

Australian Standard™

Guide to lead paint management

**Part 2: Residential and commercial
buildings**

This Australian Standard was prepared by Committee CH/3, Paint and Related Materials. It was approved on behalf of the Council of Standards Australia on 13 February 1998 and published on 5 May 1998.

The following interests are represented on Committee CH/3:

Australasian Corrosion Association
Australian Paint Approval Scheme
Australian Paint Manufacturers Federation
Australian Retailers Association
AUSTROADS
Building Research Association of New Zealand
Institution of Professional Engineers, New Zealand
Federation of Master Painters Australia
National Association of Testing Authorities Australia
New Zealand Abrasive Blasting Association
New Zealand Manufacturers Federation
New Zealand Painting Contractors Association
Surface Coatings Association Australia
Telstra Corporation

Additional interests participating in preparation of Standard:

Department of Public Works and Services, N.S.W.
Lead Reference Centre (EPA), N.S.W.
Master Painters Association of Victoria
Master Painters Association of N.S.W.
Roads and Traffic Authority of N.S.W.
WorkCover N.S.W.

Review of Australian Standards. To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

This Standard was issued in draft form for comment as DR 97003.

Australian Standard™

Guide to lead paint management

Part 2: Residential and commercial buildings

First published as AS 4361.2—1998.

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee CH/3, Paints and Related Materials.

The objective of the Standard is to provide guidelines for the successful management of lead paints and related hazards on non-industrial structures, such as dwellings and public buildings, particularly when any paint removal is carried out.

This document may be referred to in proposed State Legislation dealing with the treatment of lead paints. However, when preparing specifications for large projects involving the removal of lead paints, the assistance of suitable experts is necessary.

The recommendations contained in a number of publications, such as *Lead alert* compiled by the Commonwealth Environment Protection Agency in conjunction with the Australian Paint Manufacturers Association and *Guidelines for the management of lead paint* published by the New Zealand Occupational Safety and Health Service and other references, have been taken into account when preparing this Standard.

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

CONTENTS

	<i>Page</i>
FOREWORD	5
SECTION 1 SCOPE AND GENERAL	
1.1. SCOPE	6
1.2. APPLICATION	6
1.3. REFERENCED DOCUMENTS	8
1.4. DEFINITIONS	8
1.5. PAINT HAZARD	11
1.6. ASSESSMENT OF RISK	11
SECTION 2 DETECTION OF LEAD IN PAINT	
2.1. GENERAL	12
2.2. LEAD LEVEL	12
2.3. CONDITION OF PAINT	12
2.4. METHODS OF DETECTION	13
2.5. INTERPRETATION OF RESULTS	13
SECTION 3 OPTIONS FOR MANAGING LEAD PAINT	
3.1. GENERAL	16
3.2. DOING NOTHING	16
3.3. LEAD PAINT STABILIZATION	16
3.4. LEAD PAINT ABATEMENT	16
3.5. OTHER REMOVAL METHODS	19
3.6. CONTAINMENT	19
SECTION 4 PROCEDURES FOR PAINT STABILIZATION	
4.1. GENERAL	20
4.2. CONTAINMENT	20
4.3. OVERPAINTING	20
4.4. ENCAPSULATION	21
SECTION 5 PROCEDURES FOR PAINT REMOVAL	
5.1. GENERAL	22
5.2. CONTAINMENT OF LEAD BEARING DUST AND DEBRIS	22
5.3. SPECIAL PRECAUTIONS FOR INTERIOR PAINTWORK	23
5.4. SPECIAL PRECAUTIONS WITH EXTERIOR PAINTWORK	23
5.5. FINAL CLEAN-UP OF LEAD DUST	24
5.6. CLEARANCE TESTING	25
SECTION 6 PROTECTION OF PERSONNEL	
6.1. GENERAL	26
6.2. EXPOSURE	26
6.3. REGULATED AREA	26
6.4. PROTECTIVE CLOTHING	27
6.5. PERSONAL HYGIENE	28
6.6. RESPONSIBLE PERSON	28
6.7. MEDICAL SURVEILLANCE	28
6.8. SIGNS	28

SECTION 7 WASTE MANAGEMENT

7.1	SCOPE OF SECTION	29
7.2	BACKGROUND INFORMATION	29
7.3	SIGNIFICANT GENERATORS	29
7.4	RESPONSIBILITIES	29
7.5	JOB SITE HANDLING AND STORAGE OF WASTE	29
7.6	WASTE SAMPLING, CLASSIFICATION AND ANALYSIS	30
7.7	HAZARDOUS WASTE DISPOSAL	31
7.8	WASTE REDUCTION	32
7.9	DISPOSAL OF NON-HAZARDOUS SOLID WASTE	32
7.10	WASTEWATER MANAGEMENT	32
7.11	DISPOSAL OF CONSUMABLE SUPPLIES	32

SECTION 8 RESPONSIBILITIES OF OWNERS AND CONTRACTORS

8.1	OWNERS RESPONSIBILITIES	33
8.2	USE OF CONTRACTORS	33
8.3	CONTRACTORS RESPONSIBILITIES	33

APPENDICES

A	STANDARD PRACTICE FOR IDENTIFICATION OF LEAD IN PAINT	34
B	STANDARD PRACTICE FOR THE DETERMINATION OF LEAD IN SOIL	39
C	STANDARD PRACTICE FOR DETERMINATION OF LEAD IN SURFACE DUST	41

FOREWORD

White lead (lead carbonate) was once the principal white pigment in paints for houses and public buildings. Its use was restricted in Queensland in 1923. In the other States, paint with lead pigment was manufactured up until the late 1960s, although in diminishing quantities from 1950 onwards. In 1969, the National Health and Medical Research Council's Uniform Paint Standard was amended to restrict lead content in domestic paint.

Many older Australian homes and buildings still contain lead paint, even though it may be covered with layers of more recent paint. It was used mainly on exterior surfaces and to a lesser extent on interior doors and architraves, especially in undercoats and primers where concentrations of up to 20% lead were commonly used. Interior walls were not commonly painted with paint containing white lead, but some colours did contain red, yellow and orange lead-chrome pigments. Although all paints manufactured for Australian dwellings from the 1970s onwards will have contained less than 1% lead, it is possible that industrial paints, having higher concentrations of lead, may have been applied to housing and commercial buildings.

Lead in any form is toxic to humans when ingested and inhaled. Repeated inhalation or ingestion of lead paint particles may produce the cumulative effects of lead poisoning (plumbism). Thus, lead paint removal methods give rise to two potential health problems, i.e. inhalation or ingestion of lead paint by the workers and public in the vicinity of the structure and the deposition of lead paint particles on nearby footpaths, streets or soil where they may be resuspended, tracked into houses or buildings where it can be inhaled or ingested. In most instances workers involved in paint management may be simply and easily protected by protective equipment, and the public may be protected by preventing access to the work site; however, lead paint deposition may be much more complex and difficult to manage depending on the size, shape and location of the building.

It is recommended that children and pregnant women should not be present in an area when renovations that will disturb lead paint are taking place. Even low blood lead levels may have detrimental effects on young children's intellectual development and may cause other health problems. Children absorb the lead mostly through ingestion, i.e. by touching contaminated dust or soil and then putting their fingers in their mouths. They absorb a much greater percentage of the lead entering their bodies than adults do. During pregnancy, essential elements such as calcium are transferred from the bones of the mother to the baby, which process may release accumulated lead. Women of child bearing years and during pregnancy, therefore, should take special care to avoid sources of lead exposure.

The concept of properly managing a building coated with lead paint by means of the decision path and much of the information detailed in this Standard, has been sourced from a number of publications on the subject. Presenting these guidelines in this format facilitates consideration of all those aspects which are critical to the successful management of lead paint. The practices and procedures detailed in this Guide may require modification to accommodate different structures, locations and legislation; nevertheless, a mechanism for the proper management of non-industrial structures coated with lead paints is documented.

Contractors should be aware that there needs to be a waste management plan in place prior to any lead paint management work (particularly paint removal) being undertaken. Waste minimization is an important aspect of any waste management plan.

STANDARDS AUSTRALIA

Australian Standard

Guide to lead paint management

Part 2: Residential and commercial buildings

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This document provides guidance for the management of lead paint in non-industrial structures such as residential, commercial and public buildings. It provides information on methods for determining whether lead is present on a building, the amount of lead present and on the selection of an appropriate management strategy. Although this Guide does not fully address requirements for the evaluation of worker health and safety, which should be in accordance with current regulatory requirements, it does provide guidelines to produce a safer working environment.

NOTES:

- 1 Industrial paint removal methods, such as abrasive blasting and water blasting which may involve high emissions, are covered by AS 4361.1.
- 2 AS 2311 should be referred to for general information on the painting of buildings.

1.2 APPLICATION This Standard is intended to assist builders, trades people, architects, and the owners or administrators of residential and commercial buildings in which lead paint is present. It may provide useful background material when preparing specifications for the management of lead paint, but should not be called up in contracts without also specifying the detail to be derived from it. Figure 1.1 provides a flow chart detailing the lead paint management options given in this Standard.

Because of possible damage to people health and the environment due to the improper management of lead paint, this Guide allows trades people associated with lead paint management work to deal with lead paint and the related hazards in a safe and responsible manner. Trades people should obtain appropriate accreditation to undertake the proposed work.

Do-it-yourself (DIY) renovators should seek the assistance of trained or qualified people to undertake lead management. If this Guide is intended to be followed without professional help, then additional information and training should be obtained before attempting any management work.

Local authority requirements, public safety and health requirements, site preparation, waste disposal and contamination control all need to be fully considered prior to the commencement of any work.