

Australian Standard 1079, Part 2—1983

**PACKAGING OF ITEMS (STERILE)
FOR PATIENT CARE**

**Part 2—PAPER FOR THE
WRAPPING OF
GOODS UNDERGOING
STERILIZATION**



STANDARDS ASSOCIATION OF AUSTRALIA
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Australian Dental Standards Laboratory
Australian Institute of Packaging
Confederation of Australian Industry
Department of Defence
Department of Health
Department of Health, Queensland
Government Stores Department, N.S.W.
Health Commission of Victoria
National Council of Chemical and Pharmaceutical Industries
National Health and Medical Research Council
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South Australian Health Commission
Sterilizing Research and Advisory Council of Australia
The Technical Association of the Australian and New Zealand Pulp and Paper Industry (Appita)

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AUSTRALIAN STANDARD

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AS 1079, Part 2—1983

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PREFACE

This standard was prepared by the Association's Committee on Packaging of Sterile Goods, under the direction of the Packaging Standards Board. It supersedes, in part, AS 1662—1974, Paper Bags and Paper Packages for Sterile Goods.

Preparation of the standard was undertaken at the request of the then Health Commission of N.S.W. which pointed out the need for the simultaneous review of the two existing standards related to the packaging and sterilization of items used for patient care in hospitals, viz AS 1662—1974 and AS 1079—1971, The Sterilization of Packaged Goods.

The committee decided to prepare a multi-part standard to supersede the above standards, under the general title 'Packaging of Items (Sterile) for Patient Care' and consisting of the following parts:

Part 1—Guide to the selection of packaging materials for goods undergoing sterilization (published as AS 1079, Part 1—1981)

Part 2—Paper for the wrapping of goods undergoing sterilization (this standard)

Part 3—Paper bags for goods undergoing sterilization (published as AS 1079, Part 3—1983)

Part 4—Flexible packaging systems for the wrapping of goods undergoing sterilization*

The paper described in this standard has been found satisfactory for in-hospital use, but will only provide limited microbial barrier properties. Paper with better barrier properties may be used to provide longer retention of sterility. Owing to the complicated relationship between the physical properties and microbial barrier properties, the committee cannot recommend any single test that would guarantee absence of microbial penetration.

It is incumbent upon the user to establish whether a given grade of paper has a combination of properties which are satisfactory for his particular requirements. This can only be done by means of a suitable physical and microbiological testing program.

*In course of preparation.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
PACKAGING OF ITEMS (STERILE) FOR PATIENT CARE

PART 2—PAPER FOR THE WRAPPING OF GOODS UNDERGOING STERILIZATION

1 SCOPE. This standard specifies requirements for paper intended for the wrapping of materials and equipment for sterilization in hospitals by steam under pressure or by ethylene oxide.

The papers described in this standard provide only limited microbiological barrier properties even when the sterilized package is stored for a short period of time in a clean, dry and dust free environment.

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

- | | |
|--------------------|---|
| AS 1079 | Packaging of Items (Sterile) for Patient Care
Part 1—Guide to Selection of Packaging Materials for Goods Undergoing Sterilization |
| AS 1301 | Methods of Test for Pulp and Paper
P403rp-73 Bursting Strength of Paper and Paperboard
P404s-81 Tensile Strength of Paper and Paperboard
P405s-79 Grammage of Non-creped Paper and Board
P411s-80 Water Absorptiveness of Paper and Paperboard (Cobb Test)
P414m-73 Conditioning of Paper for Testing
P415m-73 Standard Atmosphere for Paper Testing
P417m-73 Sampling Paper and Board for Testing
P422m-73 Determination of the pH value of Aqueous Extracts of Paper—Hot Extraction Method
P437rp-80 Tensile Strength of Wetted Paper and Paperboard
P440ts-74 Bendtsen Porosity of Paper |
| AS 2400 | SAA Packaging Code
Part 1—Glossary of Packaging Terms |
| *TAPPI, T 255pm-76 | Water-soluble Sulphates in Pulp and Paper |
| *TAPPI, T 256pm-76 | Water-soluble Chlorides in Pulp and Paper |

NOTE: Attention is drawn to the following related standards:

- | | |
|---------|---|
| AS 1410 | Pre-vacuum Pressure Steam Sterilizers (with Mechanical Air Removal) |
| AS 1714 | Ethylene Oxide Sterilizers |
| AS 1862 | Aeration Cabinets (for use with Ethylene Oxide Sterilizers) |
| AS 2192 | Horizontal Sterilizers (Downward Displacement Pressure Steam Type) |

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

4 PAPER REQUIREMENTS.

4.1 General. The fibrous furnish of the paper shall be bleached chemical wood pulp, free from dirt and from unpleasant odours when dry or wet. Only the broke of the same furnish shall be used. Waste paper shall not be used. There should be no optical brightening agents present in the paper. The paper surface should be well bonded and should not shed fluff or fibre during normal use.

The finished paper shall be bleached kraft, machine glazed or machine finished on at least one side and shall be white.

4.2 Compatibility. Under normal sterilizing conditions the paper shall not release anything which could be harmful to—

- (a) the contents of the pack or package;
- (b) the patient;
- (c) any person handling the paper.

4.3 Sterilization Requirements. The paper shall be capable of withstanding the sterilization conditions for saturated steam under pressure and for ethylene oxide described in AS 1079, Part 1.

4.4 Sampling. Samples of paper for testing purposes should be taken in accordance with AS 1031.P417m-73.

4.5 Conditioning. Conditioning for testing purposes shall be carried out in accordance with AS 1301.P414m-73 in the standard atmosphere described in AS 1301.P415m-73.

5 PHYSICAL PROPERTIES.

5.1 Grammage. The types of paper mainly used are as follows:

- (a) Type A—corresponds to 49 g/m².
- (b) Type B—corresponds to 57 g/m².
- (c) Type C—corresponds to 67 g/m².
- (d) Type D—corresponds to 85 g/m².

When determined in accordance with AS 1301.P405s-79, the grammage of the paper shall be not less than the nominal grammage subject to a manufacturing tolerance of -5 percent.

5.2 pH of Hot Water Extract. When determined in accordance with AS 1301.P422m-73, the hot water extract of the paper shall have a pH within the range 4.5 to 8.0.

*Issued by the Technical Association of the Pulp and Paper Industry, U.S.A.