

AS 2243.6—1990

Australian Standard[®]

Safety in laboratories

Part 6: Mechanical aspects

This Australian Standard was prepared by Committee CH/26, Safety in laboratories. It was approved on behalf of the Council of Standards Australia on 4 January 1990 and published on 7 May 1990.

The following interests are represented on Committee CH/26:

Australian Chemical Industry Council
Australian Government Analytical Laboratories
Australian Institute of Petroleum
National Association of Testing Authority, Australia

Additional interests participating in preparation of Standard:

Australian Nuclear Science and Technology Organization
Commonwealth Scientific and Industrial Research Organization
Department of Agriculture and Rural Affairs, Vic.
Department of Defence
Department of Science
University of Melbourne

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which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.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.

AS 2243.6—1990

Australian Standard[®]

Safety in laboratories
Part 6: Mechanical aspects

First published as AS 2243.6—1980.
Second edition—1990

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
1 THE CRESCENT, HOMEBUSH, NSW 2140

ISBN 0 7262 6150 5

PREFACE

This Standard was prepared by the Standards Australia Committee on Safety in Laboratories under the direction of the Chemical Standards Board to supersede AS 2243.6—1980.

The revision was undertaken in keeping with the Standards Australia policy of revising Standards at least every five years. This edition has been expanded to include detailed information on the safeguarding of machinery and on the dangers from machinery.

Particular sections have also been expanded to include information on ventilation, principles of control of hazardous substances and operations, inventory of chemical substances, plasma cutting, cutting and welding of plastics materials, radiofrequency dielectric plastic welders, solvent welding of plastics, cryogenic liquids and hearing protection. In the preparation of this Standard cognizance was taken of the following documents:

- (a) Victorian Universities and Victoria Institute of Colleges, 'Code of Safety in Workshops'.
- (b) Commonwealth Scientific and Industrial Research Organization, 'Safety Handbook'
- (c) The University of Leeds, 'Safety Handbook'.
- (d) The University of New England, 'Safety Manual'.
- (e) The University of Warwick, 'Safety in Laboratories'.
- (f) Committee on Occupational Safety and Health in Commonwealth Government Employment, 'Draft Code of Practice: Laboratories (Physical and Metallurgical)'.
- (g) Handbook of Compressed Gases, Compressed Gas Association Inc, Reinhold, 2nd Edition, 1981.
- (h) AS 1219, Power presses—Safety requirements.
- (i) AS 1470, Health and safety at work—Principles and practices
- (j) AS 1473, Code of practice for the guarding and safe use of woodworking machinery
- (k) AS 1485, Safety and health in workrooms of educational establishments
- (l) AS 1893, Code of practice for the guarding and safe use of metal and paper cutting guillotines

This Standard is intended for use in conjunction with other Standards of the AS 2243 series and is applicable to all laboratory situations. Other parts of AS 2243 are as follows:

Part 1: General

Part 2: Chemical aspects

Part 3: Microbiology

Part 4: Ionizing radiations

Part 5: Non-ionizing radiations

Part 7: Electrical aspects

Part 8: Fume cupboards.

A further part of AS 2243 dealing with recirculating fume cabinets is in the course of preparation.

© 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>
1. SCOPE AND GENERAL	
1.1 SCOPE	4
1.2 REFERENCED DOCUMENTS	4
1.3 MINIMIZATION OF COMMON SAFETY HAZARDS	4
1.4 PLANNING FOR SAFETY	5
1.5 FIRE, EMERGENCY AND RESCUE PROCEDURES	5
 SECTION 2. EQUIPMENT IN GENERAL USE	
2.1 MACHINERY	6
2.2 FIXED POWER TOOLS	6
2.3 PORTABLE POWER TOOLS	9
2.4 HAND TOOLS	10
2.5 CENTRIFUGES	11
2.6 HEATING EQUIPMENT	11
2.7 ELECTRONIC APPARATUS	11
2.8 HIGH PRESSURE EQUIPMENT	12
2.9 VACUUM APPARATUS	12
2.10 TUBING AND PIPING	13
2.11 MISCELLANEOUS EQUIPMENT AND PROCESSES	13
 SECTION 3. COMPRESSED GAS CYLINDERS	
3.1 IDENTIFICATION OF GAS CYLINDERS	15
3.2 HANDLING, USE AND STORAGE	15
3.3 PRECAUTIONS FOR SPECIFIC GASES	16
 SECTION 4. HAZARDOUS SUBSTANCES AND PROCESSES	
4.1 GENERAL REQUIREMENTS	18
4.2 SOLDERING AND BRAZING	18
4.3 WELDING AND CUTTING	18
4.4 DEGREASING	19
4.5 CUTTING AND GRINDING OILS	19
4.6 GLASS WORKING	19
4.7 CRYOGENIC SUBSTANCES	19
 APPENDICES	
A LIST OF REFERENCED DOCUMENTS	21
B GUIDE TO THE CHEMICAL RESISTANCE OF GLOVE MATERIALS	23

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
-