

Australian Standard<sup>®</sup>

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**ADHESIVES FOR FLOOR AND  
WALL APPLICATIONS—  
RESILIENT VINYL, LINOLEUM  
AND RUBBER SHEET AND  
TILES—INTERIOR AND  
EXTERIOR USE**

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This Australian Standard was prepared by Committee CH/17, Adhesives. It was approved on behalf of the Council of the Standards Association of Australia on 31 March 1988 and published on 15 July 1988.

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The following interests are represented on Committee CH/17:

Adhesives & Sealants Manufacturers Association of Australia  
Australian Chemical Industry Council  
Australian Council of Furniture Manufacturers  
Australian Institute of Packaging  
Confederation of Australian Industry  
CSIRO, Division of Building Research  
Department of Defence  
Footwear Manufacturers Association of Australia  
Plywood Association of Australia Ltd  
Printing and Allied Trades Employers Federation of Australia  
Railways of Australia Committee  
Society of Automotive Engineers—Australasia  
Telecom Australia

Additional interests participating in preparation of Standard:

Australian Particleboard Manufacturers Association  
NSW Public Works Department  
Floor Covering Association

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## PREFACE

This Standard was prepared by a special working group, responsible to the SAA Committee dealing with Adhesives, in response to a request by another SAA Committee which was concerned with the quality of adhesives being used in the installation of resilient sheet and tile for floor and wall applications.

This Standard deals with adhesives for sheet and tile applications where vinyl, linoleum and rubber are used for interior and exterior floor and wall coverings.

Adhesives for synthetic sporting surfaces, cork tiles and sheet are outside the scope of this Standard. These adhesives will be dealt with in other Standards.

This Standard should be used in conjunction with AS 1884 which is concerned with the compatibility of the bonding of the floor covering to the underlay or sub-floor.

The following Standards were taken into account in the preparation of this Standard:

## AS

1884 *Floor coverings—Resilient sheet and tiles—Laying and maintenance practices*

2358 *Adhesives for ceramic wall tiles and mosaics*

## BS

5350 *Methods of test for adhesives*

## DIN

16860 *Adhesives for floor coverings*

53277 *Testing of adhesives for floor coverings: Testing of transverse resistance of bondings*

53278 *Testing of adhesives for floor coverings: Testing of peel resistance of bondings*

53279 *Testing of adhesives for floor coverings: Testing of the influence on the dimensional stability*

The test methods contained in the appendices represent the major criteria in judging the suitability of an adhesive for a particular floor covering. It should be emphasized that it is necessary to carry out checks on different combinations of adhesives, floor coverings, and substrates, and it cannot be assumed that because a particular adhesive behaves satisfactorily with one or more types that it will be suitable for all types.

The method of test for dimensional change (creep) for vinyl tiles has been included as Appendix E for use where any question of long term interaction between an adhesive and the floor covering may arise.

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## STANDARDS ASSOCIATION OF AUSTRALIA

## Australian Standard

ADHESIVES FOR FLOOR AND WALL APPLICATIONS — RESILIENT VINYL,  
LINOLEUM AND RUBBER SHEET AND TILES — INTERIOR AND EXTERIOR USE

**1 SCOPE.** This Standard specifies performance requirements for organic-based adhesives for use in the installation of resilient sheet and tile for floor and wall applications, for interior and exterior use. It evaluates the suitability of an adhesive to bond such coverings to a floor or wall.

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

AS	
1309	Glossary of terms used in the adhesives industry
1889	PVC floor tiles Part 1: Semi-rigid (AS 1889.1) Part 2: Flexible (AS 1889.2)
2193	Methods for calibration and grading of force-measuring systems of testing machines
BS	
6431	Ceramic floor and wall tiles Part 11: Method for determination of water absorption

**3 DEFINITIONS.** For the purposes of this Standard the terms in AS 1309 and the definitions below apply.

**3.1 Organic-based adhesive**—an adhesive in which the principal bonding component is an organic material, and is supplied as either a one-part or a multi-component mix.

**3.2 Test specimen**—specimen of resilient floor or wall covering.

**4 CLASSIFICATION.** For the purposes of this Standard, the adhesives shall be classified as follows:

(a) *One-way wet stick adhesives.*

*Type I.* Organic-based adhesives for installation of resilient sheet and tile for floor and wall applications in interior areas.

*Type II.* Organic-based adhesives for installation of resilient sheet and tile for floor and wall applications in exterior areas or where there is prolonged exposure to water.

(b) *Contact adhesives.* Adhesives for specific detailing and PVC skirting applications.

(c) *Pressure sensitive adhesives.* Adhesives which remain permanently tacky for installation of resilient tile and sheet in interior floor applications.

**5 PRODUCT INFORMATION.** The supplier shall provide information on—

- type and condition of substrate including need for priming;
- mixing;
- bonding procedures including open assembly time (working time after spreading), method of spreading including type of trowel required, as

well as time during which adjustment may be made;

- cleaning instructions;
- time for trafficking; and
- storage conditions.

An indication as to which specific applications the adhesive is suitable for shall be stated, e.g. pressure sensitive adhesives for interior vinyl tile applications.

For industrial applications, the information may be on the pack or supplied separately. For retail applications, the information shall be included with, or printed on each retail pack.

**6 APPEARANCE AND VISCOSITY.** The adhesive shall be a homogeneous material free from lumps. The viscosity of the material at the time of application shall allow application of the adhesive by the method recommended by the manufacturer.

**7 SHELF LIFE.** When stored under the conditions recommended by the manufacturer in an unopened container as supplied by the manufacturer, the adhesive shall comply with this Standard for use for at least 1 year from the date of manufacture, unless otherwise specified.

**8 TEST CONDITIONS.** All tests shall be conducted at a temperature of  $23 \pm 2^\circ\text{C}$  and  $50 \pm 5$  percent relative humidity.

## 9 REQUIREMENTS.

**9.1 Bond strength in shear.** The minimum bond strength in shear for Type I, Type II, contact adhesives and pressure sensitive adhesives for vinyl, linoleum and rubber applications for domestic and commercial use, shall be in accordance with Table 1.

**9.2 Dimensional change (creep) of flexible vinyl tiles.** When tested in accordance with Appendix E, the change in dimensions shall be not greater than 0.25 percent.

NOTE: This test is performed at the request of the purchaser of the adhesive.

**9.3 Open assembly time.** The open assembly time shall be as specified by the adhesive manufacturer.

NOTE: Open assembly time, unlike adhesive performance, is related to the effects of substrate porosity, humidity, temperature and ventilation.

**9.4 Compatibility.** The adhesive shall be compatible with the floor covering and any materials normally used as sub-floor or underlay, unless otherwise stated. If in doubt, the manufacturers of the underlay or floor covering should be contacted.

**9.5 Staining.** When tested in accordance with Appendix F, there shall be no discolouration of the wear layer.

NOTE: This test is mainly applicable to light coloured sheeting and tiles.