



NSAI
Standards

Irish Standard
I.S. EN 14350:2020

Child care articles - Drinking equipment - Safety requirements and test methods

I.S. EN 14350:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:

EN 14350:2020

Published:

2020-06-03

*This document was published
under the authority of the NSAI
and comes into effect on:*

2020-06-21

ICS number:

97.190

NOTE: If blank see CEN/CENELEC cover page

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

I.S. EN 14350:2020 is the adopted Irish version of the European Document EN 14350:2020, Child care articles - Drinking equipment - Safety requirements and test methods

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

For relationships with other publications refer to the NSAI web store.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This page is intentionally left blank

EUROPEAN STANDARD

EN 14350

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2020

ICS 97.190

Supersedes EN 14350-1:2004, EN 14350-2:2004

English Version

Child care articles - Drinking equipment - Safety requirements and test methods

Articles de puériculture - Articles pour l'alimentation
liquide - Exigences en matière de sécurité et méthodes
d'essai

Artikel für Säuglinge und Kleinkinder - Artikel für
flüssige Kindernahrung - Sicherheitstechnische
Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 14 March 2020.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

Page

European foreword	5
Introduction	7
1 Scope.....	8
2 Normative references.....	8
3 Terms and definitions	9
4 Description.....	11
5 Test equipment and tolerances	19
5.1 Small parts cylinder	19
5.2 Indentor.....	20
5.3 Fixture for security/retention test.....	21
5.4 Probes for holes (finger traps) test.....	21
5.5 Templates A and B	22
5.6 Tolerances	22
6 Construction and mechanical properties – General and sample preparation	23
6.1 Sample preparation for construction and mechanical properties	23
6.2 General.....	23
6.3 Pre-treatment (see B.4)	23
6.4 Boiling (see B.5)	23
6.5 Conditioning	23
7 Construction and mechanical requirements and tests	23
7.1 Order of testing for construction and mechanical properties.....	23
7.2 Decoration, inscription and decals (see B.6)	25
7.3 Visual and tactile examination.....	25
7.4 Small parts.....	25
7.5 Additional requirements for sealing discs (see B.7)	25
7.6 Requirements and tests for containers	25
7.7 Requirements and tests for drinking accessories.....	28
7.8 Protective covers (see B.11)	31
7.9 Handles and clips (see B.13)	32
7.10 Finger traps.....	33
7.11 Protruding parts.....	33
7.12 Cords or loops	35
8 Chemical requirements and test methods.....	36
8.1 General.....	36
8.2 Preparation of samples for chemical tests	36
8.3 Requirements by component and material.....	36
8.4 Volatile compounds content of silicone components intended to be put in the mouth or in contact with food (see B.14)	40
8.5 <i>N</i> -nitrosamines and <i>N</i> -nitrosatable substances release	41
8.6 Migration of certain elements (see B.16 and B.21)	41
8.7 2-mercaptobenzothiazole (MBT), antioxidant and formaldehyde release (see B.19, B.20, B.24).....	43
8.8 Colour fastness (see B.15)	44

8.9	Migration of primary aromatic amines (see B.23)	45
8.10	Migration of lead and cadmium from glass (see B.17).....	45
8.11	Migration of elements from metal (see B.18).....	46
9	Consumer packaging	46
10	Product information.....	46
10.1	General	46
10.2	Purchase information	46
10.3	Warnings.....	47
10.4	Instructions for use.....	48
10.5	Supply chain information for products that contain vulcanised rubber.....	49
Annex A (normative) Warnings.....		52
Annex B (informative) Rationales		62
B.1	Introduction	62
B.2	General	62
B.3	Preparation of samples for construction and mechanical tests (see 6.1).....	62
B.4	Pre-treatment (see 6.3)	63
B.5	Boiling (see 6.4)	63
B.6	Decoration, inscription and decals (see 7.2)	63
B.7	Additional requirements for sealing discs (see 7.5).....	63
B.8	Volumetric labelling and accuracy requirements (see 7.6.1. and 7.6.2)	63
B.9	Tear resistance test (see 7.7.1).....	64
B.10	Print adhesion of markings and decorations (see 7.6.3)	64
B.11	Protective covers (see 7.8).....	64
B.12	Push-pull valves (see 7.7.2)	65
B.13	Handles and clips (see 7.9).....	65
B.14	Volatile compounds content (see 8.4).....	65
B.15	Colourants (see 8.8).....	66
B.16	Migration of certain elements (see 8.6)	66
B.17	Migration of lead and cadmium from glass (see 8.10)	68
B.18	Migration of elements from metal (see 8.11)	68
B.19	Antioxidant release (see 8.7)	69
B.20	Formaldehyde release (see 8.7).....	71
B.21	Cr VI limit (see 8.6)	71
B.22	Mercaptobenzothiazole (MBT) release (see 8.7)	71
B.23	Migration of primary aromatic amines (see 8.9)	71
B.24	Migration conditions for elastomeric materials	72
Annex C (informative) Method for the determination of 2-mercaptobenzothiazole (MBT) and antioxidants specified in Table 7		73

EN 14350:2020 (E)

C.1	Apparatus	73
C.2	Procedure	73
C.3	Column.....	74
C.4	Detection.....	74
C.5	Standards.....	74
C.6	Preparation of standard solutions of MBT and antioxidants.....	75
C.7	Retention times	76
C.8	Calculation of MBT and antioxidants.....	77
	Annex D (informative) A-Deviations.....	78
	Annex E (informative) Good practice for visibility and legibility.....	79
E.1	General.....	79
E.2	Warnings.....	79
E.3	Font	79
E.4	Multi-languages	79
	Bibliography	80

European foreword

This document (EN 14350:2020) has been prepared by Technical Committee CEN/TC 252 “Child care articles”, 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 December 2020, and conflicting national standards shall be withdrawn at the latest by June 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 14350-1:2004 and EN 14350-2:2004.

The main changes compared to the previous edition are listed below:

- The standard has been completely renewed and a new structure was given. The former two parts were joined together into one standard. A whole series of new aspects had to be considered, following changes in the market and the regulatory background.
- Introduction: Completely reworded and references to European regulations were renewed.
- Clause 3: Completely restructured and partly described in more detail. Definitions for completely new parts were added.
- Clause 4: Several completely new parts were added.
- Clause 5: This clause is completely new.
- Clause 6: This clause is completely new.
- Clause 7: The whole clause has been divided into several sub-paragraphs for individual components of drinking equipment and the associated tests to improve the clarity of the sequence. Several paragraphs for new items and their tests were added.
- Clause 8: This clause was completely restructured and subdivided. The requirements and test conditions have been set with the consideration of the likely chemical exposure: food contact, mouthing or ingestion. Chemical requirements and test methods were set for materials (like rubber, silicon, TPE, metal, glass) and exposures (mouthing and swallowing) which are recently not covered by harmonised legislations. Requirements for substances (e.g. Phthalates and BPA) covered by harmonised regulation (like REACH, (EU) 10/2011 or its amendments) have not been included.
- Clause 10: Revised and partly reworded.
- Clause 11: This clause on Test report is completely new.
- Annex A: This normative annex with translations of warnings into 24 languages is completely new.
- Annex B: This informative annex with rationales is completely new.

EN 14350:2020 (E)

- Annex C: This informative annex on Method for the determination of 2-mercaptobenzothiazole (MBT) and antioxidants specified in Table 7 was revised and enlarged.
- Annex E: This informative annex on good practice for visibility and legibility is completely new.

This document has been prepared under a mandate M/264 given to CEN by the European Commission and the European Free Trade Association. The standard is developed in support of the EU Directive 2001/95/EC (GPSD).

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

Introduction

This document harmonises minimum safety requirements and test methods for children's drinking equipment. Some of the provisions have been taken from other existing national and European Standards and for these provisions the Technical Committee has relied on previous validation.

A significant choking hazard can arise if the component parts of drinking equipment become separated during use. This hazard is addressed in this document by the inclusion of a security test. However, as the fixing of such products to the container is user-dependent, the risk of an accident cannot be completely eliminated. This document sets out labelling requirements stating that parents or carers should not leave children unattended whilst being fed with a product containing a feeding teat or using a container made of glass and that children should not be allowed to use feeding teats as a soother.

The Technical Committee considered the possibility of standardizing both sizes of feeding teats and ranges of flow rates. However, it was decided that the many combinations of container systems precluded being standardized. It is recommended that all container and drinking accessory combinations are matched components. Providing meaningful flow rate information is difficult because of several factors including hole diameter, teat thickness, hole shape/type of feed, and also how individual infants suck the teat. Accordingly, it was decided not to include a test for flow rate but to recommend that manufacturers provide information on flow rate and hole size that is appropriate to their particular product.

This document sets chemical requirements and test methods for materials (like rubber, silicon, TPE etc) and exposures (mouthing and swallowing) not covered by harmonised legislations. Where this document sets migration limits for substances also covered by legislation, the requirements of this document with stated test conditions must be regarded as additional.

Materials and chemical risks included in the standard (Table 3) do not present a definitive list but the considered opinion of the Technical Committee based on current knowledge of likely risks.

All food contact materials and articles are regulated by Regulation (EC) No 1935/2004 [1], Regulation (EC) No 2023/2006 [39] and relevant implementation measures, at European or national level.

All plastics components of drinking equipment intended to come into contact with food are specifically regulated by the Regulation (EU) 10/2011 [2] on plastic materials and articles intended to come into contact with food and its amendments.

Therefore, for example the Bisphenol A - requirement has not been included in this document. [40]

Phthalates in childcare articles are restricted by Annex XVII of the REACH Regulation [3] and have not been included in this document.

Latex protein allergy risk has not been included in this document. There is no published information that sensitization is caused by feeding teats and there is an extremely low incidence of latex protein allergy among young children and babies. Nevertheless, provision for packaging information for feeding teats made from natural rubber latex has been included in this document.

It is recommended that manufacturers and suppliers operate to EN ISO 9001 standard for quality management systems [4]. It is also recommended that laboratories operate to EN ISO/IEC 17025, General requirements for the competence of testing and calibration laboratories [5].

EN 14350:2020 (E)**1 Scope**

This document specifies safety requirements relating to the materials, construction, performance, packaging and product information for drinking equipment intended for children of 0 to 48 months (see B.2) of age:

- Re-usable containers and re-usable drinking accessories;
- Single-use containers and drinking accessories sold with these containers;
- Single-use feeding teats;
- Ready to use feeding teats.

This document does not include requirements for the cleanliness of ready to use and single use products.

This document does not apply to products designed for specialist clinical medical applications, e.g. those relating to cleft lip palates.

This document does not apply to drinking equipment made from ceramics.

This document does not apply to bags intended for storage only.

This document does not apply to drinking equipment which is supplied with fluids or food when purchased and to feeding accessories fixed to it.

This document is not applicable to soothers. Safety requirements and test methods for soothers are specified in EN 1400 [6].

This document is not applicable for cutlery and other feeding utensils. Safety requirements and test methods for Cutlery and other feeding equipment are specified in EN 14372 [7].

For drinking equipment excluded from the scope, consider the applicable requirements of this document whenever possible.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 71-3, *Safety of toys - Part 3: Migration of certain elements*

EN 12868, *Child use and care articles - Method for determining the release of N-nitrosamines and N-nitrosatable substances from elastomer or rubber teats and soothers*

EN ISO 3696, *Water for analytical laboratory use - Specification and test methods (ISO 3696)*

IEC 60454-2, *Pressure-sensitive adhesive tapes for electrical purposes, Part 2: Methods of test*

ISO 188:2011, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*

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
-