

Australian Standard™

---

**Methods of testing materials for  
resistance to fungal growth**

**Part 3: Resistance of cordage  
and yarns to fungal growth**

---

This Australian Standard was prepared by Committee CH/20, Resistance to Fungal Growth. It was approved on behalf of the Council of Standards Australia on 30 November 1998 and published on 5 February 1999.

---

The following interests are represented on Committee CH/20:

Australian Paint Manufacturers Federation  
Australian Wool Research and Promotion Organization  
CSIRO Forestry & Forest Products  
Department of Defence (Australia)  
Federated Tanners Association  
Plastics and Chemicals Industry Association Incorporated  
Surface Coatings Association Australia  
The Textile Institute (Southern Australia Section)

---

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which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.*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

---

*This Standard was issued in draft form for comment as DR 98437.*

Australian Standard™

---

**Methods of testing materials for  
resistance to fungal growth**

**Part 3: Resistance of cordage  
and yarns to fungal growth**

---

Originated as AS 1157.3—1978.  
Second edition 1999.

## PREFACE

This Standard was prepared by the Standards Australia Committee CH/20, Resistance to Fungal Growth to supersede AS 1157.3—1978.

This is Part 3 of a series of methods for assessing the resistance to fungal growth of a range of commonly used materials. The other Standards in the series are as follows:

### AS

1157	Methods of testing materials for resistance to fungal growth
1157.1	Part 1: General principles of testing
1157.2	Part 2: Resistance of textiles to fungal growth
1157.4	Part 4: Resistance of coated fabrics and electronic boards to fungal growth
1157.5	Part 5: Resistance of timber to surface fungal growth
1157.6	Part 6: Resistance of leather and wet 'blue' hides to fungal growth
1157.7	Part 7: Resistance of paper and paper products to surface fungal growth
1157.10	Part 10: Resistance of dried or cured adhesives and glues to fungal growth
1157.11	Part 11: Resistance of rubbers and plastics to surface fungal growth

---

## CONTENTS

	<i>Page</i>
1 SCOPE .....	3
2 REFERENCED DOCUMENTS .....	3
3 PRINCIPLE.....	3
4 DEFINITION .....	3
5 APPARATUS, TEST MEDIUM AND TEST ORGANISM .....	3
6 TEST SPECIMENS.....	4
7 PROCEDURE .....	5
8 ASSESSMENT.....	6
9 REPORT.....	6

© 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.

# STANDARDS AUSTRALIA

## Australian Standard

### Methods of testing materials for resistance to fungal growth

#### Part 3: Resistance of cordage and yarns to fungal growth

## 1 SCOPE

This Method describes the procedures to be adopted for determining the resistance of yarn, cordage, twine, thread and rope to attack by cellulolytic fungi which may reduce the strength of the materials.

This Standard provides a laboratory test which is intended to provide severe, standardized assessment of fungal resistance under laboratory conditions. It does not include the testing of cordage and yarns in the field which, although possibly more severe, is much longer in duration and also more subjective.

## 2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

1157 Methods of testing materials for resistance to fungal growth

1157.1 Part 1: General principles of testing

2001 Methods of test for textiles

2001.2.7 Method 2.7 Physical tests—Determination of breaking force and extension of yarns

## 3 PRINCIPLE

The test specimens are sterilized, inoculated with a spore suspension of *Chaetomium globosum* Kunze and then incubated for 14 days. At the end of this period, the fungal growth is assessed by visual means and the breaking force determined.

## 4 DEFINITION

For the purposes of this Standard, where the term ‘cordage’ is used it shall be understood to include the terms ‘rope’, ‘twine’ or ‘thread’.

## 5 APPARATUS, TEST MEDIUM AND TEST ORGANISM

### 5.1 Apparatus

The following apparatus is required:

- (a) As specified in the following appendices of AS 1157.1:
- (i) Leaching of test specimens ..... Appendix A.
  - (ii) Preparing the test medium ..... Appendix B.
  - (iii) Sterilizing the equipment ..... Appendix C.
  - (iv) Sterilizing the specimens ..... Appendix D.
  - (v) Preparing the spore suspension ..... Appendix E.