AS ISO 354-2006 ISO 354:2003

Australian Standard[™]

Acoustics—Measurement of sound absorption in a reverberation room



This Australian Standard was prepared by Committee AV-004, Acoustics Architectural. It was approved on behalf of the Council of Standards Australia on 12 December 2005.

This Standard was published on 6 January 2006.

The following are represented on Committee AV-004:

Association of Australian Acoustical Consultants Australian Acoustical Society Australian Building Codes Board Australian Chamber of Commerce and Industry Australian Defence Force Academy Australian Hearing National Measurement Institute RMIT University The Royal Australian Institute of Architects University of Sydney

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 Standards may also be withdrawn.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 Web Shop 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.

Australian StandardsTM and other products and services developed by Standards Australia are published and distributed under contract by SAI Global, which operates the Standards Web Shop.

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.org.au, or write to the Chief Executive, Standards Australia, GPO Box 476, Sydney, NSW 2001.

This Standard was issued in draft form for comment as DR 05282.

Australian Standard[™]

Acoustics—Measurement of sound absorption in a reverberation room

Originated as AS 1045—1971. Previous edition AS 1045—1988. Revised and redesignated as AS ISO 354—2006.

COPYRIGHT

© Standards Australia

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, GPO Box 476, Sydney, NSW 2001, Australia ISBN 0 7337 7081 9

ii

PREFACE

This Standard was prepared by the Joint Standards Australian/Standards New Zealand Committee AV-004, Acoustics Architectural to supersede AS 1045—1988, *Acoustics—Measurement of sound absorption in a reverberation room.* 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.

This Standard is identical to ISO 354:2003, Acoustics—Measurement of sound absorption in a reverberation room.

The objective of this Standard is to specify a method of measuring the sound absorption coefficient of acoustical materials used as wall or ceiling treatments, or the equivalent sound absorption area of objects, such as furniture, persons or space absorbers, in a reverberation room.

As this Standard is reproduced from an international standard, the following applies:

- (a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- (b) In the source test 'this International Standard' should read 'this Australian Standard'.
- (c) A full point substitutes for a comma when referring to a decimal marker.
- (d) For this Standard, the sound source should be chosen for minimum directionality.

For Australia only, this Standard provides for the use of the following Australian Standards in place of particular International Standards referenced herein:

Reference to International Standard*		Australian or Australian/New Zealand Standard	
IEC		AS/NZS	
61260	Electroacoustics-Octave-band and	4476	Acoustics—Octave-band and fractional-
	fractional-octave-band filters		octave-band filters
ISO		AS	
266	Acoustics—Preferred frequencies	2533	Acoustics—Preferred frequencies and
			band centre frequencies

The term 'normative' has been used in this Standard to define the application of the annex to which it applies. A 'normative' annex is an integral part of a Standard.

^{*} Only referenced International Standards that have been adopted an Australian Standard have been listed.

iii

CONTENTS

Page

Introdu	iction	iv		
1	Scope	. 1		
2	Normative references	. 1		
3	Terms and definitions	. 1		
4	Principle	3		
5	Frequency range	3		
6 6.1 6.2 6.3	Test arrangement Reverberation room and diffusion of sound field Test specimens Temperature and relative humidity	. 3 . 4		
7 7.1 7.2 7.3 7.4	Measurement of reverberation time General Interrupted noise method Integrated impulse response method Evaluation of reverberation times based on decay curves	5 6 7		
8 8.1 8.2 8.3	Expression of results Method of calculation Precision Presentation of results	. 9 11		
9	Test report	13		
Annex	A (normative) Diffusivity of the sound field in the reverberation room	14		
Annex	Annex B (normative) Test specimen mountings for sound absorption tests			
Bibliog	Bibliography			



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

Product Page

S Looking for additional Standards? Visit Intertek Inform Infostore

> Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation