

Australian Standard[®]

Windows—Methods of test

Method 6: Ultimate strength test

1 SCOPE This Standard sets out a method for determining an aspect of the performance of windows designed for installation in all classes of buildings. The Standard addresses the ultimate load capacity of the window test sample.

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

2047 Windows in buildings

2047.1 Part 1: Specification for materials and performance

2047.2 Part 2: Code of practice—Construction, installation and maintenance

3 DEFINITIONS For the purpose of this Standard the definitions in AS 2047, Parts 1 and 2, apply.

4 PRINCIPLE A sample unit is fitted as one face of a pressure chamber, sealed at its perimeter, then subjected to positive and negative test pressures.

5 APPARATUS The following apparatus is required:

- (a) *Pressure chamber*—of a size to fit the test sample window.
- (b) *Centrifugal fan*—with controls to pressurize the test sample.
- (c) *Fluid or electronic manometer*—capable of measuring air pressure to an accuracy better than $\pm 2\%$ of test pressure.

6 PROCEDURE

6.1 Test pressure The test pressure and performance requirements shall be in accordance with AS 2047.1.

6.2 Test procedure The test sample shall be subjected to a smoothly increasing differential pressure up to the test pressure determined in Clause 6.1, conducted individually in both positive and negative directions. The time taken to reach the structural test pressure shall be approximately 1 min. Test pressure shall be maintained on the test sample for a period of 10 s.

If a sponsor requires incremental tests, each increment shall represent a separate test requiring 10 s duration.

6.3 Inspection At the conclusion of the test at each loading, the test sample shall be inspected and any signs of deformity or damage or collapse of the test sample noted and recorded. 'Collapse' shall be as defined in AS 2047.1.

NOTES:

- 1 Sufficient precautions should be taken during the performance of ultimate testing to ensure the safety of the operating personnel.
- 2 Should glass breakage occur during testing, the window may be reglazed once and tested again. If breakage occurs a second time, this is a failure.

7 TEST REPORT The following information shall be reported:

- (a) Reference to this Standard, i.e. AS 4420.6.
- (b) The name of the laboratory, authority or organization that conducted the test.
- (c) The name of the client, sample manufacturer and installer, as appropriate.
- (d) An identification and detailed description of the test sample.
- (e) Dated drawings of the test sample showing modifications, if any.
- (f) Details of collapse, if any, during the test.
- (g) Date on which the test was carried out.
- (h) Statement of compliance of the test sample with AS 2047.1.
- (i) Statement of ultimate test pressure achieved.

This Australian Standard was prepared by Committee BD/21, Windows. It was approved on behalf of the Council of Standards Australia on 15 May 1996 and published on 5 August 1996.

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.

Originated in part as AS 2047 — 1977.
 Previous editions AS 2047 — 1977 and AS 2146 — 1978.
 Revised, amalgamated and redesignated in part as AS 4420.6 — 1996.

This Standard was issued in draft form for comment as DR 95159.

© 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.