

Australian Standard[®]

SAA PACKAGING CODE
Part 14—ADHESIVES

This Australian standard was prepared by Committee PK/25, Packaging Code. It was approved on behalf of the Council of the Standards Association of Australia on 17 January 1985 and published on 4 March 1985.

The following interests are represented on Committee PK/25:

- Adhesives and Sealants Manufacturers Association
 - Agricultural and Veterinary Chemicals Association of Australia
 - Australian Airline Company
 - Australian Institute of Packaging
 - Australian Timber Producers Council
 - Bureau of Steel Manufacturers of Australia
 - Canmakers Institute of Australia
 - Confederation of Australian Industry
 - Department of Defence
 - Department of Primary Industry
 - Department of Science and Technology
 - Glass Packaging Institute of Australia
 - Packaging Council of Australia
 - Plastics Institute of Australia Incorporated
 - Printing and Allied Trades Employers Federation of Australia
 - Railways of Australia Committee
 - Technical Association of the Australian and New Zealand Paper Industry (Appita)
 - Victorian Sawmillers Association
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PREFACE

This standard was prepared by the Association's Packaging Code Committee under the direction of the Packaging Standards Board, as a further part of AS 2400, SAA Packaging Code.

The aim of this standard is to assist users of adhesives in selection and their application for assembling and sealing of packages, or securing of unit loads.

The SAA Packaging Code has been divided into parts dealing with specific subjects, as follows:

<i>Part</i>	<i>Title</i>
1	Glossary of Packaging Terms*
2	Basic Principles of Packaging Practice*
3	Mechanical Aids in Package Handling*
4	Protection against Spoilage of Packages and their Contents by Micro-organisms, Insects, Mites and Rodents*
5	Metal Protection
6	Paper and Board, Wrappers and Containers
7	Wooden Containers
8	Textile Bags, Sacks and Wrappings
9	Metal Containers
	9.1 Metal Cans and Tubes*
10	Cushioning Materials
11	Cordage
12	Adhesive Closing and Sealing Tapes
13	Tensional Strapping*
14	Adhesives*
15	Glass Containers*
16	Transparent Cellulose Films, Plastics Films, Metal Foils and Flexible Laminates
17	Packaging in Plastics Containers*
18	Use of Desiccants in Packaging*
19	Packaging for Airfreight*
20	Handling of Goods in Freight Containers*
21	Packaging of Dangerous Goods
22	Closures*
23	Shrink and Stretch Wrapping*

During the preparation of the SAA Packaging Code, account is being taken of material included in BS 1133, Packaging Code, and the assistance obtained from this source is acknowledged.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
SAA PACKAGING CODE

PART 14—ADHESIVES

1 SCOPE. This standard provides guidance on the adhesives used in the manufacture of packaging materials and for assembling and sealing packages, or securing of unit loads.

2 REFERENCED AND RELATED DOCUMENTS. The following standards are referred to in this standard:

- AS 2609 Materials Used for the Packaging of Food and Beverages—
Methods for the Assessment of Odour and Taint
Part 1—Sensory Methods
Part 2—Instrumental Methods
- BS 647 Methods of Sampling and Testing Glues (Bone, Skin and Fish Glues)
- Attention is drawn to the following related standard:
- AS 1321 Methods for the Sampling and Testing of Adhesives
- AS 2222 Adhesives for Unit Loads (Palletizing Adhesives)
- AS 2370 PVAC Emulsion Adhesives for Wood
- AS 2400 SAA Packaging Code
Part 1—Glossary of Packaging Terms
- AS XXXX Adhesives for Packaging*
- AS K189 Glossary of Terms Relating to Adhesives used in the Packaging Industry
- BS 844 Methods of Sampling and Testing Vegetable Adhesives

3 TYPES. Adhesives may be divided broadly into the following groups:

- (a) Inorganic.
- (b) Vegetable—starches and dextrans—natural rosins and gums.
- (c) Protein.
- (d) Natural rubber and latex.
- (e) Synthetic rubber and latex.
- (f) Synthetic polymers and resins—hot melts, solutions, emulsions and waxes.

The characteristics of these types differ in many respects but each has its field of use for specific purposes (see Table 1).

4 CHOICE OF ADHESIVE. The choice and application of the correct adhesive for a particular purpose are of the utmost importance and selection should be made with the aid of technical advice where possible.

It is not practicable in a standard of this kind to make detailed recommendations as to the best adhesives for a particular use. In selecting an adhesive the following factors must be considered:

- (a) Whether the resulting joint will be sufficiently

strong for the required conditions and purpose.

- (b) The technique of application to be employed.
- (c) Convenience and economy in use.
- (d) The possible long term interaction of the adhesive with other components of the completed pack or its contents, e.g. effect on inks, corrosive effects, effect of plasticizer migration.

Table 1 gives a classification of adhesives which may serve as a useful, though very general, guide. The various adhesives are more fully discussed in the subsequent clauses. The performance of adhesives under extremes of temperature is becoming increasingly important, but it is not practicable to give specific information on this subject for all the adhesives mentioned in this standard. Users are therefore recommended to consult their suppliers, especially when selecting adhesives for use under specific climatic conditions.

The use of synthetic adhesives is very wide and constantly being extended, and the manufacturer should always be consulted and full details of requirements given for any particular problem.

5 PRECAUTIONS IN USE.

5.1 Handling and storage. Special precautions may be necessary or desirable when handling or storing certain types of adhesives, for example because of flammability, toxicity or dermatitis risk. It is therefore recommended that the relevant Regulatory Authorities and the supplier of the adhesives concerned should be consulted as to any statutory or local regulations or recommendations that may affect handling or storage. It is good practice to store all liquid adhesives at temperatures between 15°C and 30°C and to rotate stock. Many adhesives in the bulk seriously deteriorate when stored in extremes of temperature or long periods of time.

5.2 Toxicity, contamination or taint. Some adhesives contain ingredients which are toxic and will therefore require special handling precautions. Adhesives may also contain ingredients which may contaminate or taint the packed product (see also AS 2609). In all such cases guidance from the manufacturers must be obtained on these points.

6 INORGANIC ADHESIVES—SILICATES. Sodium silicate adhesives are clear, colourless alkali solutions. By varying the ratio of alkali/silica, the product can be made to vary from a thin, pourable liquid to a thick syrup requiring heating to enable dispensing. Fillers may be added to decrease setting time and penetration, with an increase in viscosity.

Silicate adhesives are non-flammable, do not degrade, develop odours or rancidity, and keep indefinitely in

* In course of preparation.