This is a free page sample. Access the full version online.

AS 60695.7.3—2006
IEC/TR 60695-7-3, Ed 2.0 (2004)

AS 60695.7.3—2006

Australian Standard™

Fire hazard testing

Part 7.3: Toxicity of fire effluent—Use and interpretation of test results

STANDARDS
Australia

This is a free page sample. Access the full version online.

This Australian Standard was prepared by Committee EL-053, Fire hazard testing—Electrotechnical equipment. It was approved on behalf of the Council of Standards Australia on 23 May 2006.
This Standard was published on 23 June 2006.

The following are represented on Committee EL-053:

Australian Electrical and Electronic Manufacturers Association
Australian Information Industry Association
Electrical Compliance Testing Association
Electrical Regulatory Authorities Council
Energy Networks Association

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 Standards may also be withdrawn.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 Standards™ 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 06187.

This is a free page sample. Access the full version online.

Australian Standard™

Fire hazard testing

Part 7.3: Toxicity of fire effluent—Use and interpretation of test results

First published as AS 60695.7.3—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 7551 9

This is a free page sample. Access the full version online.

PREFACE

This Standard was prepared by the Standards Australia Committee EL-053, Fire hazard testing—Electrotechnical equipment.

The objective of this series of standards is to provide the electrotechnology industry and standards writing committees with a series of standards which give guidance on assessing the fire hazard of electrotechnical products.

This Standard is identical with, and has been reproduced from IEC/TR 60695-7-3, Ed 2.0 (2004), *Fire hazard testing - Part 7-3: Toxicity of fire effluent - Use and interpretation of test results.*

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 text 'IEC/TS 60695-7-3' should read 'AS 60695.7.3'.

(c) A full point should be substituted for a comma when referring to a decimal marker.

(d) Any French text on figures should be ignored.

The terms 'normative' and 'informative' are used to define the application of the annex to which they apply. A normative annex is an integral part of a standard, whereas an informative annex is only for information and guidance.

Any International Standard referenced should be replaced by an equivalent Australian Standard where one is available. The availability of equivalent Australian Standards can be determined either from the Standards Web Shop at www.standards.com.au or from the annual printed catalogue of Australian Standards.

This is a free page sample. Access the full version online.

CONTENTS

Page

INTRODUCTION v

1 Scope 1
2 Normative references 1
3 Terms and definitions 1
4 Principles of toxic hazard assessment 6
4.1 Introduction 6
4.2 Exposure dose 6
4.3 Determination of concentration-time data 7
4.4 Asphyxiants and the fractional effective dose, FED 9
4.4.1 Introduction 9
4.4.2 Properties of the FED 9
4.4.3 Uses of the FED 10
4.5 Irritants and the fractional effective concentration, FEC 10
4.6 Carbon dioxide 10
4.7 Oxygen vitiation 11
4.8 Heat stress 11
4.9 Effects of stratification and transport of fire atmospheres 11
5 Methods of toxic hazard assessment 11
5.1 General approach 11
5.2 Equations used to predict death 11
5.2.1 The simple toxic gas model 11
5.2.2 The N-gas model 11
5.2.3 The hyperventilatory effect of carbon dioxide 12
5.2.4 Lethal toxic potency values 12
5.2.5 The mass loss model 13
5.3 Equations used to predict incapacity 13
5.3.1 The asphyxiant gas model 13
5.3.2 The irritant gas model 14
5.3.3 The mass loss model 14
6 Toxic potency values 14
6.1 Generic values of toxic potency 14
6.2 Toxic potency values obtained from chemical analyses 15
6.3 Toxic potency values obtained from animal tests 15
7 Limitations on the interpretation of toxicity test results 15
8 Effluent components to be measured 15
8.1 Minimum reporting 15
8.2 Additional reporting 15
8.2.1 Gaseous fire effluent components 15
8.2.2 Airborne particulates 16

SAI GLOBAL

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