

---

**Embalaža - Zahteve za merjenje in overjanje štirih težkih kovin in drugih nevarnih snovi v embalaži ter njihov izpust v okolje - 2. del: Zahteve za merjenje in overjanje nevarnih snovi v embalaži in njihovo izpuščanje v okolje**

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

iTeh STANDARD PREVIEW

(standards.iteh.ai)  
Verpackung - Anforderungen zur Messung und Feststellung der vier Schwermetalle und andere gefährliche Substanzen in Verpackungen und deren Freisetzung in die Umwelt - Teil 2: Anforderungen zur Messung und Feststellung von gefährlichen Substanzen in Verpackungen und deren Freisetzung in die Umwelt

https://standards.iteh.ai/catalog/standards/sist/1b14eebc02b4/sist-cr-13695-2-2002

Emballage - Exigences pour la mesure et la vérification des quatre métaux lourds et autres substances dangereuses présents dans l'emballage et leur cession dans l'environnement - Partie 2 : Exigences pour la mesure et la vérification des substances dangereuses présentes dans l'emballage et leur cession dans l'environnement

**Ta slovenski standard je istoveten z: CR 13695-2:2002**

---

**ICS:**

13.020.40	Onesnaževanje, nadzor nad onesnaževanjem in ohranjanje	Pollution, pollution control and conservation
55.020	Pakiranje in distribucija blaga na splošno	Packaging and distribution of goods in general

**SIST CR 13695-2:2002****en**

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

SIST CR 13695-2:2002

<https://standards.iteh.ai/catalog/standards/sist/5b85c25a-7233-4f33-881e-1b14eebc02b4/sist-cr-13695-2-2002>

CEN REPORT  
RAPPORT CEN  
CEN BERICHT

**CR 13695-2**

April 2002

---

ICS

English version

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

**iTeh STANDARD PREVIEW**

This CEN Report was approved by CEN on 21 April 2001. It has been drawn up by the Technical Committee CEN/TC 261.

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

[SIST CR 13695-2:2002](https://standards.iteh.ai/catalog/standards/sist/5b85c25a-7233-4f33-881e-1b14eebc02b4/sist-cr-13695-2-2002)

<https://standards.iteh.ai/catalog/standards/sist/5b85c25a-7233-4f33-881e-1b14eebc02b4/sist-cr-13695-2-2002>



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

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

## Contents

Foreword.....	3
1 Scope .....	5
2 Normative references .....	5
3 Terms and definitions.....	5
4 The packaging and packaging waste Directive 94/62/EC requirements .....	6
5 New elements to be taken in account.....	6
5.1 The Amsterdam Treaty .....	6
5.2 The Directive on the landfill of waste .....	6
6 Summary of the present situation in the different industrial sectors .....	7
7 Identification and minimisation of dangerous substances in packaging.....	7
7.1 General principle.....	7
7.2 Identification.....	7
7.2.1 The 'Upstream Approach' as the basic principle .....	7
7.2.2 The Identification procedure.....	7
7.3 Release to the environment.....	8
7.4 Minimisation .....	8
8 Basis for a proposed new standard for presuming compliance with the Directive 94/62/EC .....	9
8.1 The principle.....	9
8.2 Determination of substances to be considered for minimisation .....	9
8.3 Conformity with the minimisation requirement.....	10
9 Conclusions.....	10
Annex A (informative) Information on current regulation .....	11
Bibliography .....	12

## Foreword

This document (CR 13695-2:2002) has been prepared by Technical Committee CEN /TC 261, "Packaging", the secretariat of which is held by AFNOR.

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 A, which is an integral part of this document.

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

SIST CR 13695-2:2002

<https://standards.iteh.ai/catalog/standards/sist/5b85c25a-7233-4f33-881e-1b14eebc02b4/sist-cr-13695-2-2002>

## Introduction

The European Commission gave a mandate to CEN for promoting the preparation of European Standards and CEN reports in order to support the application of the Directive 94/62/EC of 20 December 1994, on Packaging and Packaging Waste, in particular to elaborate a CEN Report 'Requirements for measuring and verifying heavy metals and other dangerous substances present in packaging, and their release into the environment'.

Part 1 of the CEN-Report 'Requirements for measuring and verifying the four heavy metals present in packaging, and their release into the environment' has been previously released, (CR 13695-1) due to the priority given in Article 11(1) of the Directive to the four heavy metals explicitly mentioned: Lead, Cadmium, Chromium VI, Mercury.

This document is Part 2 to the CEN Report CR 13695-1 related to other dangerous substances. It refers to the end-of-life treatment of packaging by incineration or landfilling. Only dangerous substances which are intentionally added for functional use are considered.

The task of the Ad Hoc working group 'Heavy metals and other dangerous substances' had been attributed by a resolution of CEN TC 261 SC 4.

Have been considered for the development of this work :

- the existing European or national regulations (Directives) ;
- the CEN standardisation on waste TC 292;
- the OECD environment monograph series.

A detailed information on the regulative context is given in Annex A; however this work is expected to be compatible with any further evolution of the related regulation, as it is independent of any specific case.

With regard to the number and diversity of substances, which may be considered as dangerous to the environment, there is no currently available general standardised methods for the systematic measurements of their presence in ashes, emissions or leachates, when packaging or residues from management operations or packaging waste are incinerated or landfilled. The task of elaborating specific standardised methods for each substance and applicable in each practical case would be extremely **complex and time consuming** .

A simple and efficient assessment method suitable for small and medium sized suppliers of packaging is proposed, based preferentially on an upstream approach (CR 13695/1, sub-clause 8.1).

Guidelines are provided to identify and minimise dangerous substances and a methodology is proposed to assess the compliance with the requirements of the Directive.

Work has been initiated on an inventory for the purpose of simplification of the assessment procedure, particularly for small and medium sized companies.

## 1 Scope

This document is intended to be of practical use, and to enable efficient application of the Directive 94/62/EC, even for small and medium sized companies in the packaging industry, providing them with a methodology for assessing compliance with the Directive.

## 2 Normative references

This CEN Report 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 CEN Report 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 13428, *Packaging – Requirements specific to manufacturing and composition - Prevention by source reduction*.

CR 13695-1, *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*.

EN ISO 9000:2000, *Quality management systems – Fundamentals and vocabulary (ISO 9000:2000)*.

ITIH STANDARD PREVIEW  
(standards.iteh.ai)

## 3 Terms and definitions

The definitions set out in Article 3 of Directive 94/62/EC shall apply.

For the purposes of this CEN Report, the following terms and definitions apply :

### 3.1

#### **incidental presence**

result of a non intentional introduction of a substance in a packaging or packaging component

### 3.2

#### **intentional introduction**

act of deliberately utilising a substance in the formulation of a packaging or a packaging component where its continued presence is desired in the final packaging or packaging component to provide a specific characteristic, appearance, or quality.

Note: The incidental presence of impurities in recycled materials used for the manufacture of new packaging materials is not considered intentional introduction.

### 3.3

#### **packaging component**

any part of packaging that can be separated by hand or by using simple physical means [EN 13193:2000]

### 3.4

#### **packaging constituent**

part from which packaging or its components are made and which cannot be separated by hand or by using simple physical means

## 4 The packaging and packaging waste Directive 94/62/EC requirements

4.1 The Packaging and Packaging Waste Directive 94/62/EC explains in the 21<sup>st</sup> recital of the preamble that :

"the presence of noxious metals and other substances in packaging should be limited in view of their environmental impact (in particular in the light of their likely presence in emissions or ash when packaging is incinerated or in leachate when packaging is landfilled)."

4.2 Article 1 of the Packaging and Packaging Waste Directive 94/62/EC requires the responsible body to :

"prevent any impact on the environment (...) or to reduce such impact, thus providing a high level of environmental protection."

4.3 Article 10 refers to Standardisation

"in particular relating to (...), the methods for measuring and verifying the presence of heavy metals and other dangerous substances in the packaging and their release into the environment from packaging and packaging waste."

4.4 Annex II, paragraph 1, requires that :

"packaging shall be designed, produced and commercialised in such a way as to permit its reuse or recovery, including recycling, and to minimise its impact on the environment when packaging waste or residues from packaging management operations are disposed of."

4.5 In addition Annex II, paragraph 1, requires that :

"packaging shall be so manufactured, that the presence of noxious metals and other hazardous substances and materials as constituents of the packaging material or of any of the packaging components is minimised with regard to their presence in emissions, ash or leachate when packaging or residues from management operations or packaging waste are incinerated or landfilled."

## 5 New elements to be taken in account

### 5.1 The Amsterdam Treaty

Since the adoption of the Directive 94/62 of 20 December 1994 on packaging and packaging waste, the environmental aspects have been clearly emphasised in European Union policy. The Amsterdam treaty of 1997 states that environmental aspects have to be taken in account in all other domains, as transport industry, employment or energy.

### 5.2 The Directive on the landfill of waste

More generally, Directive 1999/31/EC on the landfill of waste **was** adopted on 26 April 1999 (OJ of 16/07/1999), focused on the basis of a high level of environmental protection. New requirements have been introduced for the reduction of the landfilling of biodegradable waste. This proposal states also that :

- only hazardous waste that fulfils defined criteria can be assigned to a hazardous landfill ;
- landfill for non-hazardous waste may be used for the disposal of municipal and non-hazardous waste ;
- non-hazardous waste is defined as not being covered by the definition given in Article 1 (4) of Council Directive 91/689/EEC of 12 December 1991 on hazardous waste. They should not appear on the list annexed to the Commission Decision 2000/352/EC of 3 May 2000 amended by Commission Decision 2001/118/EC of 16 January 2001, or if so not have one or more of the properties listed in Annex III to Directive 91/689/EEC.



## 6 Summary of the present situation in the different industrial sectors

**6.1** The working group has not been able to identify current examples where packaging materials or components of packaging produced in the EU present a risk to the environment due to the presence of dangerous substances in use or after use.

One reason could be that substances that are dangerous to the environment might be dangerous in other respects as well, e.g. for the health and safety of consumers. In article 2 of the Directive, the importance of safety, the protection of health and the hygiene of the packed products are emphasised. A possible consequence of this may be that considerations related to health and safety have already had the effect of minimising or even eliminating the use of this kind of substances in packaging.

**6.2** With regard to the number and diversity of substances that may be considered as dangerous to the environment, simplified lists of such substances by relating to specific industrial sectors could be useful. Such lists would facilitate the identification of the substances dangerous to the environment, relevant for a given packaging supplier, especially for small and medium sized companies.

As a first step an enquiry was carried out in order to obtain detailed information on :

- which substances dangerous for the environment may be present in packaging or packaging components ;
- their usual concentration or range of concentrations ;
- their functional use in case of intentional introduction.

Feedback received from industry indicated that it was not appropriate to simplify regulated lists of substances which are subject to future revisions, such as the Adaptation to the Technical progress of directive 67/548/EEC.

## 7 Identification and minimisation of dangerous substances in packaging

### 7.1 General principle

Only intentionally added substances are to be considered in relation to their functional purpose and performance

### 7.2 Identification

#### 7.2.1 The 'Upstream Approach' as the basic principle

A simple and efficient assessment method for the identification of dangerous substances in packaging, especially suitable for small and medium sized suppliers of packaging, is needed. This report proposes the 'upstream approach' as elaborated in CR 13695-1 ( sub-clause 8.1) for this purpose.

The upstream verification in the sense of EN ISO 9000, should be traceable by means of information from the suppliers of raw materials or constituents. In many cases consultation of the safety data sheet in accordance with Directive 91/155/EEC could provide enough information to assess compliance with the Directive 94/62/EC.

#### 7.2.2 The Identification procedure

**7.2.2.1** Only intentionally added substances are to be considered in relation with their functional purposes and performances.

**7.2.2.2** For the purpose of the assessment procedure, 'dangerous substances' or 'noxious and other hazardous substances' are defined as :

- Any substances classified as **dangerous to the environment** according to Directive 67/548/EEC (Dangerous Substances Directive) and its adaptations to the technical progress **and assigned with the symbol N and the corresponding indication of danger** (with the exception of lead, cadmium, mercury and chromium (VI) and their compounds already considered in CR 13695-1 ).