



**NSAI**  
Standards

Standard Recommendation  
S.R. 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

## S.R. CR 13695-1:2000

*Incorporating amendments/corrigenda issued since publication:*

<i>This standard replaces:</i>	<i>This standard is based on:</i> CR 13695-1:2000	<i>Published:</i>	
This Irish Standard was published under the authority of the NSAI and comes into effect on: 18 March, 2007		ICS number: 13.020.30 55.020	
<b>NSAI</b> 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W <b>NSAI.ie</b>	<b>Sales:</b> T +353 1 857 6730 F +353 1 857 6729 W standards.ie	<b>Price Code:</b> R
Údarás um Chaighdeáin Náisiúnta na hÉireann			

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 1:  
Requirements for measuring and verifying the four heavy metals present in packaging**

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 1: Exigences pour la mesure et la vérification des quatre métaux lourds présents dans l'emballage

Verpackung - Anforderungen zur Messung und Feststellung der vier Schwermetalle und andere gefährlichen Substanzen in Verpackungen und deren Freisetzung in die Umwelt - Teil 1: Anforderungen zur Messung und Feststellung der vier Schwermetalle in Verpackungen

This CEN Report was approved by CEN on 16 June 1999. 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, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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

**Central Secretariat: rue de Stassart, 36 B-1050 Brussels**

## Contents

Foreword.....	4
Introduction .....	5
1 Scope .....	6
2 Normative references .....	6
3 Terms and definitions.....	6
4 The European packaging market at present .....	6
5 The packaging and packaging waste directive.....	7
6 Consideration of factors that influence the presence of Heavy Metals in Packaging and in emissions from Packaging Waste management .....	7
6.1 Heavy metals in the environment and risk reduction .....	8
6.2 Packaging Intended to come into Contact with Foodstuffs .....	8
6.3 Emission control at incineration of mixed municipal solid waste.....	9
6.4 Leachate from Landfills.....	9
7 Summary of the present situation in relevant industrial sectors .....	10
7.1 Possible sources of heavy metals present in packaging .....	10
7.1.1 Natural sources .....	10
7.1.2 Recycling .....	10
7.1.3 Functional use.....	10
7.1.4 Cr(VI) in metallic materials.....	10
7.2 The situation in individual material sectors.....	10
7.3 Main deductions from the survey.....	18
8 Assessing compliance with the Directive .....	18
8.1 Assessing compliance with article 11 of the Directive .....	18
8.1.1 Introduction .....	18
8.1.2 Definitions.....	19
8.1.3 Evaluation of the concentration levels of heavy metals in packaging or packaging components.....	20
8.1.4 Compliance with Article 11 of the Directive .....	21
8.2 Assessment approach to conform to minimisation according to article 9 and annex II of the directive .....	21
8.2.1 Introduction .....	21
8.2.2 Evaluation of the presence of heavy metals in emissions, ash and leachate.....	22
8.2.3 Assessment of compliance with Annex II / Art. 9 of the directive .....	22
8.3 Exemptions from the concentration limits of article 11.1 of the Directive .....	23
8.3.1 Exemptions according to Article 11.3 of the Directive .....	24
8.3.2 Specific measures according to Article 20.1 of the Directive .....	24
9 Survey of existing relevant test methods.....	24
10 Measuring the four heavy metals .....	25
10.1 Sampling .....	25
10.2 Preparing the test portion .....	25
10.3 Analysing the test portion.....	25
11 Conclusions.....	26
Annex A (informative) Survey of existing relevant test methods (chapter 9) : list of analytical methods.....	27
Annex B (informative) Market dimensions.....	33
Annex C (informative) Opinion of the Scientific Committee for Food on the Toxicity of Lead and Cadmium in Ceramics .....	35
Annex D 1 (informative) Aluminium.....	36
Annex D 2 (informative) Undecorated and decorated glass .....	39

<b>Annex D 2 bis (informative) Crystal glass as packaging.....</b>	<b>42</b>
<b>Annex D 3 (informative) PAPER.....</b>	<b>43</b>
<b>Annex D 4 (informative) Plastic.....</b>	<b>46</b>
<b>Annex D 5 (informative) Steel.....</b>	<b>49</b>
<b>Annex D 5 bis (informative) Light metal packaging.....</b>	<b>51</b>
<b>Annex D 5 ter (informative) Steel drums.....</b>	<b>52</b>
<b>Annex D 6 (informative) Wood.....</b>	<b>53</b>
<b>Annex D 7 (informative) <u>Cork</u>.....</b>	<b>56</b>
<b>Annex D 8 (informative) Paints and printing inks (coatings) as constituents of packaging components .....</b>	<b>62</b>
<b><u>Bibliography</u>.....</b>	<b>63</b>

## Foreword

This document has been prepared by CEN /TC 261, "Packaging".

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).

This document has to be implemented at national level, either by publication of an identical text or by endorsement, by **month year**, and conflicting national standards have to be withdrawn by **month year**.

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

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
  - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-