polimerni materiali na splošno	Plastics in general

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ICS 13.030.50; 83.080.01

English Version

## Plastics - Recycled plastics - Guidelines for the development of standards for recycled plastics

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This Technical Report was approved by CEN on 16 January 2006. It has been drawn up by the Technical Committee CEN/TC 249.

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<b>Contents</b>	<b>Page</b>
Foreword.....	3
1 Scope .....	4
2 Normative References .....	4
3 Terms, definitions and abbreviated terms .....	4
4 Purpose.....	8
5 Designation .....	8
6 Layout .....	9
7 Performance standards.....	9
8 Quality assurance .....	9
9 Environmental aspects .....	10
Bibliography .....	14

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## Foreword

This document (CEN/TR 15353:2007) has been prepared by Technical Committee CEN/TC 249 “Plastics”, the secretariat of which is held by IBN.

This Technical Report shall be given the status of a national standard, either by publication of an identical text or by endorsement and conflicting national standards shall be withdrawn.

This standard is one part of series of CEN publications on Plastics Recycling which is structured as follows:

- prEN 15343 Plastics — Recycled Plastics — Plastics recycling traceability and assessment of conformity and recycled content
- prEN 15344 Plastics — Recycled Plastics — Characterisation of Polyethylene (PE) recyclates
- prEN 15345 Plastics — Recycled Plastics — Plastics recyclate characterisation of PP recyclates
- prEN 15346 Plastics — Recycled plastics — Characterisation of poly(vinyl chloride) (PVC) recyclates
- prEN 15348 Plastics — Recycled plastics — Characterization of poly(ethylene terephthalate) (PET) recyclates
- prEN 15342 Plastics — Recycled Plastics — Characterization of polystyrene (PS) recyclates
- prEN 15347 Plastics — Recycled Plastics — Characterisation of plastics wastes

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## 1 Scope

This Technical Report provides a format for the drafting of standards for recycled plastics. It is intended for use by all those who are preparing drafts for consideration by the Technical Committee.

The guide provides information for the development of standards (guides, practices, test methods, and specifications) relating to the proper use of recycled plastics.

## 2 Normative References

The following referenced documents are indispensable for the application 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 ISO 472:2001, *Plastics — Vocabulary (ISO 472:1999)*

EN ISO 1043-1:2001, *Plastics — Symbols and abbreviated terms — Part 1: Basic polymers and their special characteristics (ISO 1043-1:2001)*

EN ISO 1043-2, *Plastics - Symbols and abbreviated terms — Part 2: Fillers and reinforcing materials (ISO 1043-2:2000)*

EN ISO 9001:2000, *Quality management systems — Requirements (ISO 9001:2000)*

## 3 Terms, definitions and abbreviated terms

For the purposes of this Technical Report, the terms and definitions given in EN ISO 472:2001 and the following apply. The abbreviated terms related to recyclates are given in EN ISO 1043-1:2001.

### 3.1

#### **agglomerate**

shredded and/or granulated plastics material in the form of particles which cling together

### 3.2

#### **baling**

process in which plastics waste is compacted and secured as a bundle to facilitate handling, storage and transportation

### 3.3

#### **batch**

quantity of material regarded as a single unit, and having a unique reference

### 3.4

#### **biodegradation**

degradation caused by biological activity, especially by enzymatic action, leading to a significant change in the chemical structure of a material

[ISO 16929:2002]

**3.5****biological recycling**

aerobic (composting) or anaerobic (digestion) treatment of biodegradable plastics waste under controlled conditions using microorganisms to produce stabilized organic residues, carbon dioxide and water in the presence of oxygen or to produce stabilized organic residues, methane and water in the absence of oxygen

**3.6****chemical recycling**

production of new raw materials by changing chemical structure of plastics waste through cracking, gasification or depolymerization, excluding energy recovery and incineration

NOTE Feedstock recycling and chemical recycling are synonyms.

**3.7****collection**

logistical process of moving plastics waste from its source to a place where it can be recovered

**3.8****commingled plastics**

mixture of materials or products consisting of different types of plastic

NOTE Mixed plastics is a synonym.

**3.9****contaminant**

unwanted substance or material

NOTE Impurity is a deprecated synonym of contaminant and should not be used.

**3.10****converter**

specialized operator capable of shaping plastics raw material to make a usable semi-finished or finished product

**3.11****energy recovery**

production of useful energy through controlled combustion

NOTE Solid-waste incinerators producing hot water, steam and/or electricity are a common form of energy recovery.

**3.12****environmental impact**

any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's environmental aspects

**3.13****feedstock recycling**

production of new raw materials by changing chemical structure of plastics waste through cracking, gasification or depolymerization, excluding energy recovery and incineration

NOTE Feedstock recycling and chemical recycling are synonyms.

**3.14****flake**

plate-like regrind

NOTE The shape of regrind depends both on the plastics being processed and the manner of processing.

**3.15**

**fluff**

filament-like regrind

NOTE Common usage of the term “fluff” also includes shredder residue fractions produced in the commercial recycling of durable goods such as automobiles.

**3.16**

**homogenizing**

processing to improve the degree to which a constituent and/or property is uniformly distributed throughout a quantity of plastics material

[EN 14899:2005]

**3.17**

**lot**

definite quantity of some commodity manufactured or produced under conditions that are presumed uniform

NOTE Lot is primarily a commercial term.

**3.18**

**material recovery**

material-processing operations including mechanical recycling, feedstock (chemical) recycling and organic recycling, but excluding energy recovery

**3.19**

**mechanical recycling**

processing of plastics waste into secondary raw material or products without significantly changing the chemical structure of the material

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NOTE Plastics secondary raw material is a synonym of recyclate.

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**3.20**

**micronizing**

process by which plastics material is finely ground into powder

**3.21**

**organic recycling**

controlled microbiological treatment of biodegradable plastics waste under aerobic or anaerobic conditions

NOTE The term “biological recycling” is used synonymously.

**3.22**

**post-consumer**

descriptive term covering material, generated by the end-users of products, that has fulfilled its intended purpose or can no longer be used (including material returned from within the distribution chain)

NOTE The term “post-use” is sometimes used synonymously.

**3.23**

**pre-consumer**

descriptive term covering material diverted from the waste stream during a manufacturing process

NOTE 1 This term excludes re-utilized material, such as rework, regrind or scrap that has been generated in a given process and is capable of being reclaimed within that same process.

NOTE 2 The term “post-industrial material” is sometimes used synonymously.



**3.24****purge material**

material resulting from the passing of polymer through plastics processing equipment for the purpose of cleaning the equipment, or when changing from one polymer to another, or when changing from one colour or grade of polymer to another

**3.25****qualified recycling process**

recycling process producing material which meets the requirements for the intended applications

**3.26****recovered material**

plastics material that has been separated, diverted or removed from the solid-waste stream and then re-used or recycled

NOTE See also ISO 14021.

**3.27****recovery**

processing of plastics waste material for the original purpose or for other purposes, including energy recovery

**3.28****recycled content**

percentage by weight of recycled material in a product

**3.29****recyclate**

plastics material resulting from the recycling of plastics

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NOTE Plastics secondary raw material and recycled plastics are synonyms of "recyclate". The term "regenerate" is also used.

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**3.30****recycling**

processing of plastics waste materials for the original purpose or for other purposes, excluding energy recovery

**3.31****regrind**

shredded and/or granulated recovered plastics material in the form of free-flowing material

NOTE The term "regrind" is frequently used to describe plastics material in the form of scrap generated in a plastics processing operation and re-used in-house. This term is also used to describe fine plastics powder used as filler in the recovery of plastics.

**3.32****re-use**

use of a product more than once in its original form

NOTE In view of the fact that a re-used product has not been discarded, re-use does not constitute a recovery option.

**3.33****shredding**

any mechanical process by which plastics waste is fragmented into irregular pieces of any dimension or shape

NOTE Shredding usually signifies the tearing or cutting of materials that cannot be crushed by fragmentation methods applicable to brittle materials, as typically carried out in a hammer mill.