

Packaging — Requirements for packaging recoverable by material recycling

<http://www.china-gauges.com/>

The European Standard EN 13430:2004 has the status of a
British Standard

ICS 13.030.50; 55.020

Confirmed
June 2009

National foreword

This British Standard is the official English language version of EN 13430:2004. It supersedes BS EN 13430:2000 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PKW/4, Packaging and the environment, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled "International Standards Correspondence Index", or by using the "Search" facility of the *BSI Electronic Catalogue* or of British Standards Online.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 22, an inside back cover and a back cover.

The BSI copyright notice displayed in this document indicates when the document was last issued.

Amendments issued since publication

| Amd. No. | Date | Comments |
|----------|------|----------|
| | | |
| | | |
| | | |
| | | |
| | | |

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 5 August 2004

© BSI 5 August 2004

ISBN 0 580 44192 X

<http://www.china-gauges.com/>

English version

Packaging - Requirements for packaging recoverable by
material recycling

Emballage - Exigences relatives aux emballages
valorisables par recyclage matériel

Verpackung - Anforderungen an Verpackungen für die
stoffliche Verwertung

This European Standard was approved by CEN on 5 May 2004.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

<http://www.china-gauges.com/>

Contents

| | |
|---|----|
| Foreword..... | 3 |
| Introduction | 4 |
| 1 Scope | 5 |
| 2 Normative References..... | 5 |
| 3 Terms and definitions | 5 |
| 4 Requirements..... | 6 |
| 4.1 Application | 6 |
| 4.2 Packaging assessment | 6 |
| 4.3 Declaration of percentage recyclable | 6 |
| 4.4 Conformity of the packaging with this document (material recycling)..... | 7 |
| 4.5 Support Documentation | 7 |
| Annex A (normative) Procedures to elaborate the requirements for packaging recoverable by material recycling | 8 |
| A.1 Objective..... | 8 |
| A.2 Control of packaging construction/composition and processing..... | 8 |
| A.3 Suitability for available recycling technology | 8 |
| A.4 Releases to the environment caused by recycling of the packaging after use | 8 |
| Annex B (normative) Procedure for assessing recyclability criteria | 10 |
| B.1 Objective..... | 10 |
| B.2 Design Criteria | 10 |
| B.3 Production criteria | 11 |
| B.3.1 Raw material and material composition in production, conversion and filling | 11 |
| B.3.2 Control of changes during processing | 11 |
| B.4 Utilisation criteria..... | 11 |
| B.4.1 Non-prejudice to essential requirements | 11 |
| B.4.2 Criteria for emptying by the end user..... | 11 |
| B.4.3 Criteria for sorting by the end-user | 11 |
| B.5 Criteria for collection/sorting | 11 |
| B.6 Note to annex B Material Identification | 12 |
| Annex C (informative) Examples of compliance summary statement for packaging to be recovered by material recycling after use..... | 13 |
| Annex D (informative) Examples of declaration of the percentage of weight of material available for recycling | 16 |
| Annex ZA (Informative) Relationship between this European Standard and the Essential Requirements of EU Directive 94/62/EC | 21 |
| Bibliography..... | 22 |

<http://www.china-gauges.com/>

Foreword

This document (EN 13430:2004) 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 January 2005, and conflicting national standards shall be withdrawn at the latest by January 2005.

This document supersedes EN 13430:2000.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

This document forms one of a series of standards and reports prepared under Mandate M 200 rev3 and the second Standardisation Mandate M 317 given to CEN by the European Commission and the European Free Trade Association to support the European Council and Parliament Directive on Packaging and Packaging Waste [94/62/EC]. The procedure for applying this document in conjunction with the other mandated standards and reports, is specified in EN 13427.

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

Introduction

The Directive on Packaging and Packaging Waste (94/62/EC) defines essential requirements for packaging to be considered recoverable. This document amplifies these requirements with respect to material recycling. The European Standard EN 13427 provides a framework within which this and four other standards may be used together to support a claim that a packaging is in compliance with the essential requirements for packaging to be placed on the market as required by the Directive.

NOTE The Directive 94/62/EC is amended by European Parliament and Council Directive 2004/12/EC of 11 February 2004.

The purpose of packaging is the containment, protection, distribution and presentation of products. Material recycling of used packaging is one of several recovery options in the post use strategy. In order to save resources and minimise waste, the whole system in which the packaging takes part should be optimised. This includes prevention as well as reuse and recovery of packaging waste.

This document presents a framework for self-assessment to determine whether the requirements of this document have been met. Its approach is similar to that of systems standards such as the EN ISO 9000 series or an environmental management system such as EN ISO 14001.

This document also provides practical guidance in assessing recyclability.

<http://www.china-gauges.com/>

1 Scope

This document specifies the requirements for packaging to be classified as recoverable in the form of material recycling whilst accommodating the continuing development of both packaging and recovery technologies and sets out procedures for assessment of conformity with those requirements.

This document cannot by itself provide presumption of conformity. The procedure for applying this document is contained in EN 13427.

2 Normative References

The following referenced documents are indispensable for the application 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 13193, *Packaging – Packaging and the Environment – Terminology*.

EN 13427:2004, *Packaging and the Environment – Requirements for the use of European Standards in the field of packaging and packaging waste*.

EN 13437:2003, *Packaging and material recycling – Criteria for recycling methods – Description of recycling processes and flow chart*.

CR 13688:2000, *Packaging – Material recycling – Report on requirements for substances and materials to prevent a sustained impediment to recycling*.

CR 14311; *Packaging – Marking and material identification system*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13193, EN 13427, EN 13437 and the following apply:

3.1

empty packaging

packaging is empty if - under normal and foreseeable circumstances - all product residues that can be removed by the emptier have been removed using practices commonly employed for that type of packaging

A non-exhaustive list of common practices includes:

- removing an inner liner;
- pouring;
- pumping;
- aspirating;
- shaking;
- scraping;

- squeezing;
- rinsing;
- wiping-out.

3.2

primary raw material

material which has never been processed into any form of end use product

3.3

recycling

reprocessing in a production process of the waste material for the original purpose or for other purposes including organic recycling but excluding energy recovery [94/62/EC]

3.4

recycling process

physical and/or chemical process which converts collected and sorted used packaging and scrap, together in some instances with other material, into secondary raw material or products

NOTE A description of relevant recycling processes is given in EN 13437.

3.5

secondary raw material

material recovered for use as a raw material from used products and from scrap with the exception of the scrap arising within a primary production process [EN 13437]

NOTE The precise nature of the primary production process may vary between material sectors. Reference to the relevant flow diagram in EN 13437 will clearly identify this process.

3.6

supplier

entity responsible for placing packaging or packed product on the market [EN 13427]

4 Requirements

4.1 Application

The application of this document to any particular packaging shall be as specified in EN 13427.

4.2 Packaging assessment

The supplier shall be able to demonstrate that the procedures defined in normative Annexes A and B have been followed in arriving at the final design of the finished packaging such that a certain percentage of the packaging materials can be claimed to be recyclable.

4.3 Declaration of percentage recyclable

Packaging may use more than one material whose relative proportions may vary from small components and constituents, typically represented by labels and closures, to larger proportions in multi-material packaging.

The supplier shall declare the percentage by weight of the functional unit of packaging available for recycling, identifying the intended material recycling stream(s), reference EN 13437. A format for this declaration is given in Annex C.

NOTE 1 The functional unit is explained in EN 13427:2004, Clause 4.3.

NOTE 2 CR 13688 provides guidance on materials and substances that may cause sustained impediment to the material recycling of the functional unit of packaging. Contamination of the packaging by contact with extraneous materials in the collection and sorting processes, or by residues of the packaging content, even after cleaning, are not considered as impediments to the material recycling.

4.4 Conformity of the packaging with this document (material recycling)

The supplier shall prepare a written statement of compliance with the requirements stated in 4.2 and 4.3.

4.5 Support Documentation

The assessment shall be documented and examples of the structure of such documentation are given in Annex C.

<http://www.china-gauges.com/>

Annex A (normative)

Procedures to elaborate the requirements for packaging recoverable by material recycling

A.1 Objective

To identify the criteria that need to be taken into consideration when assessing the recyclability of packaging. These criteria for recycling should be considered in a perspective which includes all relevant aspects from the design of packaging, its manufacture and through its use and post-use collection and sorting until its recovery by recycling.

This perspective is conveniently illustrated and checked through the matrix approach presented in Table A.1, which represents a guideline to elaborate practical requirements for packaging recoverable in the form of material recycling.

The relevant boxes in the Table A.1 highlight the interactions between life cycle steps and criteria for recyclable packaging.

A.2 Control of packaging construction/composition and processing

A.2.1 Ensure that the design of packaging includes consideration of aspects significant for the recycling of the materials from which it is produced.

A.2.2 Control selection of raw materials used in production /packing / filling operations and where practicable collection/ sorting operations to ensure that the recycling processes are not negatively affected.

A.3 Suitability for available recycling technology

A.3.1 Ensure that the design of packaging makes use of materials or combinations of materials which are compatible with the known, relevant and industrially available recycling technologies whilst also recognising the interrelationship of standards as detailed in 4.1.

NOTE The development and marketing of new packaging materials and systems, typically giving functional and environmental benefits may precede the introduction of appropriate recycling processes. It is recognised that the development and expansion of such recycling processes may take a period of time. Provided that the supplier can demonstrate that there is development leading to the availability of industrial recycling capacity within a reasonable period of time it may be appropriate during this period to classify such packaging as recyclable.

A.3.2 Establish a system designed to ensure that new developments in the relevant technology for the recycling of the material used in packaging are monitored, recorded and that such records are available to the design function.

A.4 Releases to the environment caused by recycling of the packaging after use

Take account of the potential change in releases to the environment arising from the used packaging and/or product residues in the recycling process.

Table A.1 — Elaboration of requirements by a decision matrix with interactions between life cycle steps and criteria for recyclable packaging

| Life cycle steps | Criteria for recyclable packaging | | |
|-------------------------|---|--|--|
| | Control of packaging construction/ composition and processing A2 | Suitability for available recycling technologies A3 | Releases to environment caused by recycling of packaging A4 |
| Design | | Relevant | Relevant |
| Production | Relevant | | Relevant |
| Utilisation | Relevant | | Relevant |
| Sorting by the End User | Relevant | | |
| Collection/Sorting | Relevant | Relevant | Relevant |

NOTE The numbering in the Table refers to the Clauses of Annex A.

Annex B
(normative)

Procedure for assessing recyclability criteria

B.1 Objective

B.1.1 To assess the inter-relationship of the various criteria which support the requirements given in Clause 4 of this document, as identified in Annex A and Table A.1, and detailed in the following paragraphs and in the matrix in Table B.1.

B.2 Design Criteria

B.2.1 Design the packaging, including construction, composition, combinations and separability of components so as to ensure that it is compatible with the specifications of related recycling technologies, enables a certain percentage by weight of materials to be recycled, and takes into account:

- substances or materials that are liable to create technical problems in the recycling process;
- materials, combinations of materials or designs of packaging that are liable to create problems in collecting and sorting before material recycling;
- the presence of the amount of substances or materials that are liable to have a negative influence on the quality of the recycled material;

as referenced in CR 13688.

B.2.2 A format for the declaration of the percentage recyclable is given in Table C2 of Annex C. Where the format and material of the functional unit of packaging and/or components conform to national, European, international or commercial standards or specifications suitable for collection, sorting and recycling, this may be used as a basis for demonstration of recyclability.

NOTE Attention is drawn to the following factors affecting compatibility to specifications of recycling processes:

- 1) efficient recycling depends on a material input of specified properties suitable for a production process with or without primary raw material;
- 2) packaging may use more than one material whose relative proportions may vary from the small proportions represented by labels or closures to the larger proportions in multi-material packaging. The manner in which specifications deal with this range of multi-material packaging can vary considerably depending on the materials being recycled, the recycling process, and the ability to empty the packaging as defined in 3.1;
- 3) specifications of the packaging should take account of:
 - i) the separability of components when appropriate;
 - ii) the compatibility of material compositions or material combinations with the recycling process.

These specifications should comply with relevant national and/or international standards that are associated with the technical requirements of delivery and supply of the input material for the related recycling process. [CR 13688.]

<http://www.china-gauges.com/>

- 4) any other design characteristics which influence recyclability should be taken into account in arriving at the final packaging design;
- 5) chemical composition aspects are addressed under heavy metals in Article 11 of the Directive 94/62/EC Emptying characteristics as influenced by design are addressed in B.4.2.

B.3 Production criteria

B.3.1 Raw material and material composition in production, conversion and filling

Ensure that the production operations associated with raw material sourcing/manufacture, conversion and filling operations for the packaging can be managed such that any changes or deviations cannot adversely affect the compatibility of the packaging with the specification of the recycling process.

B.3.2 Control of changes during processing

Ensure that materials selected in the design stage as causing no significant problems in recycling technologies, are not changed during the process so as to adversely affect compatibility with the specification of the recycling processes.

NOTE This can also apply to changes in other constituents such as adhesives, printing inks or coatings, and components such as labels, closures and other sealing materials.

B.4 Utilisation criteria

B.4.1 Non-prejudice to essential requirements

Ensure that the construction is without prejudice to the conformance with other essential requirements as set out in 4.2, and the requirement that it meets the safety, hygiene and consumer needs of the packaging.

B.4.2 Criteria for emptying by the end user

Ensure that the design of the primary packaging, e.g. shape of the packaging, design and location of the opening etc. will enable emptying of the packaging using common practices as defined in 3.1 such that the used packaging is compatible with the recycling process.

NOTE Packaging systems may consist of primary packaging which is in contact with the product and secondary, grouping or distribution packaging. These latter types of packaging should normally be easily separable and made available uncontaminated by the product.

B.4.3 Criteria for sorting by the end-user

Ensure that where the packaging comprises more than one material component which need to be separated to be compatible with the collection system as required for suitability with the recycling process, the packaging is constructed so that the end user can carry out the separation under normal and foreseeable circumstances.

B.5 Criteria for collection/sorting

B.5.1 Ensure, as far as may be practicable, that information has been sought regarding any particular requirements of the expected and relevant collection and sorting process are identified and that the design and construction of the packaging takes these into account.

NOTE Constraints to collection / sorting.

At the time a packaging is designed, produced or filled it may not have a specific destination with the result that it can be impracticable to identify criteria for collection and sorting. This is particularly true, given the significant differences in systems available within and between the Member States.

Table B.1 — Interactions between life cycle steps and criteria for recyclable packaging
(Decision Matrix)

| Life Cycle Steps | Criteria for Recyclable Packaging | | |
|-------------------------|--|---|---|
| | Control of Packaging Construction/ Composition and Processing A.2 | Suitability for Available Recycling Technologies A.3 | Releases to Environment caused by Recycling of Packaging A.4 |
| Design | | Criteria B.2 | Criteria B.2 |
| Production | Criteria B.3 | | Criteria B.3 |
| Utilisation | Criteria B.4.2 | | Criteria B.4.1 |
| Sorting by the End User | Criteria B.4.3 | | |
| Collection/Sorting | Criteria B.5 | Criteria B.5 | Criteria B.5 |

NOTE The numbering of the criteria in the Table refers to the Clauses of Annexes A and B

B.6 Note to Annex B Material Identification

CR 14311 recommends that when any material identification is used it should be recognisable to its target groups. It facilitates identification of the predominant material in a packaging in a clear, unambiguous manner.

Identification of the predominant material used in packaging may assist at various points in the post-use chain e.g.:

- for the user in indicating a disposal option;
- for collection and sorting;
- for the aggregation of materials into streams suitable for the recycling process.

The nature of some materials are clear without the need for applied identification.

Recognition may also be assisted by other means, e.g. colour or a specific shape of container.

Licensed copy: Lee Shau Kee Library, HKUST, Version correct as of 03/01/2015, (c) The British Standards Institution 2013

Annex C (informative)

Examples of compliance summary statement for packaging to be recovered by material recycling after use

Table C

| Packaging identification/description | Assessment Reference |
|--------------------------------------|----------------------|
|--------------------------------------|----------------------|

NOTE Descriptions of the packaging in this Table are given in the notes at the end of this Annex.

| | Criteria | Response | Reference |
|----------|---|----------|-----------|
| A2/B3 | Is design and control of all stages of production, packing/filling including the materials used sufficient to maintain the suitability of the packaging for the recycling process ? | | |
| A2/ B4.2 | Does the design and control of components used and of the method of construction facilitate effective emptying ? | | |
| A2/ B4.3 | Does the design and control of the components used and of the method of construction facilitate the end-user role of separation, when necessary, to assist collection ? | | |
| A2/ B5 | Does the design and control of the components used and the method of construction ensure compatibility with collection and sorting systems ? | | |
| A3/ B2 | Is the method of construction, and the combination of raw materials and components (including additives) suitable for the recycling process ? | | |
| A3/ B5 | Are any necessary systems of sorting, in preparation for the recycling process, suitable for the achievement of material recycling ? | | |
| A4/ B2 | Are the construction, composition and separability of components such as to minimize releases to the environment in the recycling process ? | | |
| A4/ B3 | Is the control of all stages of production, packing/filling sufficient to ensure that the releases to the environment in the recycling system, are minimized ? | | |
| A4/ B4.1 | Can the packaging be emptied of contents sufficiently to minimize any additional emissions/ residues from the recycling process ? | | |
| A4/ B5 | Can the packaging be collected and sorted to minimise any additional residues/emission in the subsequent recycling operations ? | | |

Notes on the headings in Table C.1.

Column 1 refers to the position in Table B.1 and the relevant Clauses in Annex A and Annex B.

Column 2 "Criteria" is a summary of the criteria set out in Annex B against the life cycle steps for the packaging. For fuller explanation to the criteria and the life cycle steps refer to the Clauses stated in Column 1 to be found in Annex A and Annex B of this document.

Column 3 "Response" records where the criteria described are satisfied or if there is a shortfall.

Column 4 "Reference" provides for any references, comment and/or an explanation of the short fall in that specific compliance.

Table C2

This Table provides a way of assessing and recording the percentage by weight of material available for recycling within a functional unit of packaging.

For recovery by recycling technology under development see NOTE in A.3.1.

Examples of declarations of some functional units of packaging are given in the informative Annex D. Where there is a series of similar packaging, comprising the same material(s), a collective declaration of availability for recycling may be made, D4 provides an example.

<http://www.china-gauges.com/>

http://www.shipboardes.com/

Table C.2 — Declaration of Percentage of a Functional Unit of Packaging available for Recycling

| Functional Unit of Packaging | | Description: | | |
|------------------------------|--|--------------------|-------------|-------------|
| 1 | Component see NOTE 1 | Component 1 | Component 2 | Component 3 |
| 2 | Description | | | |
| 3 | Weight of component as % of total functional unit | | | |
| 4 | If the whole component is accepted for recycling based on national, European, international, commercial standards or specifications, give detailed reference | | | |
| 5 | If the component complies with such standard(s) or specification(s) fill in line 6 - and then go to line 11 and note that 100% is available for recycling. If not, continue with line 6 | | | |
| 6 | Intended material stream See NOTE 2 | | | |
| 7 | Identification of constituents within the component likely to create problems in the overall recycling such that alternative recovery is recommended. Reference to CR 13688 | | | |
| 8 | Constituents liable to cause problems in collection and sorting | | | |
| 9 | Constituents liable to cause problems in recycling | | | |
| 10 | Constituents liable to have a negative influence in the recycled material | | | |
| 11 | Percentage by weight of component available for recycling | | | |
| 12 | Percentage by weight of functional unit available for recycling (Line 11 x Line 3 / 100) | | | |
| 13 | Total percentage available for recycling (Sum line 12) | Date and Signature | | |

NOTE 1 Component defined in EN 13427 - part of packaging that can be separated by hand or by using simple physical means.

NOTE 2 Intended material recycling stream - aluminium, glass, paper, plastic, steel, wood, other. Where recycling operations are not available, or under development, see NOTE in A.3.1.

NOTE 3 N/A - Not Applicable.

Annex D
(informative)

**Examples of declaration of the percentage of weight of material available
for recycling**

The following are examples of the use of Table C.2 to assess and declare the availability of material for recycling, as detailed in 4.3, for various examples of functional units of packaging.

<http://www.china-gauges.com/>

Example 1
 Declaration of Percentage of a Functional Unit of Packaging available for Recycling

Example 1

Declaration of Percentage of a Functional Unit of Packaging available for Recycling

| | | | | |
|-------------------------------------|---|--|--|---------------|
| Functional Unit of Packaging | | Description: Print and Steel Aerosol, fill volume 250 ml, with plastic cap (overall volume 335 ml) | | |
| 1 | Component see NOTE 1 | Component 1 | Component 2 | Component 3 |
| 2 | Description | Cap with valve and nozzle | Plastic Cap | |
| 3 | Weight of component as % of total functional unit | 91 % | 9 % | |
| 4 | If the whole component is accepted for recycling based on national, European, international, commercial standards or specifications, give detailed reference | German BDSV-MVS steel scrap specification N° 47 | DSD product specification No. 06-09/02, fraction No. 324 | Polypropylene |
| 5 | If the component complies with such standard(s) / specification(s) fill in line 6 - and then go to line 11 and note that 100 % is available for recycling. If not, continue with line 6 | | | |
| 6 | Intended material stream See NOTE 2 | Steel | Plastic | |
| 7 | Identification of constituents within the component likely to create problems in the overall recycling such that alternative recovery is recommended. Reference to CR 13688 | | | |
| 8 | Constituents liable to cause problems in collection and sorting | | | |
| 9 | Constituents liable to cause problems in recycling | | | |
| 10 | Constituents liable to have a negative influence in the recycled material | | | |
| 11 | Percentage by weight of component available for recycling | 100 % | 100 % | |
| 12 | Percentage by weight of functional unit available for recycling (Line 11 x Line 3 / 100) | 91 % | 9 % | |
| 13 | Total percentage available for recycling (Sum line 12) | Date and Signature | | |

NOTE 1 Component defined in EN 13427 - part of packaging that can be separated by hand or by using simple physical means.

NOTE 2 Intended material recycling stream - aluminium, glass, paper, plastic, steel, wood, other. Where recycling operations are not available, or under development, see NOTE in A.3.1

NOTE 3 N/A - Not Applicable.

http://www.cas.com/standards.com/

Example 2
Declaration of Percentage of a Functional Unit of Packaging available for Recycling

| | | | | |
|----------|--|--|----------------|--------------|
| 1 | Functional Unit of Packaging | Description: Corrugated tray with waxed corrugated lid and PE tray for fresh fish. Total weight 550 g | | |
| | Component see NOTE 1 | Component 2 | Component 3 | |
| 2 | Description | Lid made of corrugated paper board and waxed | | |
| 3 | Weight of component as % of total functional unit | 27 % | | |
| 4 | If the whole component is accepted for recycling based on national, European, international, commercial standards or specifications, give detailed reference | Paper recycling stream. EN 643 Standard grades of recovered paper and board. | | |
| 5 | If the component complies with such standard(s) / specification(s) fill in line 6 - and then go to line 11 and note that 100% is available for recycling. If not, continue with line 6 | Item 1.05 | | |
| 6 | Intended material stream See NOTE 2 | Paper | Plastic | Paper |
| 7 | Identification of constituents within the component likely to create problems in the overall recycling such that alternative recovery is recommended. Reference to CR 13688 | | | |
| 8 | Constituents liable to cause problems in collection and sorting | None | | |
| 9 | Constituents liable to cause problems in recycling | None | | |
| 10 | Constituents liable to have a negative influence in the recycled material | None | | |
| 11 | Percentage by weight of component available for recycling | 100 % | | |
| 12 | Percentage by weight of functional unit available for recycling (Line 11 x Line 3 / 100) | 9 % | | |
| 13 | Total percentage available for recycling (Sum line 12) | 73 % | | |
| | | Date and Signature | | |

NOTE 1 Component defined in EN 13427 - part of packaging that can be separated by hand or by using simple physical means.

NOTE 2 Intended material recycling stream - aluminium, glass, paper, plastic, steel, wood, other. Where recycling operations are not available, or under development, see NOTE in A.3.1

NOTE 3 N/A - Not Applicable.

www.bsigroup.com
 Example 3
 Declaration of Percentage of a Functional Unit of Packaging available for Recycling

| | | | | |
|----------|---|---|--|--------------|
| 1 | Functional Unit of Packaging | Description: Ceramic pottery jar with ceramic lid and paper labels | | |
| | Component see NOTE 1 | Component 1 | Component 2 | Component 3 |
| 2 | Description | Ceramic pottery jar | Ceramic lid | Paper labels |
| 3 | Weight of component as % of total functional unit | 87.2 % | 12 % | 0.8% |
| 4 | If the whole component is accepted for recycling based on national, European, international, commercial standards or specifications, give detailed reference | | | |
| 5 | If the component complies with such standard(s) / specification(s) fill in line 6 - and then go to line 11 and note that 100 % is available for recycling. If not, continue with line 6 | | | |
| 6 | Intended material stream See NOTE 2 | N/A See NOTE 4 | N/A | None |
| 7 | Identification of constituents within the component likely to create problems in the overall recycling such that alternative recovery is recommended. Reference to CR 13688 | | | |
| 8 | Constituents liable to cause problems in collection and sorting | None | None | None |
| 9 | Constituents liable to cause problems in recycling | No recycling facilities available See NOTE 4 | No recycling facilities available----- | None |
| 10 | Constituents liable to have a negative influence in the recycled material | N/A | ----- | None |
| 11 | Percentage by weight of component available for recycling | 0 % | 0 % | 0% |
| 12 | Percentage by weight of functional unit available for recycling (Line 11 x Line 3 / 100) | 0 % | 0 % | 0% |
| 13 | Total percentage available for recycling (Sum line 12) | Date and Signature | | |

NOTE 1 Component defined in EN 13427 - part of packaging that can be separated by hand or by using simple physical means.

NOTE 2 Intended material recycling stream - aluminium, glass, paper, plastic, steel, wood, other. Where recycling operations are not available, or under development, see NOTE in A.3.1

NOTE 3 N/A - Not Applicable.

NOTE 4 Availability of recycling facilities could be changed in the future but at this stage recycling cannot be claimed See also EN 13437:2003, Annex H.4.

<http://www.bsigra.com>

Example 4
Declaration of Percentage of a Functional Unit of Packaging available for Recycling

| | | | |
|----|--|---|----------------------|
| 1 | Functional Unit of Packaging | Description: Clear, non coloured monolayer PET bottles with plastic closure and paper/foil label, volume 0.33 litre for soft drinks | Component 3 |
| | Component see NOTE 1 | Component 2 | Component 3 |
| 2 | Description | PP closure | Paper/foil label |
| 3 | Weight of component as % of total functional unit | 12.50 % - 5.00 % | 6.26% - 5.00% |
| 4 | if the whole component is accepted for recycling based on national, European, international, commercial standards or specifications, give detailed reference | 81.25 % - 90.00 % Italian UNI 10667-7 Post consumer PET to be used for fibres | |
| 5 | if the component complies with such standard(s) / specification(s) fill in line 6 - and then go to line 11 and note that 100% is available for recycling. if not, continue with line 6 | Italian UNI 10667-8 Post consumer PET to be used for blow moulding | |
| 6 | Intended material stream See NOTE 2 | Plastic | Plastic |
| 7 | Identification of constituents within the component likely to create problems in the overall recycling such that alternative recovery is recommended. Reference to CR 13688 | | |
| 8 | Constituents liable to cause problems in collection and sorting | ----- | None |
| 9 | Constituents liable to cause problems in recycling | ----- | None |
| 10 | Constituents liable to have a negative influence in the recycled material | ----- | None |
| 11 | Percentage by weight of component available for recycling | 100% | 0% |
| 12 | Percentage by weight of functional unit available for recycling (Line 11 x Line 3 / 100) | 81.25% - 90.00% | 12.50% - 5.00% 0% |
| 13 | Total percentage available for recycling (Sum line 12) | 93.75 % - 95 % | Date and Signature |

NOTE 1 Component defined in EN 13427 - part of packaging that can be separated by hand or by using simple physical means.
 NOTE 2 Intended material recycling stream - aluminium, glass, paper, plastic, steel, wood, other. Where recycling operations are not available, or under development, see NOTE in A.3.1
 NOTE 3 N/A - Not Applicable.

Annex ZA
(Informative)

Relationship between this European Standard and the Essential Requirements of EU Directive 94/62/EC

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive 94/62/EC:

European Parliament and Council Directive 94/62/EC of 20 December 1994

on packaging and Packaging Waste

Once this standard is cited in the official Journal of the European Communities under that Directive and has been implemented as a national standard in at least one member state, compliance with the Clauses of this standard given in Table ZA confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding Essential Requirements of the Directive and associated EFTA regulations.

Table ZA.— Correspondence between this European Standard and Directive 94/62/EC on Packaging and packaging waste

| Clauses and sub-clauses of this EN | Essential requirements (Ers) of Directive 94/62/EC | Qualifying remarks/notes |
|------------------------------------|--|--------------------------|
| Clauses 4.1 and 4.4 | Article 9 and Annex II, paragraph 1 - indents 1 to 3 | |
| Clauses 4.2 and 4.3 | Article 9 and Annex II paragraph 1 - indent 2 Annex II paragraph 3 (a) | |

WARNING — Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

Bibliography

- [1] EN 643:2001, *Paper and board - European list of standard grades of recovered paper and board*

<http://www.china-gauges.com/>

<http://www.china-gauges.com/>

BSI — British Standards Institution

BSI is the independent national body responsible for preparing British Standards. It presents the UK view on standards in Europe and at the international level. It is incorporated by Royal Charter.

Revisions

British Standards are updated by amendment or revision. Users of British Standards should make sure that they possess the latest amendments or editions.

It is the constant aim of BSI to improve the quality of our products and services. We would be grateful if anyone finding an inaccuracy or ambiguity while using this British Standard would inform the secretary of the technical committee responsible, the identity of which can be found on the inside front cover.
Tel: +44 (0)20 8996 9000. Fax: +44 (0)20 8996 7400.

BSI offers members an individual updating service called PLUS which ensures that subscribers automatically receive the latest editions of standards.

Buying standards

Orders for all BSI, international and foreign standards publications should be addressed to Customer Services. Tel: +44 (0)20 8996 9001.
Fax: +44 (0)20 8996 7001. Email: orders@bsi-global.com. Standards are also available from the BSI website at <http://www.bsi-global.com>.

In response to orders for international standards, it is BSI policy to supply the BSI implementation of those that have been published as British Standards, unless otherwise requested.

Information on standards

BSI provides a wide range of information on national, European and international standards through its Library and its Technical Help to Exporters Service. Various BSI electronic information services are also available which give details on all its products and services. Contact the Information Centre.
Tel: +44 (0)20 8996 7111. Fax: +44 (0)20 8996 7048. Email: info@bsi-global.com.

Subscribing members of BSI are kept up to date with standards developments and receive substantial discounts on the purchase price of standards. For details of these and other benefits contact Membership Administration.
Tel: +44 (0)20 8996 7002. Fax: +44 (0)20 8996 7001.
Email: membership@bsi-global.com.

Information regarding online access to British Standards via British Standards Online can be found at <http://www.bsi-global.com/bsonline>.

Further information about BSI is available on the BSI website at <http://www.bsi-global.com>.

Copyright

Copyright subsists in all BSI publications. BSI also holds the copyright, in the UK, of the publications of the international standardization bodies. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI.

This does not preclude the free use, in the course of implementing the standard, of necessary details such as symbols, and size, type or grade designations. If these details are to be used for any other purpose than implementation then the prior written permission of BSI must be obtained.

Details and advice can be obtained from the Copyright & Licensing Manager.
Tel: +44 (0)20 8996 7070. Fax: +44 (0)20 8996 7553.
Email: copyright@bsi-global.com.