



# SLOVENSKI STANDARD

SIST EN 13428:2004

01-september-2004

BUXca Yý U.

SIST EN 13428:2001

---

**Embalaža - Posebne zahteve za proizvodnjo in sestavo - Preventiva z zmanjševanjem pri izvoru**

Packaging - Requirements specific to manufacturing and composition - Prevention by source reduction

Verpackung - Spezifische Anforderungen an die Herstellung und Zusammensetzung - Ressourcenschonung durch Verpackungsminimierung

(standards.iteh.ai)

Emballage - Exigences spécifiques a la fabrication et a la composition - Prévention par la réduction a la source

[SIST EN 13428:2004](#)

<https://standards.iteh.ai/catalog/standards/sist/ea6bc1a5-bb19-4454-ba9c-bf623729c51c/sist-en-13428-2004>

**Ta slovenski standard je istoveten z: EN 13428:2004**

---

**ICS:**

13.030.99

55.020

**SIST EN 13428:2004**

**en,fr,de**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 13428:2004

<https://standards.iteh.ai/catalog/standards/sist/ea6bc1a5-bb19-4454-ba9c-bf623729c51c/sist-en-13428-2004>

English version

## Packaging - Requirements specific to manufacturing and composition - Prevention by source reduction

Emballage - Exigences spécifiques à la fabrication et à la composition - Prévention par la réduction à la source

Verpackung - Spezifische Anforderungen an die Herstellung und Zusammensetzung - Ressourcenschonung durch Verpackungsminimierung

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.

[SIST EN 13428:2004](https://standards.iteh.ai/catalog/standards/sist/ea6bc1a5-bb19-4454-ba9c-bf623729c51c/sist-en-13428-2004)

<https://standards.iteh.ai/catalog/standards/sist/ea6bc1a5-bb19-4454-ba9c-bf623729c51c/sist-en-13428-2004>



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

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

**Contents**

**Page**

Foreword.....	4
Introduction .....	5
1 Scope .....	6
2 Normative references .....	6
3 Terms and definitions .....	6
4 Requirements .....	7
4.1 Application .....	7
4.2 Packaging assessment .....	7
4.2.1 General.....	7
4.2.2 Determination of critical area .....	7
4.2.3 Determination of presence of dangerous substances or preparations .....	8
4.2.4 Determination of the four named heavy metals .....	8
4.3 Demonstration of Conformity.....	8
4.3.1 Demonstration of source reduction.....	8
4.3.2 Demonstration of minimisation of dangerous substances or preparations .....	9
4.3.3 Demonstration of conformity with the limit for the presence of the named heavy metals.....	9
5 List of performance criteria .....	9
Annex A (informative) Guidelines on the use of this standard for the assessment of adequate minimum weight/volume of packaging .....	10
A.1 Introduction .....	10
A.2 Assessment methodology .....	10
A.3 Performance criteria .....	11
A.3.1 General.....	11
A.3.2 Product protection.....	11
A.3.3 Packaging manufacturing process .....	11
A.3.4 Packing/filling process.....	11
A.3.5 Logistics (including transport, warehousing and handling).....	12
A.3.6 Product presentation and marketing .....	12
A.3.7 User/consumer acceptance .....	12
A.3.8 Information .....	13
A.3.9 Safety .....	13
A.3.10 Legislation .....	13
A.3.11 Other issues .....	13
A.4 Example of a checklist layout.....	14
Annex B (informative) Examples of the weight/volume conformity assessment process by using the checklist .....	15
B.1 General.....	15
B.2 Example based on packaging study carried out by UKCEED .....	15
B.2.1 General.....	15
B.2.2 Product protection.....	15
B.2.3 Packaging manufacturing process .....	15
B.2.4 Packing/filling process.....	15
B.2.5 Logistics .....	15
B.2.6 Product presentation and marketing .....	16
B.2.7 User/consumer acceptance .....	16
B.2.8 Information .....	16
B.2.9 Safety .....	16
B.2.10 Legislation .....	16
B.2.11 Other issues .....	16

<b>B.3</b>	<b>Example based on a packaging study carried out by Fachvereinigung Behälterglasindustrie e.V</b> .....	<b>18</b>
<b>B.3.1</b>	<b>General</b> .....	<b>18</b>
<b>B.3.2</b>	<b>Product protection</b> .....	<b>18</b>
<b>B.3.3</b>	<b>Packaging manufacturing process</b> .....	<b>18</b>
<b>B.3.4</b>	<b>Packing/filling process</b> .....	<b>19</b>
<b>B.3.5</b>	<b>Logistics</b> .....	<b>19</b>
<b>B.3.6</b>	<b>Product presentation and marketing</b> .....	<b>19</b>
<b>B.3.7</b>	<b>User/consumer acceptance</b> .....	<b>19</b>
<b>B.3.8</b>	<b>Information</b> .....	<b>19</b>
<b>B.3.9</b>	<b>Safety</b> .....	<b>19</b>
<b>B.3.10</b>	<b>Legislation</b> .....	<b>19</b>
<b>B.3.11</b>	<b>Other issues</b> .....	<b>19</b>
<b>Annex C (normative)</b>	<b>Minimisation of Dangerous Substances or Preparations and Demonstration of Conformity</b> .....	<b>21</b>
<b>C.1</b>	<b>Objective</b> .....	<b>21</b>
<b>C.2</b>	<b>Determination of the substances or preparations to be minimised</b> .....	<b>21</b>
<b>C.3</b>	<b>Conformity with the minimisation requirement</b> .....	<b>22</b>
<b>Annex D (informative)</b>	<b>Decision Tree - Minimisation of Dangerous Substances or Preparations and Demonstration of Conformity</b> .....	<b>23</b>
<b>Annex ZA (informative)</b>	<b>Relationship between this European Standard and the essential requirements of EU Directive 94/62/EC</b> .....	<b>24</b>
<b>Bibliography</b> .....		<b>25</b>

**iTeh STANDARD PREVIEW**  
(standards.iteh.ai)

[SIST EN 13428:2004](https://standards.iteh.ai/catalog/standards/sist/ea6bc1a5-bb19-4454-ba9c-bf623729c51c/sist-en-13428-2004)

<https://standards.iteh.ai/catalog/standards/sist/ea6bc1a5-bb19-4454-ba9c-bf623729c51c/sist-en-13428-2004>

## Foreword

This document (EN 13428:2004) 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 13428:2000.

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 standard forms one of a series of standards and reports prepared under Mandate M 200 rev.3 and the Second Standardisation Mandate M317 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 standard 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.

<https://standards.iteh.ai/catalog/standards/sist/ea6bc1a5-bb19-4454-ba9c-bf623729c51c/sist-en-13428-2004>

## Introduction

The Directive on Packaging and Packaging Waste (94/62/EC) defines requirements for the manufacturing and composition of packaging. This document amplifies these requirements with respect to reduction of packaging at source and the minimisation of dangerous substances or preparations as they may arise from waste management operations. 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, handling, delivery and presentation of products. A major role is prevention of product damage and/or product waste. Reduction of packaging at source is one of several options for reducing the amount of used packaging for final disposal. In order to save resources and minimise waste, the whole system in which the packaging takes part should be optimised.

This document presents a framework for self-assessment to determine whether the requirements of this standard 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.

## iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 13428:2004](https://standards.iteh.ai/catalog/standards/sist/ea6bc1a5-bb19-4454-ba9c-bf623729c51c/sist-en-13428-2004)

<https://standards.iteh.ai/catalog/standards/sist/ea6bc1a5-bb19-4454-ba9c-bf623729c51c/sist-en-13428-2004>

## 1 Scope

This document specifies a procedure for assessment of packaging to ensure that the weight and/or volume of its material content is at the minimum commensurate with the maintenance of :

- functionality throughout the supply and user chain ;
- safety and hygiene for both product and user/consumer ;
- acceptability of the packed product to the user/consumer.

This document also specifies the methodology and procedure for determining the presence of the four heavy metals named in article 11 of the packaging and packaging waste Directive 94/62/EC and for determining the presence and minimisation of any dangerous substances or preparations if they are present in packaging and are likely to be released into the environment as a result of waste management operations. The procedures are referenced in CR 13695-1 and CEN/TR 13695-2.

NOTE The substitution of one packaging material by another is not a basis for source reduction.

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.

- [SIST EN 13428:2004](https://standards.iteh.ai/catalog/standards/sist/en/13428-2004)  
<https://standards.iteh.ai/catalog/standards/sist/en/13193-2004>  
EN 13193, *Packaging – Packaging and the Environment – Terminology.*
- <https://standards.iteh.ai/catalog/standards/sist/en/13427-2004>  
EN 13427, *Packaging – Requirements for the use of European Standards in the field of packaging and packaging waste.*
- CR 13695-1:2000, *Packaging – Requirements for measuring and verifying the four heavy metals and other dangerous substances present in packaging, and their release into the environment – Part 1 : Requirements for measuring and verifying the four heavy metals present in packaging.*
- CEN/TR 13695–2:2004, *Packaging – Requirements for measuring and verifying the four heavy metals and other dangerous substances present in packaging, and their release into the environment – Part 2 : Requirements for measuring and verifying dangerous substances present in packaging and their release into the environment.*

## 3 Terms and definitions

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

**3.1 prevention by source reduction**  
process for the achievement of a minimum adequate weight and/or volume, for identical requirements, of primary and/or secondary and/or tertiary packaging, when performance and user acceptability remain unchanged and/or adequate, thereby minimising the impact on the environment

**3.2 critical area for source reduction**  
specific performance criterion which prevents further reduction of weight and/or volume of the packaging without endangering functional performance, safety and user/consumer acceptability



**3.3****supplier**

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

**3.4****substances**

chemical elements and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product, and any impurity deriving from the production process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition [67/548/EEC]

**3.5****preparations**

mixtures or solutions composed of two or more substances [67/548/EEC]

**3.6****safety data sheets**

documentation provided by any person established within the community who is responsible for placing a dangerous substance or preparation on the market, whether the manufacturer, importer or distributor. Documentation to be provided to any recipient who is a professional user of the substance or preparation and to contain the information required of the dangerous substance or preparation [91/155/EEC]

NOTE 1 Article 1 of Directive 2001/58/EC amending Directive 91/155/EEC and the implementation of Directives 67/548/EEC and 1999/45/EC requires that the person who is responsible for placing a substance or preparation classified as dangerous on the market shall supply the recipient who is a professional user with a safety data sheet.

NOTE 2 Article 3 of Directive 91/155/EEC on Safety Data Sheets defines the content of the 16 obligatory headings. Information on the composition of a preparation in dangerous substances is given in heading 2. Heading 12 (ecotoxicology) requires the description of the most important characteristic likely to have an effect on the environment owing to the nature of the substance or preparation and likely methods of use. Information of the same kind shall be supplied for dangerous products arising from the degradation of substances or preparations

<https://standards.iteh.ai/catalog/standards/sist/ea6bc1a5-bb19-4454-ba9c-bf623729c51c/sist-en-13428-2004>

**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****4.2.1 General**

The supplier shall be able to demonstrate by the determination of a critical area that the minimum adequate amount of weight and/or volume of the packaging have been reached taking into account all the "performance criteria" included in Clause 5 (see 4.2.2).

The supplier shall be able to demonstrate that substances or preparations classified as dangerous to the environment and assigned with the symbol 'N' (see 4.2.3) present in the packaging components have been minimised in accordance with Annex C. Annex D provides a basis for this assessment.

The supplier shall be able to demonstrate that any presence of the four named heavy metals (lead, cadmium, mercury, and hexavalent chromium) in the packaging components does not exceed the specified limits (see 4.2.4).

**4.2.2 Determination of critical area**

The supplier shall evaluate the complete list of relevant criteria developed as a result of 4.2.1 to determine the "critical area" which will govern the achievable limit for source reduction. See Annex A.2 for guidance.

The identification of the critical area shall be the basis of complying with this document for minimisation. If no critical area has been identified the packaging is not in compliance with the requirements of this document and the potential for (further) source reduction is to be investigated.

#### **4.2.3 Determination of presence of dangerous substances or preparations**

The supplier shall determine with the use of the relevant safety data sheets if there is a presence of dangerous substances or preparations :

- as so classified with the symbol 'N' in the EC Directives - the dangerous substance Directive 67/548/EEC (and its amendments) and dangerous preparation Directive 1999/45/EC ; and
- as likely to be present in emissions, ash or leachate when packaging or residues from management operations or packaging waste are incinerated or landfilled.

**NOTE** For example, the packaging manufacturer should receive from its supplier of dangerous substances or preparations a safety data sheet as detailed in Clause 3.6.

The heading "composition/information on ingredients" should indicate the concentration or concentration range of substances presenting an environmental hazard within the meaning of Directive 67/548/EEC, if they are present in concentrations equal to or greater than those laid down in the table set out in article 3(3) of Directive 1999/45/EC (unless lower limits are given in Annex I to Directive 67/548/EEC, or in Annexes II, III or V to Directive 1999/45/EC).

The packaging manufacturer can calculate and so measure the presence of dangerous substances in its packaging on the basis of information associated with the packaging formulation and manufacturing process.

#### **4.2.4 Determination of the four named heavy metals**

The supplier shall determine by means of measurement and/or calculation and/or upstream information and data if there is a presence of heavy metals (lead, cadmium, mercury, and hexavalent chromium) in the packaging component as so classified in the EC packaging and packaging waste Directive 94/62/EC article 11.

### **4.3 Demonstration of Conformity**

#### **4.3.1 Demonstration of source reduction**

The supplier shall :

- prepare on request a statement of conformity to 4.2.1 and 4.2.2;
- document the relevant data or other information that has been used to develop the list of relevant performance criteria and in particular to establish the nature and effects of the critical elements ;
- use a checklist as the basis for the statement of conformity (such as examples in Annex B) or its own documentation providing that all performance criteria listed in Clause 5 are covered.

#### 4.3.2 Demonstration of minimisation of dangerous substances or preparations

The supplier shall :

- prepare on request a statement of conformity to 4.2.1 and 4.2.3;
- document that relevant safety data sheets and subsequent process information have been used to identify the possible presence of dangerous substances or preparation in the packaging components and likely to be present in emissions, ash or leachate ;
- if the presence of any dangerous substance or preparation has been identified document the relevant data and subsequent process information used to demonstrate that minimisation has been achieved against the performance criteria listed in Clause 5 using the methodology detailed in the normative Annex C of this document.

#### 4.3.3 Demonstration of conformity with the limit for the presence of the named heavy metals

The supplier shall :

- determine that the aggregate presence does not exceed the concentration, specified in the Directive 94/62/EC except where derogations exist ;
- record the results using the methodology in CR 13695-1:2000, Clause 8.

**iTeh STANDARD PREVIEW**  
(standards.iteh.ai)

### 5 List of performance criteria

- Product protection ;
- packaging manufacturing process ; [SIST EN 13428:2004](https://standards.iteh.ai/catalog/standards/sist/ea6bc1a5-bb19-4454-ba9c-bf623729c51c/sist-en-13428-2004)
- packing/filling process ;
- logistics (including transport, warehousing and handling) ;
- product presentation and marketing ;
- user/consumer acceptance ;
- information ;
- safety ;
- legislation ;
- other issues.