

Australian Standard[®]

SAA PACKAGING CODE

Part 22—CLOSURES

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
- 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
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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 provide information on the choice and use of closures for containers made from different materials, e.g. glass, plastics, metal or clay.

The SAA Packaging Code has been divided into different 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 for Packaging*
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 22—CLOSURES

1 SCOPE. This standard provides guidance on the choice and use of closures of various types for types of containers made of different materials such as bottles, cans, jars and tubes, generally less than 5 L capacity. It applies to closures such as bungs, caps, corks, lids, plugs, seals, strives and stoppers but excludes seamed ends and lever lids on metal cans.

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

AS 1517 Tinplate and Blackplate

AS 2400 SAA Packaging Code
Part 1—Glossary of Packaging Terms
Part 9—Metal Containers

BS 1918 Glass Container Finishes

Attention is drawn to the following related standards:

AS 1326 Polyethylene Film for Packaging and Allied Purposes

AS 1525 Tinplate Cans with Threaded Closures

AS 1734 Wrought Aluminium and Aluminium Alloy Flat Sheet, Coiled Sheet and Plate for General Engineering Purposes

BS 5789 Screw Thread Finishes for Plastics Containers

3 DEFINITIONS. For the purpose of this standard, the definitions given in AS 2400, Part 1 and the following apply:

3.1 Bungs, strives, etc—corks for wide apertures usually cut disc or strive fashion (q.v.). The depth is shorter than the diameter. Clean bungs or strives have the back and belly removed. Burnt bungs can be either unfaced or clean bungs with top and tail burnt or cut from burnt corkwood, which some believe reduce porosity of cork cut strive fashion. Thin faced strives are sometimes used as a secondary closure under a screw cap. Bungs are commonly supplied with bark face intact; for decorative purposes only.

3.2 Closure—a sealing or covering device affixed to or on a container openings for the purpose of retaining the contents and preventing contamination. (See also bung, cap, cork, cover, lid, plug, seal, strive, or stopper.)

3.3 Cork—a stopper or plug manufactured from the outer bark of the cork oak tree.

3.4 Terms used with cork.

3.4.1 Cork, agglomerated or composition—material made from granulated natural cork, mixed with glues, resins, etc, according to method of manufacture and use.

3.4.2 Back—the rough exterior of the corkwood (bark face).

3.4.3 Belly—the inside skin of the corkwood nearest the trunk of the tree.

3.4.4 Cork fashion—method of cutting corks for most narrow-mouthed bottles. Corks are punched between back and belly with the pores running parallel to top and tail, thus preventing seepage.

3.4.5 Disc or strive fashion—method of cutting corks in one piece for large apertures, with pores running from head to tail.

3.4.6 Discs—thin liners of natural or composition cork for screw caps or crown seals. Natural discs are usually punched from sheet, but may be cut cork fashion. Composition cork discs are punched from sheet or sliced from rod.

3.4.7 Hand cuts—corks originally whittled by knife from squares of corkwood and reassembled in section squares with corners rounded.

Imitation hand-cuts are made by machine and are of similar shape.

3.4.8 Optic corks—tapered and bored corks used for dispensing measures, on licensed premises.

3.4.9 Machine cut straights—cork cylindrical in shape.

3.4.10 Tapers—corks tapered to suit any container.

3.4.11 Portuguese or Spanish vials—measurements are given in Spanish lines. One Spanish line is approximately 2.2 mm. Usually only length and top diameter are given. Taper is approximately 3 mm per 25 mm of length.

3.4.12 Wine corks—cylindrical corks, compressed and driven fully into the bottle, top being flush with top of bottle finish. Wine corks are usually 38 mm long and upwards.

4 GENERAL.

4.1 Types. Closures, of many and varied types, form an essential part of an efficient packaging system. Closures are manufactured in a wide range of materials and are generally available in a range of standard sizes with the necessary precision to ensure, upon correct application, the effective sealing of the containers after filling. They can be designed to withstand pasteurization and sterilization processes.

A satisfactory closure exists for the sealing of practically every product handled commercially. Final selection should be made in close liaison with manufacturers of the containers, closures and equipment. Closures other than corks have almost always to be fitted with liners to make a good seal, but certain thermoplastics closures are designed to be used without liners.

Most types of closures can be produced with decorative effects that contribute considerably to the overall