SLOVENSKI STANDARD
SIST EN 14243-1:2019

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Nadomešča:
SIST-TS CEN/TS 14243:2010

Snovi iz izrabljenih avtomobilskih gum - 1. del: Splošne definicije, povezane z metodami za določanje njihovih mer in nečistoč

Materials obtained from end of life tyres - Part 1: General definitions related to the methods for determining their dimension(s) and impurities

Materialien aus Altreifen - Teil 1: Allgemeine Definitionen der Methode zur Bestimmung der Abmessungen und Verunreinigungen

Matériaux produits à partir de pneus usagés non réutilisables (PUNR) - Partie 1 : Définitions générales relatives aux méthodes de détermination de leur(s) dimension(s) et impuretés

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ICS:

13.030.50	Recikliranje	Recycling
83.160.01	Avtomobilske pnevmatike na splošno	Tyres in general

SIST EN 14243-1:2019 en,fr,de

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 14243-1

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ICS 83.160.01

Supersedes CEN/TS 14243:2010

English Version

Materials obtained from end of life tyres - Part 1: General definitions related to the methods for determining their dimension(s) and impurities

Matériaux produits à partir de pneus usagés non réutilisables (PUNR) - Partie 1: Définitions générales relatives aux méthodes de détermination de leur(s) dimension(s) et impuretés

This European Standard was approved by CEN on 19 November 2018.

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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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 14243-1:2019) has been prepared by Technical Committee CEN/TC 366 “Materials obtained from End-of-Life Tyres (ELT)”, the secretariat of which is held by UNI.

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 August 2019, and conflicting national standards shall be withdrawn at the latest by August 2019.

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 together with EN 14243-2 and EN 14243-3 supersede CEN/TS 14243:2010.

EN 14243, Materials obtained from End-of-Life Tyres (ELT), consists of the following parts:

— Part 1: General definitions related to the methods for determining their dimension(s) and impurities

— Part 2: Granulates and powders – Methods for determining the particole size distribution and impurities, including free steel and free textile content

— Part 3: Shreds cuts and chips – Methods for determining their dimension(s) including protruding filaments dimensions

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This standard is used in conjunction with the other parts of EN 14243 series. Such series is intended to cover the testing programs needed to characterize each product category as shown on the figure below.

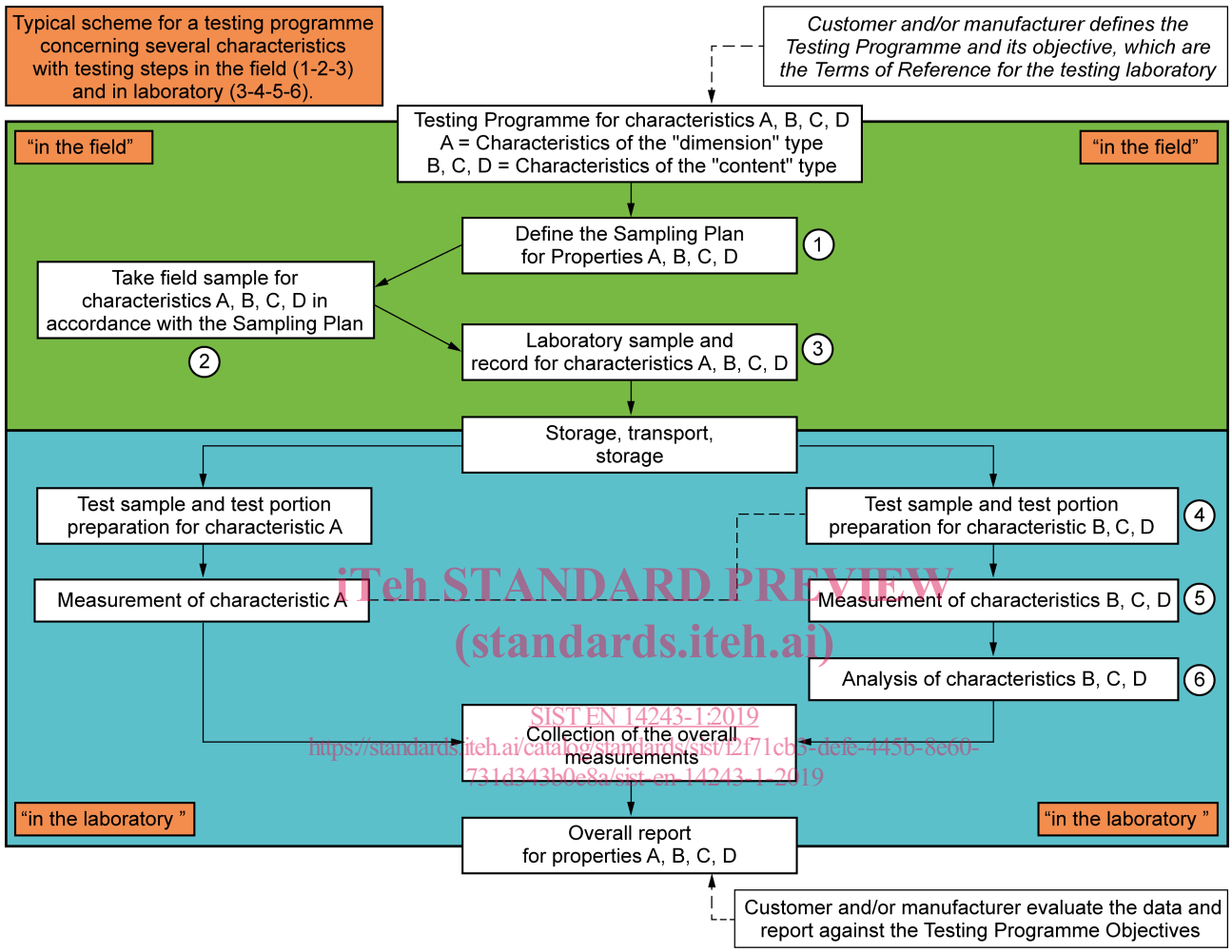

Figure 1 — Typical scheme for a testing programme concerning several characteristics with testing steps in the field and in the laboratory

End-of-life tyres consist mainly of passenger and commercial vehicle tyres, truck, earthmover and agricultural tyres manufactured for distribution in the European market that are no longer suitable for their original purpose. Products from end-of-life tyres are used as a secondary raw material finding a wide range of applications. The principal categories of materials from end-of-life tyres are defined on the basis of their dimension(s) according to this standard.

1 Scope

This document provides general definitions for sample collection and preparation of a representative sample based on a sampling plan for the purpose of determining dimensions and impurities.

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 14243-2:2019, *Materials obtained from End-of-life tyres — Part 2: Granulates and powders — Methods for determining the particle size distribution and impurities, including free steel and free textile content*

EN 14243-3:2019, *Materials obtained from End-of-life tyres — Part 3: Shreds, cuts and chips — Methods for determining their dimension(s) including protruding filaments dimensions*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

3.1 Sampling and sample preparation

3.1.1
sample
portion of material selected from a larger quantity of material

[SOURCE: IUPAC definition]

3.1.2
sub-sample
portion of a sample

3.1.3
increment
sub-portion of material extracted in a single operation by the sampling device

[SOURCE: ISO 13909-1:2016, 3.15, modified]

3.1.4
characteristic
property which helps to identify or differentiate items of a given population

Note 1 to entry: The characteristic may be either quantitative (by variables) or qualitative (by attributes).

3.1.5
lot
defined quantity of material for which a characteristic is to be determined

Note 1 to entry: In sampling standards the lot is also designated as the "scale".

Note 2 to entry: The lot (or the scale) is a stated weight or volume of material that is considered appropriate for assessing a given characteristic of the material. When several characteristics are determined, the corresponding lots may not be identical.

Note 3 to entry: Variations occurring in the material on a smaller scale than the defined lot are not taken into account and are deemed not to be of relevance.

3.1.6
combined sample
sample consisting of all the increments taken from a lot

Note 1 to entry: A combined sample is a quantity of material, representative of the lot for which the characteristic is to be determined.

3.1.7
field sample
sample taken in the place of production and from which laboratory samples are created

3.1.8
laboratory sample
sample or sub-sample sent to or received by the laboratory

[SOURCE: IUPAC definition]

Note 1 to entry: The laboratory sample is the final sample from the point of view of sample collection but it is the initial sample from the point of view of the laboratory testing and analysis.

Note 2 to entry: Several laboratory samples can be prepared and sent to different laboratories or they can be sent to the same laboratory for different purposes. In the latter case, they are generally considered a single laboratory sample and documented as such.

3.1.9
test sample
sample prepared from the laboratory sample, by subdivision, mixing, or crushing, or by a combination of these processes from which the test portions are removed for testing or for analysis

[SOURCE: IUPAC definition]

3.1.10
test portion
quantity or volume removed from the test sample for analysis purposes

[SOURCE: IUPAC definition]

3.1.11
population
totality of items, or total volume of material, to be investigated by sampling

Note 1 to entry: The population will generally be a convenient, well-defined subset of the overall population (e.g. a year's production of material) that is believed to be typical of that wider population.

3.1.12
representative sample
sample resulting from a sampling plan that can be expected to adequately reflect the properties of interest of the parent population.

[SOURCE: IUPAC definition]

Note 1 to entry: This sample is expected to reflect adequately the properties of interest in the parent population.

3.1.13
probabilistic sampling
sampling conducted according to the statistical principles of sampling

3.1.14
judgement based sampling
sampling undertaken from a practically convenient (perhaps relatively small) sub-population, not conducted fully in accordance with the statistical principles of sampling

3.1.15
sample division
reduction of the mass of a sample or sub-sample

3.2 Materials derived from ELTs

3.2.1
end-of-life tyre (ELT)
tyre no longer suitable for its original purpose

3.2.2
cut
result of mechanical processes by which end-of-life tyres are fragmented, ripped or torn into irregularly formed pieces typically larger than 300 mm in size

3.2.3
shred
result of mechanical processes by which end-of-life tyres are fragmented, ripped or torn into irregular pieces of typically 20 mm to 400 mm in any dimension

3.2.4
format
range of shreds size based on the distribution of the maximum projected length of shreds produced from end-of-life tyres

3.2.5
chip
result of mechanical processes by which end-of-life tyres are fragmented, ripped or torn into irregularly shaped pieces of typically 10 mm to 50 mm in size

3.2.6
granulate
ELT derived rubber particles typically between 0,8 mm and 20 mm obtained from a granulation process