

Australian/New Zealand Standard™

Occupational protective gloves

Part 6: Protective gloves for structural firefighting—Laboratory test methods and performance requirements



AS/NZS 2161.6:2014

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee SF-049, Firefighters PPE. It was approved on behalf of the Council of Standards Australia on 30 January 2014 and on behalf of the Council of Standards New Zealand on 21 February 2014.

This Standard was published on 4 April 2014.

The following are represented on Committee SF-049:

Association of Accredited Certification Bodies
Australasian Fire and Emergency Service Authorities Council
Australian Chamber of Commerce and Industry
Australian Industry Group
Certification Interests, Australia
Council of Textile and Fashion Industries of Australia
CSIRO Textile and Fibre Technology
Department of Defence, Australia
Footwear Manufacturers Association of Australia
New Zealand Fire Service
New Zealand Footwear Industry Association
New Zealand Leather and Shoe Research Association
New Zealand Manufacturing Interests
New Zealand Professional Firefighters Union
NSW Rural Fire Service Association
Testing Interests, Australia
United Firefighters Union of Australia
University of Otago, New Zealand
WorkCover New South Wales

Additional Interests:

AWTA
Country Fire Authority, Vic.
VicLab

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 Standards may also be withdrawn.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.saiglobal.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

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.

This Standard was issued in draft form for comment as DR2 AS/NZS 2161.6.

Australian/New Zealand Standard™

Occupational protective gloves

Part 6: Protective gloves for structural firefighting—Laboratory test methods and performance requirements

Originated in Australia as AS 2161.6(Int)—2001.
Previous edition AS 2161.6—2003.
Jointly revised and designated AS/NZS 2161.6:2014.

COPYRIGHT

© Standards Australia Limited/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, unless otherwise permitted under the Copyright Act 1968 (Australia) or the Copyright Act 1994 (New Zealand).

Jointly published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001 and by Standards New Zealand, Private Bag 2439, Wellington 6140.

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee SF-049, Firefighters—Personal Protective Equipment, to supersede (in part) AS 2161.6—2003, *Occupational protective gloves, Part 6: Protective gloves for firefighters—Laboratory test methods and performance requirements*. It is the Committee's intention to revise requirements for Type 1 gloves in a future ensemble standard for wildland firefighting ensembles (based on ISO 16073).

This Standard is based on but not equivalent to ISO 15383:2001, *Protective gloves for firefighters—Laboratory test methods and performance requirements*, published by the International Organization for Standardization (ISO). The variations to ISO 15383 in this Standard are in line with changes proposed at ISO technical committee deliberations but not yet finalized as part of the ISO 11999 series, to be titled, *PPE for firefighters—Test methods and requirements for PPE used by firefighters who are at risk of exposure to high levels of heat and/or flame while fighting fires occurring in structures*.

The objective of this revision is to remove specifications for Type 1 gloves, a change reflected in the new part title of the Standard and to introduce a single level of performance for structural firefighting gloves in place of the previous two level approach (Types 2 and 3). Type 1 gloves will continue to be able to comply with AS 2161.6—2003 until it is withdrawn.

Dexterity testing is a subject that will be considered in a future revision.

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

CONTENTS

	<i>Page</i>
1 SCOPE.....	4
2 REFERENCED DOCUMENTS	4
3 DEFINITIONS	5
4 DESIGN REQUIREMENTS.....	6
5 SAMPLING AND PRETREATMENT	8
6 PERFORMANCE REQUIREMENTS	9
7 MARKING	14
8 MANUFACTURER'S INFORMATION	15
APPENDICES	
A WHOLE GLOVE INTEGRITY TEST.....	16
B GRIP TEST.....	17
C DONNING AND DOFFING TEST	18
D GUIDELINES AND CONSIDERATIONS FOR PERFORMING A RISK ASSESSMENT	19

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard
Occupational protective gloves

**Part 6: Protective gloves for structural firefighting—Laboratory test methods
and performance requirements**

1 SCOPE

This Standard specifies test methods and minimum requirements for protective gloves to be worn during structural firefighting and associated activities where there is a risk of heat and/or flame.

This Standard provides minimum performance requirements for protective gloves designed to protect against injury in firefighting operations.

This Standard covers the general glove design, the minimum performance levels of the materials used and the methods of test for determining these performance levels.

This Standard does not cover special gloves for use in other high risk situations such as specialized firefighting. It does not cover protection for the head, torso, arms, legs and feet or protection of the hands against other hazards, e.g. chemical, biological, radiation and electrical hazards, except for limited, accidental exposure to fireground chemicals and contaminated blood or body fluids. These aspects may be dealt with in other standards.

Selection of the appropriate system of clothing, including gloves, is dependent on carrying out an effective risk assessment that identifies the hazards to be faced, evaluates the likelihood of those hazards and provides the means of reducing or eliminating these hazards.

NOTE: Guidelines for conducting a risk assessment and some factors for consideration are included in Appendix D.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

- | | |
|-------------|--|
| 2001 | Methods of test for textiles |
| 2001.2.25.4 | Part 2.25.4: Physical tests—Determination of the abrasion resistance of fabrics by the Martindale method—Assessment of appearance change |
| 2001.5.4 | Part 5.4: Dimensional change—Domestic washing and drying procedures for textile testing (ISO 6330:2000, MOD) |

AS/NZS

- | | |
|--------|--|
| 2161 | Occupational protective gloves |
| 2161.1 | Part 1: Selection use and maintenance |
| 2161.3 | Part 3: Protective gloves against mechanical risks |
| 4502 | Methods for evaluating clothing for protection against heat and fire |
| 4502.2 | Part 2: Evaluation of heat transmission of materials and material assemblies when exposed to flame |

AS/NZS ISO

- | | |
|------|--|
| 6530 | Protective clothing—Protection against liquid chemicals—Test method for resistance materials to penetration by liquids |
|------|--|