SLOVENSKI STANDARD
SIST-TS CEN/TS 17188:2018

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Snovi iz izrabljenih avtomobilskih gum (ELT) - Metoda vzorčenja granulatov in praškov, shranjenih v velikih vrečah

Materials obtained from end of life tyres (ELTs) - Sampling method for granulates and powders stored in big-bags

Materialien aus Altreifen - Probenahme von Granulaten aus dem Schleifprozess von Altreifen - Methode, die auf der Entnahme einer relevanten Probe aus einem Big-Bag aus übereinanderliegenden Schichten basiert

Matériaux obtenus à partir de pneus usagés non réutilisables (PUNR) - Méthode d'échantillonnage de granulats et de poudrettes stockés dans des big-bags

Ta slovenski standard je istoveten z: **CEN/TS 17188:2018**

ICS:

13.030.50	Recikliranje	Recycling
83.160.01	Avtomobilske pnevmatike na splošno	Tyres in general

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TECHNICAL SPECIFICATION

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CEN/TS 17188

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ICS 13.030.50; 83.160.01

English Version

Materials obtained from end of life tyres (ELT) - Sampling method for granulates and powders stored in big-bags

Matériaux obtenus à partir de pneus usagés non réutilisables (PUNR) - Méthode d'échantillonnage de granulats et de poudrettes stockés dans des big-bags

Materialien aus Altreifen (ELTs) - Probeentnahme für in Big Bags gelagerte Granulate und Mehle

This Technical Specification (CEN/TS) was approved by CEN on 2 March 2018 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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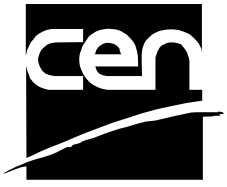

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European foreword

This document (CEN/TS 17188:2018) 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.

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Introduction

Particle size distribution and related parameters are key measurements for product characterization of size-reduced materials, such as granulates and powders derived from End-of-life Tyres (ELTs). To obtain an accurate particle size distribution, a representative sample of the material to be tested will be taken according to the principle that every particle of the sample that represents the lot will have an equal probability of being included in the sample.

Sampling criteria to assess characteristics of granulates and powders at different stages of a production process by size reduction of End-of-life tyres are given in prEN 14243-2:2017, Clause 5.

When the lot to be characterized is a big-bag, particular attention has to be given in order to obtain a representative sample(s) because of the tendency of the stored material to segregate over time with the smaller particles settling in the lower part of the big-bag.

1 Scope

This document specifies a method for obtaining a sample of rubber granulates or powders derived from End-of-life tyres which have been stored in big-bags.

Several sample increments at different levels within the big-bag are obtained, which represent the average particle size distribution within the big-bag. From these sample increments, a representative sample is derived.

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.

prEN 14243-1:2017, *Materials obtained from end of life tyres — Part 1: General definitions related to the methods for determining their dimension(s) and impurities*

prEN 14243-2:2017, *Materials obtained from end of life tyres — Part 2: Granulates and powders — Methods for determining their dimension(s) and impurities, including free steel and free textile content*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in prEN 14243-1:2017 and the following 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 tool
tool used to collect (remove) a defined quantity of material from the big-bag

Note 1 to entry: An example of a sampling tool should be a lance with a point tip usually made of stainless steel containing one or more sampling chambers that may be opened and closed for point sampling of a predetermined sampling depth.

4 Principle

The sample is created by mixing several increments removed with a sampling tool at least at three levels and at least at one location on each level, as specified in Clause 6.

5 Apparatus

5.1 Sampling tool

Tool used to remove the same quantity of material, greater than or equal to 150 g, from different heights within a big-bag. It shall be shaped to allow the operator to reach different heights by simply pressing on the tool and introducing it into the big-bag. Its opening shall be wider than three times the size of the largest element expected. The tool should be preferably used by piercing through the fabric. Upon removal, the bag may be sealed with tape. The tool shall be closed to prevent contamination.

5.2 Balance

The scales shall be accurate to ± 0,1 g.

5.3 Container

The containers are used to recover the increments. The container shall be large enough to hold all three increments to make the combined sample and to allow for mixing the combined sample to make it homogeneous.

6 Procedure

a) Take the increments from different heights:

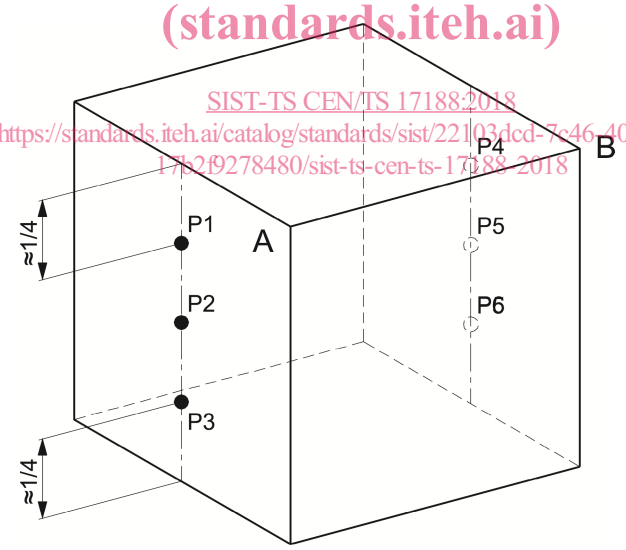
the mass of the combined sample shall be greater than or equal to 450 g. At least three increments shall be taken at different heights, as specified in Clause 4. Two options are available:

1) Scheme 1: according to the indications of Figure 1) samples can be taken at the following points:

— P1 and/or P4: at the top (approximately 1/4 from the surface);

— P2 and/or P5: in the middle;

— P3 and/or P6: at the bottom of the big-bag (approximately 1/4 from the bottom).



Key

A front

B back

Figure 1 — Position of increments for portions

2) Scheme 2: if an appropriate tool is available (see Annex A), it is also possible to take samples from the centre axis of big-bag (see Figure 2) then three increments shall be taken at different heights (see Figure 2).

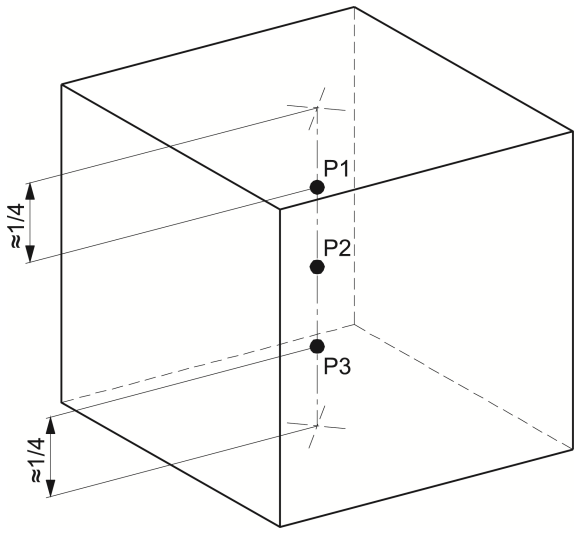


Figure 2 — Position of increments for portions taken from the centre axis of the big-bag

b) mix the primary portions in a container to make up the combined samples;

c) weight the sample.

The tool shall be able to collect at different levels without contamination. The chamber of the tool shall be in the closed position when removing the tool from the big-bag in order to prevent contamination.

Each user may choose his tool according to Annex A but the type of tool shall be defined in the sampling scheme.

7 Sampling scheme

The sampling scheme shall contain the following information:

a) the name of the sampler, the place where the sample was taken and the date when it was taken;

b) a full identification of the sample (reference);

c) a full identification of the big-bag from which the sample was taken;

d) the mass of the sample (g);

e) the name and the volume of the sampling tool (ml);

f) the number and position of the primary portions within the big-bag;

g) the type of ELT specified, if available;

h) the reference to this Technical Specification;

i) the report on all the operating conditions not specified in this Technical Specification, or any optional operations;

j) the report on any possible incidents that might have affected the representative nature of the sample.