

Australian Standard[®]

**DOWN AND/OR FEATHER
FILLING MATERIALS AND
FILLED PRODUCTS**

This Australian Standard was prepared by Committee CS/35, Continental Quilts. It was approved on behalf of the Council of the Standards Association of Australia on 8 October 1987 and published on 9 November 1987.

The following interests are represented on Committee CS/35:

Australian Consumers Association
Australian Retailers Association
Australian Wool Corporation
Confederation of Australian Industry
Department of Consumer Affairs, N.S.W.
Department of Public and Consumer Affairs, S.A.
Ministry of Consumer Affairs, Vic.

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which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.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.

Australian Standard[®]

**DOWN AND/OR FEATHER
FILLING MATERIALS AND
FILLED PRODUCTS**

First published as Commercial Standard 19	1937
Revised and redesignated as AS 2479	1981
Second edition	1987

Incorporating:
Amdt No 1—1993

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
1 THE CRESCENT, HOMEBUSH, NSW 2140

ISBN 0 7262 4765 0

PREFACE

This Standard was prepared by the Association's Committee on Continental Quilts to supersede AS 2479—1981.

This edition differs from the 1981 edition in being more definitive not only about the requirements such as labelling but also about the test procedures, which test for compliance with the requirements.

Particular acknowledgment is made of U.S. Federal Standard 148a for the illustrations reproduced in Appendix L.

 CONTENTS

	<i>Page</i>
FOREWORD	3
1 SCOPE	4
2 APPLICATION	4
3 REFERENCED DOCUMENTS	4
4 DEFINITIONS	4
5 PURITY AND QUALITY REQUIREMENTS	5
6 CLASSIFICATION	6
7 DETERMINATION OF COMPOSITION	7
8 LABELLING	7
APPENDICES	
A RECOMMENDED SAMPLING PROCEDURE FOR COLLECTING A GROSS SAMPLE OF A FILLING MATERIAL	10
B METHOD FOR CONDITIONING A FILLING MATERIAL	11
C METHOD FOR OBTAINING A TEST SAMPLE OF A FILLING MATERIAL	12
D METHOD FOR DETERMINING THE OXYGEN NUMBER OF A FILLING MATERIAL	13
E METHOD FOR DETERMINING THE DRY MATTER CONTENT IN A FILLING MATERIAL	16
F METHOD FOR DETERMINING THE TOTAL EXTRACTABLE MATTER AND SOLUBLE MATTER IN A FILLING MATERIAL	17
G METHOD FOR DETERMINING THE BRITTLENESS OF FEATHERS	20
H METHOD FOR DETERMINING THE FILLING POWER OF A FILLING MATERIAL	21
J METHOD FOR DETERMINING THE COMPOSITION OF A FILLING MATERIAL	23
K METHOD FOR DETERMINING THE NOMINAL COMPOSITION FOR LABELLING OR FOR LABEL VERIFICATION	25
L ILLUSTRATIONS OF DEFINED MATERIALS	32
M COMPOSITION LIMITS FOR MIXTURES OF DOWN AND WATERFOWL FEATHERS	54

© 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.

FOREWORD

This Standard aims to ensure that purified bulk (i.e. contained in bales, packages etc), down and/or feather filling which is intended for use in finished products (e.g. pillows, cushions, comforters, quilts, continental quilts, sleeping bags etc) as well as that which is already contained in finished products, has an acceptable level of cleanliness and performance. Further, the Standard provides a classification that specifies limits for each of the various components that could reasonably be expected to be included in the filling. Although it may appear that the tolerances (specified within each classification) are excessive, it is stressed that because of the nature of the filling material itself as well as the manner in which the filling is processed, the tolerances are stringent but practical. That is, the tolerances specified have been selected to ensure that there is a balance between the maintenance of quality and the economics and practicality of separating the filling within the classification limits.

In order to minimize misinterpretation of the terminology used to identify the various components in the filling material (e.g. during analysis), the definitions of down, feather and the other various components, as specified in Clause 4, have been reinforced by pictorial representation given in Appendix L.

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

DOWN AND/OR FEATHER FILLING MATERIALS AND FILLED PRODUCTS

1 SCOPE. This Standard specifies requirements for purity and quality. This Standard also provides a classification that is intended to be applied when labelling or verifying a label of down and/or feather filling material or down and/or feather filled products.

2 APPLICATION. This Standard applies to down and/or feathers contained in—

- (a) bales, packets or the like, and which down and/or feathers are intended for use as a filling material in products such as pillows, cushions, comforters, quilts, continental quilts, sleeping bags and the like; and
- (b) products such as pillows, cushions, comforters, quilts, continental quilts, sleeping bags and the like.

3 REFERENCED DOCUMENTS. The following Standards are referred to in this Standard:

AS 1152 Test Sieves.

AS 1957 Care Labelling of Clothing, Household Textiles, Furnishings, Upholstered Furniture, Bedding, Piece Goods and Yarns.

AS 2001 Method of Test for Textiles.

AS 2001.3.1—Chemical Tests—Determination of pH of Aqueous Extract.

BS 1425 Cleanliness of Fillings and Stuffings for Bedding, Upholstery, Toys and Other Domestic Articles.

4 DEFINITIONS. For the purpose of this Standard, the definitions below apply. (See Appendix L for figures referred to.)

4.1 Aftershaft—a feather-like appendage, growing from the basal portion of the main quill (see Figure L17).

NOTE: An aftershaft on a feather indicates that the feather is a landfowl feather (see Notes under Clause 4.1.2).

4.2 Barb—an elongated structure that emanates from the quill shaft of a feather (see Figures L1, L10) or from the quill point of down (see Figures L9, L10, L11), and which elongated structure includes barbules.

NOTE: Generally the barb of a feather is coarser in structure than the barb of down (see Figure L10).

4.3 Barbule—a branch emanating from a barb comprising nodes, internodes and prongs (see Figures L9, L11, L12, L13).

4.3.1 Node—a protuberance or swelling appearing on barbules (see Figure L13).

4.3.2 Internode—the portion of the barbule between the distal end of a node and the basal end of an adjacent node (see Figure L13).

4.3.3 Prong—short, spiny outgrowth emanating from a barbule (see Figure L12).

4.4 Crushed feathers.

4.4.1 CRUSHED FEATHERS (*as classification*)—components in excess of the permissible component limits specified in Clause 6, comprising crushed feathers as defined in Clause 4.4.2, down fibres and/or feather fibres and fluff barbs.

NOTE: For determining the excess of components see the description of E at the bottom of Table K1 in Appendix K.

4.4.2 Crushed feathers (*as a component of plumage*)—feathers which have been subjected to a crushing, milling, chopping, stripping, grinding or other process whereby more than 25 percent of each feather is cut, broken or otherwise removed from the whole feather (see Figure L21).

NOTES:

1. Where a feather has been damaged (e.g. chopped) in such a way that it is not possible to assess if less than 25 percent of the whole feather has been removed, that feather is to be considered as being a crushed feather.
2. See the definition of feather in Clause 4.8 and the Notes to that clause.

4.5 Curled feather—feather which has been subjected to a curling process which has imparted a curl, without any damage, to the feather.

4.6 Down.

4.6.1 DOWN (*as classification*)—the components and their respective composition limits specified in Clause 6.1.

4.6.2 Down (*as a component of plumage*)—a component of plumage being the undercoating of a waterfowl consisting of barbs growing from a quill point (see Figures L8, L9), but which component may include down fibre that has become so attached to the barbs emanating from the quill point that the down fibre is not readily detachable.

NOTE: An individual entity of down without attached down fibre as shown in Figure L9, is commonly known as a down cluster.

4.7 Down fibre—the detached barbs from down and/or plumules (see Figures L7, L10).

NOTE See Note in Clause 4.2.

4.8 Feather—a component of plumage which, when whole and fully developed, generally comprises a quill in which the quill shaft is surrounded by a substantially planar vane and fluff barbs, but which component may have up to 25 percent cut, broken or otherwise removed from the whole feather.

NOTES:

1. Where the feather has been damaged, e.g. crushed so that the quill is permanently bent, that feather is to be considered as complying with the above definition, *if* not more than 25 percent of the whole feather has been removed (see Figure L22).
2. Since the above definition includes curled feathers, nestling feathers and quill feathers, *all* feathers may be broadly categorized into two groups being either—
 - (i) feathers as defined above; or
 - (ii) crushed feathers as defined in Clause 4.4.2.