



SLOVENSKI STANDARD
SIST EN 17085:2019

01-september-2019

Papir, karton in lepenka - Postopki vzorčenja za papir, karton in lepenko za recikliranje

Paper and board - Sampling procedures for paper and board for recycling

Papier und Pappe - Probenahmeverfahren für Papier und Pappe für Recycling

Papier et carton - Procédures d'échantillonnage pour le papier et le carton à des fins de recyclage

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Ta slovenski standard je istoveten z: EN 17085:2019

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EUROPEAN STANDARD

EN 17085

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2019

ICS 85.060

English Version

Paper and board - Sampling procedures for paper and board for recycling

Papier et carton - Procédures d'échantillonnage de papiers et cartons pour recyclage

Papier und Pappe - Probenahmeverfahren für Altpapier

This European Standard was approved by CEN on 15 April 2019.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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.

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

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Contents	Page
European foreword.....	3
Introduction	4
1 Scope.....	5
2 Normative references.....	5
3 Terms and definitions	5
4 Principle	6
5 Sampling.....	6
5.1 Frequency	6
5.2 General guidance.....	6
5.3 Loose material.....	7
5.4 Baled material.....	8
5.4.1 Manual sampling	8
5.4.2 Core sampling.....	8
5.5 Sample labelling	9
5.6 Storage of samples.....	9
6 Micro-sampling procedure	10
6.1 General.....	10
6.2 Extraction of micro-sample	10
6.3 Storage of micro-samples.....	10
7 Sampling report.....	10
Bibliography.....	11

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SIST EN 17085:2019

<https://standards.iteh.ai/catalog/standards/sist/b706e339-c170-4bc7-b9c6-03bac777e9d/sist-en-17085-2019>

European foreword

This document (EN 17085:2019) has been prepared by Technical Committee CEN/TC 172 “Pulp, paper and board”, the secretariat of which is held by DIN.

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 November 2019, and conflicting national standards shall be withdrawn at the latest by November 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

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.

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EN 17085:2019 (E)**Introduction**

The purpose of these sampling procedures for paper and board for recycling (PFR) is to provide stakeholders with the basis for subsequent measurements to obtain robust and consistent data regarding composition and quality of this important recovered material and ensure compliance with the requirements of EN 643 and/or any other commercially agreed specifications. Paper and board for recycling with ensured quality will improve confidence and ensure that output materials are suitable for use in paper mills.

The majority of paper and board for recycling is moved and handled in the form of discrete bales typically weighing up to 1 500 kg and typically in loads of approximately 25 t. However, a significant quantity of paper and board for recycling is moved and handled as loose, unbaled material (possibly in containers or walking floor trucks).

This document can be used by collectors, re-processors, paper mills, any other stakeholders and interested third parties to ensure consistency throughout the value chain of paper and board for recycling.

This document defines the procedures for obtaining macro-samples (needed for large-scale tests e.g. composition) and micro-samples (needed for laboratory scale tests e.g. moisture content).

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1 Scope

This document specifies a method of obtaining representative samples from a lot of paper and board for recycling for testing to determine whether or not its composition and quality comply with the requirements of EN 643 and/or other specifications.

This document also specifies the positioning of probes, when in situ measurements are performed.

It defines the sampling procedures which apply when sampling is carried out to resolve compliance issues and commercial disputes between buyer and seller relating to a lot of paper and board for recycling, at any point in the value chain, where those procedures are not defined in the contract between buyer and seller.

This document is not specifically intended for routine monitoring of processes or quality, but the procedures described may be used to form the basis of an agreement between supplier and buyer.

This document is not applicable if the material is not intended for recycling.

The method is not intended for determining the variability within a lot, however, the general sampling principles can be applied.

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 643, *Paper and board — European list of standard grades of paper and board for recycling*

3 Terms and definitions

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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

lot

aggregate of paper and board for recycling presumed to be a single grade in accordance with EN 643 standard grades and/or other specifications and available for sampling at any one time

Note 1 to entry: For the purposes of this standard, one “lot” is typically considered to be one unit of delivery (for example, a single truck, rail wagon or a container) of a single grade, up to a maximum of 50 t.

3.2

loose material

paper and board for recycling supplied in bulk with material that is not formed into discrete bales

3.3

baled material

paper and board for recycling supplied in bulk with material formed into discrete bales

EN 17085:2019 (E)**3.4****macro-sample**

initial large subset drawn from the lot that is considered to be representative of that full lot of the material being examined

3.5**micro-sample**

secondary, smaller sample, drawn from the macro-sample that is intended for laboratory scale analysis

Note 1 to entry: A micro-sample is typically below 500 g and can be used for moisture determination.

3.6**target grade**

grade of paper and board for recycling as defined in EN 643 (or any other commercially agreed specification) used to describe a lot, shipment or consignment traded as paper and board for recycling

4 Principle

The aim of this standard is the extraction of a randomized subset representative of the material forming the lot.

The procedures described in this European Standard provide a representative sample used to technically describe the material under consideration:

- For lots of loose material, this standard describes a methodology of repeated sub-division to arrive at a macro-sample.
- For lots formed from baled material, this standard describes a methodology for sampling individual randomly selected bales to form a representative macro-sample.

The sampling procedures also define a procedure for obtaining the micro-sample from the macro-sample. Where appropriate equipment exists, the micro-sample may be directly obtained from the bale or to measure the parameters *in situ*.

5 Sampling**5.1 Frequency**

Where a lot is considered in isolation (e.g. a single delivery), a minimum of two samples per lot shall be extracted for analysis.

Where a lot forms a part of an ongoing supply arrangement, a minimum of one sample per lot shall be extracted for analysis, but may be increased to more samples as agreed between supplier and buyer or as required by legislation.

In the case of recurring non-compliances from a single source of supply, increasing the sampling frequency should be considered.

5.2 General guidance

The default size of the macro-sample shall be at least 150 kg and this shall be used where no additional agreement exists.

The size of the macro-sample depends on the size of the individual pieces within the sample, which is typically determined by the target grade, and under certain circumstances, a smaller macro-sample may be used. Circumstances that permit a smaller macro-sample are:

- 1) an agreement between all parties concerned with the testing of the lot under examination;
- 2) a scientifically derived reduced macro-sample size, accepted as being representative of specific grades. Accepted reduced macro-sample sizes are given in Table 1.

Table 1 — Accepted reduced macro-sample sizes

Target grade from EN 643	Reduced macro-sample size
1.02.00	min. 100 kg
1.04.00 (including all sub grades)	min. 100 kg
1.05.00 (including all sub grades)	min. 100 kg
1.11.00	min. 30 kg

If sampling according to the procedure described in the main body of this standard is impossible, impracticable or inappropriate, sampling should be carried out in the best possible manner for the purpose concerned or according to criteria agreed upon by all parties in the value chain.

When a sample is taken for subsequent testing, the sampling procedure shall be documented. A detailed description of the sampling procedure shall accompany the sample to the test laboratory and shall be included in the test report.

If a sample is submitted for testing in a situation where the sampling procedure is unknown or where the sample is isolated so that there is no sampling procedure, this shall be recorded in the test report.

The paper and board for recycling intended for sampling shall be kept separate from any other material. This shall be done in a clean, dry area that has been cleared of all other material (or in an appropriate storage bay). Care shall be taken to prevent spoiling of the sample with materials from other sources. No picking from the material shall occur prior to the sample being taken.

5.3 Loose material

As a precursor to the analysis of loose material, a representative macro-sample shall be extracted from the lot. The material shall be randomized to ensure representative sampling. An example approach would be to tip (discharge) the load onto the floor and mix it with a loading shovel, or similar equipment. This can be achieved by separating a proportion of the material (approximately four times greater than the required sample size) and lifting it up and dropping it back on the floor at least twice using a loading shovel. This will help redistribute unwanted materials that have settled to the bottom of the load. A push wall will help with the mixing process.

Either of the following techniques can then be used to take a sample:

- a) Slice of pie method:

Remove a whole section of the loose material i.e. a slice of pie or a section. Shovels and brooms or other suitable equipment may be used. Put the sample into sample containers (e.g. containers or bulk bags) taking care that all material particles are captured, until the required specified sample weight has been collected.