

AS/NZS 8124.9:2008

EN 71-9:2005

Reconfirmed 2018

AS/NZS 8124.9:2008

Australian/New Zealand Standard™

**Safety of toys**

**Part 9: Organic chemical compounds—  
Requirements**



## **AS/NZS 8124.9:2008**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee CS-018, Safety of Children's Toys. It was approved on behalf of the Council of Standards Australia on 26 February 2008 and on behalf of the Council of Standards New Zealand on 7 March 2008.

This Standard was published on 28 April 2008.

---

The following are represented on Committee CS-018:

Australian Chamber of Commerce and Industry  
Australian Competition and Consumer Commission  
Australian Retailers Association  
Australian Toy Association  
CHOICE  
Consumer Affairs Victoria  
Consumers' Federation of Australia  
Kidsafe National  
Ministry of Consumer Affairs (New Zealand)  
NSW Office of Fair Trading Department of Commerce  
National Acoustic Laboratories  
New Zealand Toy Distributors Association  
Office of Consumer Affairs and Fair Trading (Tasmania)  
Office of Consumer and Business Affairs South Australia  
Pigment Ecological & Toxicological technical Committee of Australia  
Queensland Health  
SafeKids (New Zealand)  
The Children's Hospital at Westmead

---

### **Keeping standards up-to-date**

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at [www.standards.com.au](http://www.standards.com.au) or Standards New Zealand web site at [www.standards.co.nz](http://www.standards.co.nz) and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

---

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

---

**RECONFIRMATION**

**OF**

**AS/NZS 8124.9:2008**

**Safety of toys**

**Part 9: Organic chemical compounds—Requirements**

---

**RECONFIRMATION NOTICE**

Technical Committee CS-018 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 24 January 2018.

Approved for reconfirmation in New Zealand on behalf of the New Zealand Standards Approval Board on 26 June 2018.

The following are represented on Technical Committee CS-018:

Australian Chamber of Commerce and Industry

Australian Toy Association

CHOICE

Consumer Affairs Victoria

Consumers Federation of Australia

Kidsafe

Ministry of Business, Innovation and Employment (NZ)

National Acoustic Laboratories

National Retail Association

New Zealand Toy Distributors Association

NSW Fair Trading

Office of Fair Trading (QLD)

Queensland Health

Standards New Zealand

The Sydney Children's Hospital Network Westmead

Australian/New Zealand Standard<sup>™</sup>

**Safety of toys**

**Part 9: Organic chemical compounds—  
Requirements**

First published as AS/NZS 8124.9:2008.

**COPYRIGHT**

© Standards Australia/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Jointly published by Standards Australia, GPO Box 476, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 8629 4

## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee CS-015, Safety of Children's Toys.

The objective of this Standard is to specify requirements for the migration or content of certain hazardous organic chemical compounds from or in certain toys and materials.

This Standard is identical with, and has been reproduced from EN 71-9:2005, *Safety of toys—Part 9: Organic chemical compounds—Requirements*.

As this Standard is reproduced from an International Standard, the following applies:

- (a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- (b) In the source text 'Part 9 of the document EN 71' should read 'Australian Standard AS/NZS 8124.10'.
- (c) A full point should be substituted for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

<i>Reference to European Standard</i>	<i>Australian/New Zealand Standard</i>
EN	AS/NZS ISO
71 Safety of toys	8124 Safety of toys
71-1 Part 1: Mechanical and physical properties	8124.1 Part 1: Safety aspects related to mechanical and physical properties (ISO 8124-1:2000, MOD)
71-5 Part 5: Chemical toys (sets) other than experimental sets	AS/NZS 8124.5 Part 5: Chemical toys (sets) other than experimental sets
71-10 Part 10: Organic chemical compounds—Sample preparation and extraction	AS/NZS 8124.10 Part 10: Organic chemical compounds—Sample preparation and extraction
71-11 Part 11: Organic chemical compounds—Methods of analysis	AS/NZS 8124.11 Part 11: Organic chemical compounds—Methods of analysis

Other European Standards referenced in the source document have not been adopted as Australian Standards.

The term 'informative' has been used in this Standard to define the application of the annex only for information and guidance.

## CONTENTS

	<i>Page</i>
1 SCOPE.....	1
2 NORMATIVE REFERENCES.....	1
3 TERMS AND DEFINITIONS.....	1
4 REQUIREMENTS.....	2
4.1 Limits (see A.4).....	2
4.2 Liquids in toys (see A.5).....	2
4.3 Formaldehyde (see A.6).....	3
4.4 Methods of analysis (A.7).....	3
 Annex A (Informative) Rationale.....	 8
A.1 General.....	8
A.2 Accessible liquid (see 3.2).....	8
A.3 Polymeric (see 3.6).....	8
A.4 Limits (see 4.1).....	8
A.5 Liquids in toys (see 4.2).....	9
A.6 Formaldehyde (see 4.3).....	9
A.7 Methods of analysis (see 4.4).....	9
A.8 Colourants and primary aromatic amines (see Table 1, Table 2B and Table 2C).....	9
A.9 Applicable limit tables (see Table 1).....	10
A.10 Limit tables (see Tables 2 A to 2 I).....	10
A.11 Toys containing cosmetic components.....	11
Annex B (Informative) Conformity assessment.....	12
Annex ZA (Informative) Clauses of this European Standard addressing essential requirements of other provisions of EU Directives.....	12
Bibliography.....	13

**Tables of 4.4**

Table 1–Applicable limit tables
Table 2 A–Flame retardants
Table 2 B–Colourants
Table 2 C–Primary aromatic amines
Table 2 D–Monomers (migration)
Table 2 E–Solvents (migration)
Table 2 F–Solvents (inhalation)
Table 2 G–a) and b)–Wood preservatives
Table 2 H–Preservatives (other than wood preservatives)
Table 2 I–Plasticisers (migration)

## STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

## Australian/New Zealand Standard

**Safety of toys**  
**Part 9: Organic chemical compounds—Requirements**
**1 Scope**

This Part 9 of the document EN 71 for safety of toys specifies requirements for the migration or content of certain hazardous organic chemical compounds from/in certain toys and toy materials (see Table 1) by the following exposure routes:

- mouthing
- ingestion
- skin contact
- eye contact
- inhalation

when used as intended or in a foreseeable way, bearing in mind the normal behaviour of children and the function and design of the toy.

This document does not contain requirements for chemical toys, experimental sets or finger-paints, which are addressed by other parts of EN 71.

Packaging materials used with toys are not within the scope of the document unless they form part of the toy or have intended play value.

**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 71-1:1998, *Safety of toys - Part 1: Mechanical and physical properties*

EN 71-5, *Safety of toys - Part 5: Chemical toys (sets) other than experimental sets*

prEN 71-10:, *Safety of toys - Organic chemical compounds - Sample preparation and extraction*

prEN 71-11, *Safety of toys - Organic chemical compounds - Methods of analysis*

EN 645, *Paper and board intended to come into contact with foodstuffs - Preparation of a cold water extract*

EN 717-3, *Wood based panels - Determination of formaldehyde release - Part 3: Formaldehyde release by the flask method*

EN 1541, *Paper and board intended to come into contact with foodstuffs - Determination of formaldehyde in an aqueous extract*

EN ISO 787-9, *General methods of test for pigments and extenders - Part 9: Determination of pH value of aqueous suspension (ISO 787-9:1981)*

EN ISO 14184-1, *Textiles - Determination of formaldehyde - Part 1: Free and hydrolysed formaldehyde (water extraction method) (ISO 14184-1:1998)*

**3 Terms and definitions**

For the purposes of this document, the following terms and definitions apply.