Australian Standard™

Methods of testing materials for resistance to fungal growth

Part 11: Resistance of rubbers and plastics to surface 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)

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Part 11: Resistance of rubbers and plastics to surface fungal growth

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PREFACE

This Standard was prepared by the Standards Australia Committee CH/20, Resistance to Fungal Growth to supersede AS 1157.11—1978.

This is Part 11 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
1157.3	Part 3:	Resistance of cordage and yarns 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

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FOREWORD

The growth of fungi on rubbers and plastics may be objectionable for aesthetic reasons, because of adverse effects on physical properties or because of obnoxious odours.

Two methods of testing the resistance to surface fungal growth of rubbers and plastics and articles manufactured therefrom are described. In neither method is the effect of the fungal growth on the mechanical (physical) properties of the test specimens assessed, though this may be significant. If required by the material specification, specimens suitable for subsequent testing may be exposed to fungal attack using the method described.

STANDARDS AUSTRALIA

Australian Standard
Methods of testing materials for resistance to fungal growth

Part 11: Resistance of rubbers and plastics to surface fungal growth

SECTION 1 RESISTANCE OF RUBBERS AND PLASTICS TO SURFACE-GROWING FUNGI

1.1 SCOPE

This Section describes procedures for determining the resistance of rubbers and plastics to surface-growing fungi. The basic material may not be attacked by the fungi used, but other substances, such as plasticizers, included in the formulation to modify the properties of the rubbers and plastics, may be attacked.

This method is suitable for testing the resistance to fungal growth of most rubbers and plastics.

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 rubbers and plastics in the field which, although possibly more severe, is much longer in duration and also more subjective.

1.2 REFERENCED DOCUMENT

The following document is referred to in this Standard:

AS
1157 Methods of testing materials for resistance to fungal growth
1157.1 Part 1: General principles of testing

1.3 PRINCIPLE

The test specimens are sterilized, inoculated with a spore suspension and then incubated for 14 days. At the end of the incubation period the fungal growth on all specimens is assessed.

1.4 APPARATUS, TEST MEDIUM AND TEST ORGANISMS

1.4.1 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 test specimens ..... Appendix D.
(v) Preparing the spore suspension ..... Appendix E.