

Packaging code —

Section 5: Protection against spoilage of packages and their contents by micro-organisms, insects, mites and rodents

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Packaging and Freight Containers Standards Committee (PKM/-) to Technical Committee PKM/581, upon which the following bodies were represented:

- Agricultural and Food Research Council
- British Nonwoven Manufacturers' Association
- British Pest Control Association
- British Wood Preserving Association
- Chemical Industries Association
- Lambeg Industrial Research Association
- Metal Packaging Manufacturers' Association
- Ministry of Defence
- Overseas Development Administration, Tropical Development and Research Institute
- PIRA (The Research Association for the Paper and Board, Printing and Packaging Industries)
- Transparent Cellulose Wrapping Committee

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Foreword

BS 1133 was originally issued in December 1943 and was intended primarily to give guidance on the packaging of Service and other Government supplies. In practice, however, the Code was used not only by Government departments and contractors, but also by civilian packers and accordingly it was later amended to suit commercial requirements. The Parts were then issued separately and this Section was published in 1951. Developments in packaging materials and methods led to revisions in 1953 and 1964 and a further revision is now considered desirable. The present Section sets out in some detail the factors to be taken into consideration, in connection both with transport and storage conditions and also protective treatments which may be necessary. This edition of this code supersedes BS 1133-5:1964, which is now withdrawn.

Packaged goods and their containers are liable to attack by micro-organisms, insects, mites and rodents. Foodstuffs and textiles are the products most likely to suffer such attack with consequent deterioration. Damage to other products includes the infestation and decay of wood, rotting of paper, moulding of leather, disintegration of laminated materials, etching of optical glass, and discolouration and staining of many kinds of materials.

No attempt has been made to detail techniques for the protection of particular commodities since the many problems involved are too specialized and are best dealt with individually.

The appropriate method of preventing attack will depend on the anticipated environment, and also on the susceptibility of the package and its contents to spoilage. While the treatment of the commodity may not be the direct concern of the packer it will influence what forms of protection may subsequently be required.

As it is not possible to specify in detail the most satisfactory method for every set of circumstances the Section gives general guidance and indicates when expert advice should be sought.

The packaging code now consists of the following Sections all of which are published separately with the exception of Sections 1-3 which are published in one volume.

Sections 1-3. Introduction to packaging. Section 1 gives general guidance on the choice of containers, precautions to be taken in packaging and choice of packaging methods, and notes relating to physical and statutory limitations, and packing bay conditions.

Section 2 gives guidance regarding the storage of packaging materials and deals with covered and open storage, weight limitations, fire hazards, dangerous goods and inspection.

Section 3 gives guidance on the addressing, marking and labelling of containers.

Section 4. Mechanical aids in package handling. Describes briefly the many types of mechanical handling equipment suitable for the moving of packaging materials and filled packages in factories and warehouses. Also gives notes to assist users in selecting equipment and using it to the best advantage.

Section 6. Temporary protection of metal surfaces against corrosion during transportation and storage. Gives guidance on the cleaning and drying of metal surfaces prior to the application of temporary (i.e. easily removable) protectives against corrosion and on the selection and application of the protectives. Performance specifications are included for eight types of protectives together with methods of test.

Section 7. Paper and board wrappers, bags and containers. Gives general guidance in the use of paper and board in the following forms:

wrapping papers, waxed paper, greaseproof paper, glassine, vegetable parchment, waterproof paper, wet strength paper, bags, envelopes, multi-wall sacks, liners and linings, paper-board cartons and boxes, moulded pulp and fibreboard cases and drums.

Methods of test are also given.

Section 7:Chapter 7.5. Fibreboard cases. Gives guidance on materials, types of case, internal fitments, closing and sealing, and uses.

Section 8. Wooden containers. Gives general information regarding the styles, design and construction of large and small framed wooden cases, nailed wooden cases, wire-bound wooden boxes, plywood cases of battened and metal edged construction, plywood postal type boxes, wooden casks, plywood barrels, wooden crates, metallined cases and closures for returnable cases.

Section 9. Textile bags, sacks and wrappings. Describes and defines materials and methods of stitching and closing jute bags. Cotton bags are also dealt with. Methods of baling and the jute materials to be used are described and typical specifications are given.

Section 10. Metal containers. Gives descriptions of the materials and construction for tins and cans, drums, crates, hampers and trays, collapsible tubes and composites. Includes many illustrations of types of containers and their closures. For tins and cans it also describes decoration, testing, filling and closing. For collapsible tubes, it covers styles, decoration, filling and packaging for transport.

Section 11. Packaging felt. Covers pressed felts and needle-loom felts for cushioning against shock. It describes five types of felt, and methods of proofing.

Section 12. Cushioning materials (excluding packaging felt). Deals with protection against shock and is concerned with the physical properties of the materials used. Basic cushioning theory and suggested cushion design procedures are included. Methods of test for materials are given.

Section 13. Twines and cords for packaging. Gives guidance on the types of twine and cords available for packaging and the purposes for which they may be used.

Section 14. Adhesive closing and sealing tapes. Gives general guidance, with illustrations, on the uses and various properties of gummed tape and self adhesive tape available for packaging purposes.

Section 15. Tensional strapping. Gives guidance on the use of metallic and non-metallic tensional strapping for packaging purposes.

Section 16. Adhesives for packaging. Describes the characteristics and use of the principal types of adhesive used in packaging.

Section 17. Wicker and veneer baskets. Gives general descriptions and definitions relating to wicker baskets, hampers and veneer baskets (chips) and punnets.

Section 18. Glass containers and closures. Gives general guidance on the types of glass containers available for packaging and describes the factors to be considered when ordering or using them. Details of the various forms of closures are also given.

Section 18:Subsection 1. Terminology. Gives definitions of terms used for glass containers and closures.

Section 19. Use of desiccants in packaging. Gives guidance on the use of desiccated packages, the factors governing the choice of desiccant, determination of quantity of desiccant and general considerations affecting this method of packaging.