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**Polimerne cevi in fitingi - Uporaba recikliranih plastomerov - 1. del: Terminologija**

Plastics pipes and fittings - Utilisation of thermoplastics recyclates - Part 1: Terminology

Kunststoffrohrleitungen und Formstücke - Verwendung von thermoplastischen Rezyklaten - Teil 1: Terminologie

Tubes et raccords en plastique - Utilisation de recyclats thermoplastiques - Partie 1 : Terminologie  
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**(standards.iteh.ai)****Ta slovenski standard je istoveten z: prEN 14541-1****oSIST prEN 14541-1:2021**  
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| 23.040.20 | Cevi iz polimernih materialov                        | Plastics pipes                                |
| 23.040.45 | Fitingi iz polimernih materialov                     | Plastics fittings                             |
| 83.140.30 | Polimerne cevi in fitingi za snovi, ki niso tekočine | Plastics pipes and fittings for non fluid use |

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EUROPEAN STANDARD  
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**DRAFT**  
**prEN 14541-1**

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English Version

## Plastics pipes and fittings - Utilisation of thermoplastics recyclates - Part 1: Terminology

Tubes et raccords en plastique - Utilisation de recyclats  
thermoplastiques - Partie 1 : Terminologie

Kunststoffrohrleitungen und Formstücke -  
Verwendung von thermoplastischen Rezyklaten - Teil  
1: Terminologie

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 155.

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European foreword

This document (prEN 14541-1:2021) has been prepared by Technical Committee CEN/TC 155 “Plastics piping systems and ducting systems”, the secretariat of which is held by NEN.

This document is currently submitted to the CEN Enquiry.

This document is part of the new EN 14541 series.

This document, together with prCEN/TR 14541-2, will supersede CEN/TS 14541:2013.

The new EN 14541 series will consist of the following parts under the general title *Plastics pipes and fittings — Utilisation of thermoplastics recyclates*:

- a) *Part 1: Terminology* (this document);
- b) *Part 2: Recommendations for relevant characteristics* (under development);
- c) *Part 3: Recommendations for Assessment of Conformity* (to be developed).

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**prEN 14541-1:2021 (E)****Introduction**

The EN 14541 series is intended to give recommendations to the value chain of thermoplastics piping systems to stimulate the use of thermoplastics recyclates as defined in the European circular economy policy.

This part of EN 14541 defines the relevant terms and definitions related to the use of thermoplastics recyclates in thermoplastics pipes and fittings. The commonly used terms and definitions are reviewed, and as much as possible aligned with the practises within the thermoplastics pipes and fittings value chain and the terminology used in European policy documents (e.g. circular economy, sustainability) and existing international standards.

Part 2 (under development) is a CEN/TR document in which recommendations are given about the relevant characteristics for defining (e.g. fingerprinting) commonly used thermoplastics recyclates intended to be used in thermoplastics pipes and fittings.

NOTE These characteristics are intended for use within an agreed specification.

Part 3 (to be developed) is a CEN/TR document in which recommendations are given about sampling procedures and conformity assessment for thermoplastics recyclates to be used in thermoplastics pipes and fittings.

TC249 “Plastics” developed a series of CEN publications on Plastics Recycling which consists of:

EN 15344 [1], EN 15345 [2] and EN 15346 [3]. Other documents touching recycling are e.g. ISO 15270 [4] and Waste Framework Directive [5].

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## 1 Scope

This document specifies the general terms and definitions relevant for the utilisation of thermoplastics recyclates in thermoplastics pipes, fittings and ancillaries for both pressure and non-pressure piping systems.

This document is intended to be used by specification writers in conjunction with prCEN/TR 14541-2 and prCEN/TR 14541-3 when preparing normative documents under the scope of CEN/TC 155.

## 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 ISO 472:2013, *Plastics - Vocabulary (ISO 472:2013)*<sup>1</sup>

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

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

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 472:2013<sup>1</sup> and CEN/TR 15353, abbreviated terms related to recyclates given in EN ISO 1043-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

NOTE Terms 3.2 to 3.6 are in line with EN ISO 14021:2016 but rephrased to accommodate the needs for plastic piping systems.

### 3.1

#### virgin material

plastics material in the form of pellets, granules, powder, floc, etc. that has not been subjected to use or processing other than required for its initial manufacture

Note 1 to entry: Does not contain any reworked plastics material and/or plastics recyclate.

Note 2 to entry: Sometimes also referred to as “primary material” or “primary plastics feedstock”.

Note 3 to entry: It is understood that the addition of additives such as stabilizers and pigments is still resulting into a virgin (plastics) material.

[SOURCE: ISO 472:2013, 2.1231]

<sup>1</sup> As impacted by EN ISO 472:2013/A1:2018.

**prEN 14541-1:2021 (E)****3.2****reworked material**

plastics material from rejected unused products or trimmings capable of being reclaimed within the same process that generated it

Note 1 to entry: Reworked material does not change the status of the feedstock.

Note 2 to entry: This definition does not cover the conditions for the use of reworked material, which can be found in the applicable product standard.

Note 3 to entry: Previously referred to as “own reprocessed material”.

**3.3****pre-consumer material**

plastics material from unused products excluding reworked (plastics) material

Note 1 to entry: Previously referred to as “post-industrial material”.

Note 2 to entry: Different categories of pre-consumer material may be considered in the applicable product standard.

**3.4****post-consumer material**

plastics material from used products, that have fulfilled their intended purpose or that can no longer be used

**3.5****recyclate**

plastics material resulting from the recycling of pre-consumer and post-consumer plastics products

Note 1 to entry: Also referred to as “secondary raw material” or “recycled plastics” or “regenerate”.

Note 2 to entry: Recycling can be chemical or mechanical.

[SOURCE: ISO 472:2013, 2.1705, modified — Note 1 to entry and Note 2 to entry deleted and 'plastic waste' changed into 'pre-consumer and post-consumer plastics products']

**3.6****recycled content**

proportion, by mass, of recyclate in a product

**3.7****recycling**

processing of plastics products into recyclate, for the original purpose or for other purposes, excluding energy recovery

[SOURCE: ISO 472:2013, 2.1706, modified – 'Waste materials' changed into 'Plastics products']

**3.8****mechanical recycling**

processing of plastics products into recyclate without significantly changing the chemical structure of the material

[SOURCE: ISO 472:2013, 2.1697, modified – 'waste into secondary raw material or products' changed into 'products into recyclate']



**3.9****chemical recycling**

conversion to monomer or production of new raw materials changing the chemical structure of plastics products/materials by cracking, gasification or depolymerization, excluding energy recovery and incineration

[SOURCE: ISO 472:2013, 2.1690, modified – Note 1 to entry deleted]

**3.10****micronized material**

plastics material finely ground into powder

[SOURCE: CEN/TR 15353]

**3.11****compound/formulation**

clearly defined homogenous mixture of substances used for the manufacture of the product

Note 1 to entry: In general, the term “compound” is used for polyolefins and the term “formulation” for PVC.

Note 2 to entry: For metals and when dealing with water and food contact regulations the term “composition” is often used instead of compound/formulation.

**3.12****granulate**

relatively small particle produced in various sizes and shapes in operations such as cutting grinding and granulation

Note 1 to entry: Often also referred to as “pellet” or “granules”.

[SOURCE: ISO 472:2013, 2.450, modified — Note 1 to entry deleted and 'crushing, precipitation and polymerization' is deleted]

**3.13****batch**

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

Note 1 to entry: Batch can apply to material and products.

[SOURCE: ISO 472:2013, 2.560, modified — definition name changed from 'lot' to 'batch']

**3.14****contaminant**

unwanted substance or material

[SOURCE: ISO 472:2013, 2.1684, modified — Note 1 to entry deleted]

**3.15****agreed specification**

specification of the relevant material characteristics agreed between the supplier of the recylate, the pipe and/or fitting manufacturer and in case of third party certification, the certification body

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**prEN 14541-1:2021 (E)****4 Abbreviations**

|        |                                    |
|--------|------------------------------------|
| PE:    | polyethylene                       |
| PP:    | polypropylene                      |
| PP-MD: | polypropylene modified by minerals |
| PVC-C: | chlorinated poly(vinyl chloride)   |
| PVC-U: | unplasticized poly(vinyl chloride) |
| MFR:   | melt mass-flow rate                |
| OIT:   | oxidation induction time           |
| ABS:   | acrylonitrile butadiene styrene    |
| PE-X:  | cross-linked polyethylene          |

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