

AS 8124.7—2003

EN 71-7:2002

Reconfirmed 2013

AS 8124.7

Australian Standard™

Safety of toys

**Part 7: Finger paints—Requirements
and test methods**



Standards Australia



Documents

Document Sharing Hub

This Australian Standard was prepared by Committee CS-018, Safety of Children's Toys. It was approved on behalf of the Council of Standards Australia on 5 May 2003 and published on 26 June 2003.

The following are represented on Committee CS-018:

- Australian Chamber of Commerce and Industry
- Australian Competition and Consumer Commission
- Australian Consumers Association
- Australian Hearing
- Australian Retailers Association
- Commerce Commission, New Zealand
- Department of Fair Trading, NSW
- Kidsafe
- Ministry of Health, New Zealand
- New Children's Hospital, Westmead
- New Zealand Toy Distributors Association
- Office of Consumer and Business Affairs, South Australia
- Office of Consumer Affairs, Tasmania
- Office of Fair Trading and Business Affairs (Victoria)
- Pigment Ecological & Toxicological Technical Committee of Australia
- Plastics and Chemicals Industries Association
- Queensland Health
- The Treasury, Consumer Affairs Division

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 Standards may also be withdrawn.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 Standards can be found by visiting the Standards Australia web site at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Global Standard*, has a full listing of revisions and amendments published each month.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.com.au, or write to the Chief Executive, Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001.

This Standard was issued in draft form for comment as DR 03125.

STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 8124.7—2003

Safety of toys

Part 7: Finger paints—Requirements and test methods

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 27 September 2013.

The following are represented on Technical Committee CS-018:

Australian Chamber of Commerce and Industry
Australian Competition and Consumer Commission
Australian Toy Association
CHOICE
Consumer Affairs Victoria
Consumers Federation of Australia
Kidsafe
Ministry of Consumer Affairs New Zealand
National Acoustic Laboratories
National Retail Association
New Zealand Toy Distributors Association
NSW Office of Fair Trading
Pigment Ecological and Toxicological Technical Committee
Queensland Health
SafeKids New Zealand
The Children's Hospital at Westmead

NOTES

Australian Standard™

Safety of toys

Part 7: Finger paints—Requirements and test methods

First published as AS 8124.7—2003.

COPYRIGHT

© Standards Australia International

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.

Published by Standards Australia International Ltd
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 5311 6

PREFACE

This Standard was prepared by the Australian members of Joint Standards Australian/New Zealand Standards Committee CS-018, Safety of children's toys. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard. The Standard is identical with and has been reproduced from EN 71-7:2002, *Safety of toys, Part 7: Finger paints—Requirements and test methods*.

The objective of this Standard is to specify requirements for the substances and materials used in finger paints and applies to finger paints only. Additional requirements are specified for markings, labelling and containers.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the annex to which they apply. A 'normative' annex is an integral part of a Standard, whereas an 'informative' annex is only for information and guidance.

As this Standard is reproduced from an international publication, the following applies.

- (a) Its number appears on the cover and title page while the International Standard number appears only on the cover.
- (b) In the source text, 'this part of EN 71' should read 'this Australian Standard'.
- (c) A full point substitutes for a comma when referring to a decimal marker.

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

<i>Reference to International Standard or other publication</i>		<i>Australian/New Zealand Standard</i>	
EN		AS/NZS	ISO
71	Safety of toys	8124	Safety of toys
71-3	Part 3: Migration of certain elements	8124.3	Part 3: Migration of certain elements
13690	Fruit and vegetable juices— Determination of the ethanol content of fruit juices—Method using gas chromatography	—	
EN ISO			
787	General methods of test for pigments and extenders	—	
787-9	Part 9: Determination of pH value of aqueous suspension	—	

CONTENTS

Introduction	1
1 Scope	1
2 Normative references	1
3 Terms and definitions.....	2
4 Requirements	2
4.1 General	2
4.2 Colourants	3
4.3 Preservatives.....	3
4.4 Limits for the migration of certain elements.....	3
4.5 Limits for primary aromatic amines	3
4.6 Taste and smell	5
4.7 pH-value	5
4.8 Binding agents, extenders, humectants and surfactants.....	5
5 Test methods.....	5
5.1 General.....	5
5.2 Colourants	5
5.3 Preservatives.....	5
5.4 Migration of certain elements	5
5.5 Primary aromatic amines	5
5.6 Ethanol	6
5.7 pH-value	6
6 Product information.....	6
6.1 General	6
6.2 Marking	6
6.2.1 Manufacturer's identification.....	6
6.2.2 Labelling phrases	6
7 Containers	6
Annex A (normative) List of colourants allowed for use in finger paints.....	7
Annex B (normative) List of preservatives allowed for use in finger paints.....	11
Annex C (informative) Ingredients used in the manufacture of finger paints.....	14
Annex D (normative) Method for the detection of certain azo colourants and determination of primary aromatic amines.....	16
Annex E (informative) Rationale	22
Annex ZA (informative) Clauses of this European Standard addressing essential requirements or other provisions of EU Directives	23
Bibliography	24

NOTES

AUSTRALIAN STANDARD

Safety of toys

Part 7:

Finger paints—Requirements and test methods

Introduction

It is recognised that finger paints when compared to other toy products present different risks: the ingestion of paint material and the possibility for prolonged skin contact. Therefore, the safety limitations expressed in other parts of EN 71 are not wholly appropriate.

In order to accommodate this risk and to reduce the risks associated with potential ingestion of paint, this part of this European Standard specifies the ingredients that may be used in the manufacture of finger paints, and specifies certain limitations on impurities, preservatives, migration of certain elements and other attributes.

It is intended to reduce the risks which may be presented to a child when finger paints are used as intended or in a foreseeable way, bearing in mind the normal behaviour of children.

Chemical Abstract Service Registry Number (CAS), European Inventory of Existing Chemical Substances Number (EINECS) or Colour Index Number given in the tables are provided for information purposes only.

This European Standard is intended to complete the general valid safety requirements of Directive 88/378/EEC by special requirements for finger paints, to facilitate the proof of compliance with these general specifications.

1 Scope

This part of EN 71 specifies requirements for the substances and materials used in finger paints and applies to finger paints only.

Additional requirements are specified for markings, labelling and containers.

2 Normative references

This European Standard 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 European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 71-3:1994, *Safety of toys - Part 3: Migration of certain elements*.

prEN 13690, *Fruit and vegetable juices - Determination of the ethanol content of fruit juices - Method using gas chromatography*.

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)*.

3 Terms and definitions

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

3.1

finger paints

paste and/or jelly like, coloured preparations specially designed for children, directly applicable to suitable surfaces with the fingers and hands

NOTE In addition to water, finger paints essentially consist of colourants, extenders, binders, humectants, preservatives, surfactants and embittering agent.

3.2

colourant

colouring chemical compounds (dyes and pigments)

3.3

extender

substance consisting of insoluble particles used to increase volume, maximise some technical feature or influence optical qualities

3.4

humectant

substance that delays the drying process

3.5

binding agent

water soluble or miscible, non volatile component(s) that bind(s) the paint to the surface to which it has been applied

3.6

preservative

substance that prevents the growth of undesirable micro-organisms

3.7

surfactant

surface active substance

3.8

embittering agent

substance that gives the product a bitter taste

4 Requirements

4.1 General

Finger paints shall not contain dangerous substances or preparations in amounts which may harm the health of children using them.

The use of ingredients in annex A and annex B is considered to meet this general requirement.

NOTE 1 Directives 67/548/EEC and 99/45/EC refer (see Bibliography).

NOTE 2 Differing legal requirements may exist in non EU countries.

4.2 Colourants

4.2.1 The use of colourants listed in annex A is permitted. Annex A consists of colourants falling in one or more of the following categories:

- food colourants;
- colourants permitted for the use in cosmetics, without limitation in the field of application and which fulfil the requirements given there;
- other pigments (listed as substances 1 – 35) which meet the general requirements of 4.1.

4.2.2 Colourants which are not classified as carcinogenic, mutagenic, toxic to reproduction, very toxic, toxic, harmful, corrosive, irritant or sensitising, may also be used in finger paints.

NOTE Directive 67/548/EEC refers.

4.2.3 Finger paints shall not contain azo colourants that by cleavage of one or more azo groups can produce primary amines listed in Tables 3 and 4 when tested in accordance with 5.2.

4.3 Preservatives

Finger paints shall be preserved using only the preservatives listed in annex B, when tested in accordance with 5.3. The maximum concentrations specified in the column "maximum allowed concentration" of Table B.1 and the limitations and requirements specified in the column "Limitations and requirements" of Table B.1 shall be observed.

4.4 Limits for the migration of certain elements

The migration of elements from finger paints shall not exceed the limits given in Table 1 (after application of the analytical correction given in Table 2) when tested in accordance with EN 71-3 (see also 5.4).

Table 1 — Limits for the migration of certain elements from finger paints

Element	Sb	As	Ba	Cd	Cr	Pb	Hg	Se
Maximum migration in finger paint (mg/kg)	10	10	350	15	25	25	10	50

Table 2 — Analytical correction

Element	Sb	As	Ba	Cd	Cr	Pb	Hg	Se
Analytical correction (%)	60	60	30	30	30	30	50	60

4.5 Limits for primary aromatic amines

4.5.1 The single primary aromatic amines listed in Table 3 shall not be determinable when tested in accordance with 5.5.

Table 3 — Primary aromatic amines which shall not be determinable in finger paints

Primary aromatic amines	CAS number
Benzidine	CAS 92-87-5
2-Naphthylamine	CAS 91-59-8
4-Chloro-2-methyl-aniline (4-Chloro-o-toluidine)	CAS 95-69-2
4-Aminobiphenyl	CAS 92-67-1

4.5.2 With the exception of those amines listed in Table 3, finger paints shall not contain primary aromatic amines in a total amount exceeding 20 mg/kg, with no individual primary aromatic amine exceeding 10 mg/kg, when tested in accordance with 5.5. The limitation does not apply to aromatic aminocarboxylic acids or aminosulfonic acids.

Table 4 gives examples of other primary aromatic amines of concern.

Table 4 — Other primary aromatic amines of concern (examples)

Primary aromatic amine	CAS number
o-Aminoazotoluene (4-o-tolyazo-o-toluidine)	CAS 97-56-3
2-Amino-4-nitro-toluene (5-Nitro-o-toluidine)	CAS 99-55-8
4-Chloroaniline	CAS 106-47-8
2,4-Diaminoanisole	CAS 615-05-4
4,4'-Diaminodiphenylmethane (4,4'-Methylenedi-o-toluidine)	CAS 101-77-9
3,3'-Dichlorobenzidine	CAS 91-94-1
3,3'-Dimethoxybenzidine	CAS 119-90-4
3,3'-Dimethylbenzidine	CAS 119-93-7
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	CAS 838-88-0
p-Cresidine (6-Methoxy-m-toluidine)	CAS 120-71-8
2,2'-Dichloro-4,4'-methylenedianiline (4,4'-Methylene-bis-2-chloroaniline)	CAS 101-14-4
4,4'-Oxydianiline	CAS 101-80-4
4,4'-Thiodianiline	CAS 139-65-1
o-Toluidine	CAS 95-53-4
2,4-Xylidine	CAS 95-68-1
2,6-Xylidine	CAS 87-62-7
4-Amino-3-fluorophenol	CAS 399-95-1
6-Amino-2-ethoxynaphthalene	not available
2-Methoxyaniline (o-anisidine)	CAS 90-04-0
4-Aminoazobenzene	CAS 60-09-3
4-Methyl-m-phenylenediamine (Toluene-2,4-diamine)	CAS 95-80-7
2,4,5-Trimethylaniline	CAS 137-17-7