

Packaging code —

Section 10: Metal containers —

Subsection 10.2 Metal drums

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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 Policy Committee (PKM/-) to Technical Committee PKM/503, upon which the following bodies were represented:

- Association of Drum Manufactures
- British Glass Manufacturers' Confederation
- British Paper and Board Industry Federation
- Department of Trade and Industry (Laboratory of the Government Chemist)
- Metal Packaging Manufacturers' Association
- Ministry of Defence
- PIRA
- Pressed Felt Manufacturers' Association
- Process Plant Association
- Timber Packaging and Pallet Confederation

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Contents

	Page
Committees responsible	Inside front cover
Foreword	ii
1 Scope	1
2 Definitions	1
3 General	1
4 Materials	1
5 Constructional features	1
6 Closures	1
7 Internal treatment and linings	2
8 Exterior finish	2
9 Drum types	8
Figure 1 — Typical drum end seams	2
Figure 2 — Typical drum side seams	2
Figure 3 — Typical drum rolling hoops	3
Figure 4 — Welded drum-end bands and chimb reinforcements	3
Figure 5 — Typical tinplate drum closure fittings	4
Figure 6 — Typical plastics plug-in closure with extension spout	5
Figure 7 — Typical screw bung closures for drums	6
Figure 8 — Typical lid closures for drums	7
Figure 9 — 25 L type A drum with reduced top, 50 mm presscap neck and crank handle	8
Figure 10 — 25 L type A drum with interrupted chimb and 76 mm neck, plug and capseal	8
Figure 11 — 50 L type A drum with reduced top and crank handle, 50 mm bung in head and 19 mm bung in body	8
Figure 12 — 110 L to 210 L type A drum with pressed out rolling hoops and corrugations, 50 mm bung in body and 19 mm bung in head	9
Figure 13 — 110 L to 210 L type A drum with corrugated body and 178 mm wheel-on lid in head	9
Figure 14 — 210 L type A drum with 50 mm and 19 mm bungs in head, shallow pressed out rolling hoops and convex ends	10
Figure 15 — All-welded type B drum with external and internal convex chimb bands and I section hoops	10
Figure 16 — Open-top, full aperture type C drum with bend-over clips attached to body; crank handle; bottom reduced	11
Figure 17 — Open-top, full aperture type C drum with pressed out bead, scaling gasket and closing ring, and wire drop handle; bottom reduced	11
Figure 18 — Open-top, full aperture type C drum with pressed out bead, multi-lug pail closure and bale handle; bottom reduced	12
Figure 19 — Open-top, full aperture type C drum with pressed out beads, sealing gasket and example of lever action closing	12
Figure 20 — Open-top, full aperture type C drum with bend-over clips attached to head, and strap handle	13
Figure 21 — Square and rectangular section type D drums	14
Publication(s) referred to	Inside back cover

Foreword

This Subsection of BS 1133, which has been prepared, under the direction of the Packaging and Freight Containers Standards Policy Committee, supersedes clauses 14 to 21 of BS 1133-10:1966. BS 1133-10:1966 is withdrawn.

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 later issued separately and new Sections were added as necessary. Since Section 10 covers many different types of packaging it was decided to subdivide it into a number of separately published Subsections.

This Subsection, Subsection 10.2, provides information on metal drums and their closures.

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

- *Sections 1 to 3: Introduction to packaging;*
- *Section 4: Mechanical aids in package handling;*
- *Section 5: Protection against spoilage of packages and their contents by micro-organisms, insects, mites and rodents;*
- *Section 6: Temporary protection of metal surfaces against corrosion (during transport and storage);*
- *Section 7: Paper and board wrappers, bags and containers;*
- *Subsection 7.1: Wrapping papers;*
- *Subsection 7.2: Bags and envelopes;*
- *Subsection 7.3: Cartons and boxes;*
- *Subsection 7.4: Fibreboard drums;*
- *Chapter 7.5: Fibreboard cases;*
- *Subsection 7.6: Moulded pulp packaging;*
- *Subsection 7.7: Composite containers;*
- *Section 8: Wooden containers;*
- *Section 10: Metal containers;*
- *Subsection 10.1: Tins and cans;*
- *Subsection 10.2: Metal drums;*
- *Subsection 10.3: Metal collapsible tubes;*
- *Section 12: Methods of protection against shock (excluding cushioning devices);*
- *Section 13: Twines and cords for packaging;*
- *Section 14: Adhesive closing and sealing tapes;*
- *Section 15: Tensional strapping;*
- *Section 16: Adhesives for packaging;*
- *Section 18: Glass containers and closures;*
- *Subsection 1: Terminology;*
- *Section 19: Use of desiccants in packaging;*
- *Section 21: Regenerated cellulose film, plastics film, aluminium foil and flexible laminates;*
- *Section 22: Packaging in plastics containers;*

Section 9 “*Textile bags, sacks and wrappings*”, Section 11 “*Packaging felt*”, Section 17 “*Wicker and veneer baskets*” and Section 20 “*Packaging for air freight excluding livestock*” were withdrawn as obsolete.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 14, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This Subsection of BS 1133 provides basic information on the various types of metal drum currently available.

NOTE The titles of the publications referred to in this standard are listed on the inside back cover.

2 Definitions

For the purposes of this Subsection of BS 1133 the definitions given in BS 3130-4 apply.

3 General

3.1 Metal drums, because of the wide range of designs and closures available, are used for packaging all forms of solids, powders, crystals, pastes and liquids. They are impervious to air, light and water, completely resistant to attack by insects and rodents and generally capable of withstanding rough handling during transit without additional packaging. These factors make metal drums a most versatile form of packaging for use in all areas, irrespective of climatic conditions or transit hazards.

Metal drums are available in capacities from 5 litres¹⁾ upwards. This Subsection describes the main types of drum and drum closures to assist users in the selection of the most appropriate design for their particular needs. Users should satisfy themselves that the type of drum, the material or protective treatment used and the closure are suitable for and compatible with the product to be contained.

Suppliers of dangerous goods need to be aware of statutory and international requirements relevant to the journey to be undertaken. Drums intended to contain substances or articles which are classified as dangerous for transport should:

- a) bear the appropriate UN certification markings; or
- b) possess the physical attributes set out in the relevant regulations and/or supporting approved codes of practice.

BS 1133-1 to BS 1133-3 contain more information on the transport of dangerous goods.

3.2 Drums are of the following basic types (described in detail in clause 9):

- a) type A: cylindrical drums; light duty; fixed ends;

- b) type B: cylindrical drums; heavy duty; fixed ends;

- c) type C: cylindrical drums; heavy and light duty; open-top full aperture;

- d) type D: square or rectangular section drums; light duty.

NOTE Type C drums are also referred to as "removable head drums".

British Standard specifications for metal drums are given in BS 814:1974 and BS 814-1, BS 1702, BS 2003:1974 and BS 2003-1.

4 Materials

Drums are most commonly made from uncoated low carbon steel sheet, but for certain usages and conditions they may be manufactured from other materials, such as:

- a) galvanized steel sheet;
- b) tinplate;
- c) aluminium alloy sheet;
- d) stainless steel sheet.

5 Constructional features

Some of the most usual forms of end seams, side seams, rolling hoops and end bands are illustrated in Figure 1 to Figure 4.

6 Closures

6.1 Fixed end drums

Drum closures for fixed end drums can be divided into the following basic classes (illustrated in Figure 5 to Figure 8).

- a) tinplate necks for small drums for liquids (see BS 6499);
- b) plastics plug-in closures;
- c) screw bungs for small and large drums for liquids;
- d) lid closures for small and large drums for dry and paste products.

6.2 Open-top full aperture drums

Typical closures for open-top full aperture drums are illustrated in Figure 16 to Figure 20.

¹⁾ Litres are denoted by L throughout this standard.