

Packaging - Rate of recycling - Definition and method of calculation

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13440:2003 sisaldab Euroopa standardi EN 13440:2003 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 06.06.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13440:2003 consists of the English text of the European standard EN 13440:2003.</p> <p>This document is endorsed on 06.06.2003 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This European Standard establishes a methodology for the calculation of the rate of recycling of packaging and packaging material</p>	<p>Scope: This European Standard establishes a methodology for the calculation of the rate of recycling of packaging and packaging material</p>
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ICS 13.030.50, 55.040

Võtmesõnad:

ICS 13.030.50; 55.040

English version

Packaging - Rate of recycling - Definition and method of calculation

Emballage - Taux de recyclage - Définition et méthode de calcul

Verpackung - Recyclingrate - Definition und Berechnungsverfahren

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Foreword

This document (EN 13440:2003) has been prepared by Technical Committee CEN/TC 261 "Packaging", the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by November 2003, and conflicting national standards shall be withdrawn at the latest by November 2003.

This document provides a procedure for calculating the rate of material recycling to access compliance with the recycling targets as set in the packaging and packaging waste directive 94/62/EC. It also provides examples of other ratios of material usage which can be used as management tools.

This document contains annex A, which is informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

This European Standard considers the methodology of the calculation of the rate of recycling specifically related to packaging and packaging waste materials. It has been prepared by experts in the Working Group CEN/TC 261/SC 4/WG 3 "Material recovery".

Material recycling of used packaging should be seen within the overall life cycle of products and packaging. The purpose of packaging is the containment, protection, distribution and presentation of products including instructions as to their use. A major role is one of prevention of damage/wastage of the product contained in the packaging.

Following its functional role, the packaging waste is required to be suitable for recovery through at least one of the waste management option as described in EN 13427. One of this option is material recycling.

The Working Group WG 3 has produced EN 13437 which defines the recycling process for packaging in the form of a series of flow diagrams. This European Standard uses the general form of the flow diagram from that standard to make its proposals. The proposal is made within the context of the Packaging and Packaging Waste Directive 94/62/EC. Annex A shows how the principles may be used in a more general context.

1 Scope

This European Standard establishes a methodology for the calculation of the rate of recycling of packaging and packaging material.

NOTE The packaging supply chain also uses other ratios in the management of their operations. The flow diagrams used in the methodology set out in this European Standard can be used in the evaluation of such other ratios and examples are given.

2 Normative References

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 13193:2000, *Packaging - Packaging and the environment – Terminology*.

EN 13437, *Packaging and material recycling - Criteria for recycling methods - Description of recycling processes and flow chart*.

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 13193:2000 and the EU Directive "Packaging and Packaging Waste" 94/62/EC apply.

4 Calculation of recycling rate

4.1 Area of application

The method of calculation shall be applied to any group or sub-grouping of packaging and packaging materials for which data can be provided in the format of the flow chart - Figure 1.

NOTE 1 It will be found that the flow charts for the major material groupings e.g. aluminium, glass, paper and board, plastics, steel (plated and/or coated) and wood, are identical to that shown in Figure 1, in this respect.

NOTE 2 All forms of recycling should be included and are as defined in article 3 of the Directive (94/62/EC). This therefore includes organic recycling.

4.2 The calculation.

The ratio for the recycling rate of used packaging shall be calculated by the equation

$$r_m = \frac{\delta_1 + \delta_2}{\alpha + \beta - \gamma}$$

Where the elements of the equation are as specified in 5.2.

NOTE Annex A shows the use of the flow diagram for calculating other recycling rates and ratios often used in the analysis of packaging production use.

4.3 Rate of recycling

4.3.1 The rate of recycling shall be defined for stated geographic boundaries (NOTE 1) and unless otherwise specified by legislation (NOTE 2) shall include used packaging exported for recycling (for the principles of using