

Australian Standard<sup>®</sup>

**Slip resistance measurement of existing  
pedestrian surfaces**



This Australian Standard® was prepared by Committee BD-094, Slip Resistance of Flooring Surfaces. It was approved on behalf of the Council of Standards Australia on 16 May 2013. This Standard was published on 28 June 2013.

---

The following are represented on Committee BD-094:

- Accord Australasia
  - Association of Consultants in Access Australia
  - Australian Building Codes Board
  - Australian Institute for Non-Destructive Testing
  - Australian Institute of Architects
  - Australian Resilient Floorcovering Association
  - Australian Stone Advisory Association
  - Australian Tile Council
  - Building Service Contractors Association of Australia
  - Cement Concrete and Aggregates Australia
  - Concrete Masonry Association of Australia
  - CSIRO Manufacturing and Materials Technology
  - Engineers Australia
  - Housing Industry Association
  - Human Factors and Ergonomics Society of Australia
  - Insurance Council of Australia
  - Local Government and Shires Associations of New South Wales
  - Property Council of Australia
  - Safety Institute of Australia
  - Think Brick Australia
- 

This Standard was issued in draft form for comment as DR AS 4663.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

---

#### **Keeping Standards up-to-date**

Australian Standards® are living documents that 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Standards may also be withdrawn.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 that may have been published since the Standard was published.

Detailed information about Australian Standards, drafts, amendments and new projects can be found by visiting [www.standards.org.au](http://www.standards.org.au)

Standards Australia welcomes suggestions for improvements, and encourages readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at [mail@standards.org.au](mailto:mail@standards.org.au), or write to Standards Australia, GPO Box 476, Sydney, NSW 2001.

---

Australian Standard<sup>®</sup>

## Slip resistance measurement of existing pedestrian surfaces

First published as part of AS/NZS 3661.1:1993.  
AS/NZS 3661:1993 jointly revised and redesignated in part, as AS/NZS 4663:2002.  
Previous edition 2004.  
AS/NZS 4663:2004 revised and redesignated AS 4663—2013.

### **COPYRIGHT**

© Standards Australia Limited

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.

Published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001, Australia

ISBN 978 1 74342 521 3

## PREFACE

This Standard was prepared by the Standards Australia Committee BD-094, Slip Resistance of Flooring Surfaces, to supersede AS/NZS 4663:2004, *Slip resistance measurement of existing pedestrian surfaces*.

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 objective of this Standard is to provide users, maintenance organizations and facility managers with standardized methods of testing existing in situ pedestrian surface materials for determination of their slip resistance.

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

Statements expressed in mandatory terms in notes to tables are deemed to be requirements of this Standard.

## CONTENTS

	<i>Page</i>
FOREWORD.....	4
1 SCOPE.....	5
2 APPLICATION.....	5
3 NORMATIVE REFERENCES .....	6
4 DEFINITIONS.....	6
5 TEST METHODS .....	7
6 INTERPRETATION OF TEST RESULTS .....	8
APPENDICES	
A WET PENDULUM TEST METHOD .....	9
B DRY FLOOR FRICTION TEST METHOD .....	19
C EXAMPLES OF DETERMINING SLOPE DESIGN VALUE (SDV) AND SLOPE CORRECTION VALUE (SCV) .....	23
BIBLIOGRAPHY.....	37

## FOREWORD

Wet testing is carried out using two types of rubber materials, Slider 55 (also known as TRL rubber), which has been traditionally used for testing outdoor surfaces and Slider 96 (also known as Four S rubber) which was specifically developed to replace the TRL rubber for testing smoother indoor surfaces, as it provides greater discrimination between such internal surfaces.

The use of these rubbers on the pendulum enables universal comparison of test results. The testing does not take into account the performance of different footwear sole materials or profiles. The slip resistance of these materials can vary widely, even within generic groups of polymers such as PVC or polyurethane. The slip resistance of footwear is also a function of the soling material, the tread, effects of ageing, degradation and wear, as well as design and construction parameters. While it may be possible to form sliders using other soling materials, it is outside the scope of this Standard.

This revision incorporates an additional requirement for preparing rubber test feet when testing smooth surfaces. Research has shown that when a slider 96 (Four S rubber) is only prepared with P400 abrasive paper, the pendulum result on smoother surfaces may be more representative of the rubber roughness than the slip resistance of the pedestrian surface that is being tested. A more representative reading that also enables a greater level of discrimination between smoother surfaces may be obtained by preparing the slider on a 3 µm lapping film as detailed in the Standard. A slider prepared in this way is a closer representation of a worn and polished heel and may best reflect the lower slip resistance attributable to the contact of two smoother surfaces under water-wet conditions.

Adoption of the lapping film preparation to condition the slider enables more sensitive differentiation between potentially slippery surfaces than was previously the case. It will cause some pedestrian surfaces to provide a lower result than would have been obtained if tested according to AS/NZS 4663:2004.

HB 197, *An introductory guide to the slip resistance of pedestrian surface materials*, provides guidance for specifying pedestrian surface materials for various locations based on minimum wet slip resistance classifications that are obtained when testing to AS/NZS 4586:2004, *Slip resistance classification of new pedestrian surface materials*. HB 197 recognizes that slip resistance test methods have inherent limitations.

A new pedestrian surface is considered to become an existing pedestrian surface once it has been installed and made available for pedestrian traffic, other than movements specifically for purposes of formal testing to determine compliance with AS 4586. New pedestrian surfaces are to be tested in accordance with AS 4586.

This is a free preview. Purchase the entire publication at the link below:

**AS 4663 : 2013 : EN : COMBINED PDF**

- 
- ⊙ Looking for additional Standards? Visit SAI Global Infostore
  - ⊙ Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
- 

Need to speak with a Customer Service Representative - Contact Us