



SLOVENSKI STANDARD

SIST EN 14768:2005

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Fibreboard drums - Removable head (open head) drums with slip on lids with a nominal capacity of 5 l to 600 l

Deckelbehälter aus Fiber (Fibertrommeln) - Deckelfässer mit aufsetzbarem Deckel und einem Nennvolumen von 5 l bis 600 l

Futs en carton - Futs a ouverture totale et couvercle emboîté d'une capacité nominale de 5 l a 600 l

Ta slovenski standard je istoveten z: EN 14768:2005

ICS:

55.140 Ú[áãÄ[çã • \ Á [áãÜ[\ ^ Barrels. Drums. Canisters

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EUROPEAN STANDARD

EN 14768

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EUROPÄISCHE NORM

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ICS 55.140

English version

Fibreboard drums - Removable head (open head) drums with slip on lids with a nominal capacity of 5 l to 600 l

Fûts en carton - Fûts à ouverture totale et couvercle
emboîté d'une capacité nominale de 5 l à 600 l

Deckelbehälter aus Fiber (Fibertrommeln) - Deckelfässer
mit aufsetzbarem Deckel und einem Nennvolumen von 5 l
bis 600 l

This European Standard was approved by CEN on 3 February 2005.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

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 SIST EN 14768:2005

Foreword

This document (EN 14768:2005) has been prepared by Technical Committee CEN/TC 261 "Packaging", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2005, and conflicting national standards shall be withdrawn at the latest by September 2005.

The work was carried out in close cooperation with the European Association of Fibreboard Drum Manufacturers (S.E.F.F.I.) which prepared the draft proposal.

Efficient packaging is of great importance for the distribution and the protection of goods. Insufficient or inappropriate packaging can lead to damage or wastage of the contents of the package.

This document includes a Bibliography.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Introduction

This document is limited to the specification of constructional details and the establishment of a preferred range of diameters and capacities for fibreboard drums, in recognition of the fact that one of the important characteristics of fibreboard drums is that they can be produced in various ranges of diameters and heights with constructions to suit specific products and market needs and can be fitted with a variety of bases and lids.

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1 Scope

This document specifies the construction requirements for cylindrical fibreboard drums with slip on lids with a nominal capacity of 5 l to 600 l and the preferred range of diameters for drums with a circular cross-section and preferred dimensions for drums with a rectangular cross section.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 2233:2000, *Packaging – Complete, filled transport packages and unit loads – Conditioning for testing (ISO 2233:2000)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

fibreboard drum

rigid, container with a sidewall, made of multiple plies of virgin or recycled paper or board firmly bonded together, and a base, firmly connected to the sidewall. The drum may include a base chimb and a slip on lid which can be secured after filling

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3.2

nominal capacity (NC)

capacity in litres which, by convention, is used to represent a class of drums of similar brimful capacities

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3.3

sidewall

body of the drum

3.4

lid

removable top of the drum

3.5

chimb

bottom rim of the drum

3.6

internal lining

fixed inner ply of material, other than that which is used for the general construction of the drum, used to give the drum specific properties

3.7

external lining

fixed outer ply of material, other than that which is used for the general construction of the drum, used to give the drum specific properties

EN 14768:2005 (E)**3.8****barrier**

multiple or single ply of material, other than that which is used for the general construction of the drum, incorporated into the sidewall, lid or base of the drum

3.9**liner**

separate bag or semi-rigid container, used inside the drum to give the drum specific properties

3.10**internal coating**

material applied to the inner surface of the drum, by spray, brush or other means to give the drum specific properties

3.11**external coating**

material applied to the outer surface of the drum, by spray, brush or other means to give the drum specific properties

3.12**base**

horizontal bottom wall of the drum

4 Dimensions

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4.1 General

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The drum description shall include the dimensions listed in 4.2, 4.3 and 4.4. In addition the description shall include the nominal capacity as determined in 4.5.14. Drum dimensions are shown in Annex A.

4.2 Dimensions for drums of circular cross-section**4.2.1 Nominal internal diameter**

The nominal internal diameter is used only to provide a classification of drum diameters.

4.2.2 Internal diameter (d_1)

The internal diameter (d_1), in millimetres, is the internal measurement from the inner sidewall to the diametrically opposite inner sidewall.

4.2.3 Outside diameter (d_2)

The outside diameter (overall diameter) (d_2), in millimetres, is the measurement over the widest part of the drum.

4.3 Dimensions for drums of rectangular cross-section**4.3.1 Internal section (d_3 and d_5)**

The internal dimension (d_3) or (d_5), in millimetres, is the internal measurement taken from inner face to inner face of opposite sidewalls.

4.3.2 Outside section (d_4 and d_6)

The outside dimension, (d_4) or (d_6) in millimetres, is the measurement over the widest part, between opposite outer faces of the drum.

4.4 Height and depth

4.4.1 Internal height (h_1)

The internal height (h_1), in millimetres, is the height from the inner surface of the drum base to the top of the drum sidewall.

4.4.2 Stacking height (h_2) for drums with interstacking feature

The external height (h_2), in millimetres, is the height from the lowest point of the drum to the top surface of the lid on which a base chimb or base of a stacked drum is located.

4.4.3 Overall height (h_3)

The overall height (h_3), in millimetres, is the height of a drum closed for despatch, measured from the lowest point of the drum to the highest point of the lid.

4.4.4 Chimb depth (h_4)

The chimb depth (h_4) in millimetres is the measurement from the lowest point of the chimb to the underside of the base.

4.4.5 Total stack height

The total stack height, in millimetres, of the drum is calculated by:

$$\text{Height of stack of } N \text{ drums} = (N-1)h_2 + h_3$$

4.5 Capacity calculations

4.5.1 Nominal capacity (NC)

The nominal capacity (see 3.2) is calculated from dimensions d_1 and h_1 for drums of circular cross-section and dimensions d_3 and h_1 for drums of rectangular cross section.

4.5.2 Shipping cube

For drums of circular cross section dimensions d_2 and h_3 are used to calculate the shipping cube.

For rectangular section drums dimensions d_4 and h_3 are used to calculate the shipping cube.

4.6 Tolerances

4.6.1 Conditioning

As drums are manufactured from materials which are subject to dimensional and weight variations according to changes in atmospheric conditions, all dimensions and tolerances are quoted on completed drums which have been conditioned for 24 h at $23 \text{ }^\circ\text{C} \pm 2 \text{ }^\circ\text{C}$ and $50 \text{ \% rh} \pm 2 \text{ \% rh}$, in accordance with EN ISO 2233:2000, Condition 7.

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NOTE Short term fluctuations and measurement limitations may cause individual measurements to vary up to $\pm 5\%$ relative humidity.

4.6.2 Mass tolerance

The mass tolerance is $\pm 5\%$ of the mass, in kilograms, of a complete drum.

4.6.3 Manufacturing tolerances

The manufacturing tolerances applicable to dimensions shall be:

- a) all diameters $\pm 2,0$ mm;
- b) all heights $\pm 5,0$ mm.

4.7 Capacity requirements**4.7.1 General**

As fibreboard drums provide numerous variations in size, construction and design type, they can be adapted to suit the purchaser's packaging and capacity requirements.

4.7.2 Preferred range of nominal capacities

The preferred range of nominal capacities is 5 l, 10 l, 15 l, 20 l, 25 l, 30 l, 40 l, 50 l, 60 l, 80 l, 100 l, 120 l, 150 l, 200 l, 220 l, 250 l and 600 l for drums of circular cross section and 15 l, 20 l, 30 l, 40 l, 50 l, 60 l, 80 l, 100 l, 120 l, 150 l, 200 l, 220 l and 250 l for drums of rectangular cross section.

NOTE Annex B shows the preferred relationship between drum sizes and nominal capacity.

4.7.3 Other capacities

Other capacities are available by arrangement between purchaser and supplier.

5 Materials**5.1 Sidewall**

The sidewall of the drum shall consist either of convolutely or spirally wound plies of virgin or recycled paper or fibreboard, firmly bonded together.

NOTE The sidewall may incorporate one or more layers of protective material (internal or external - lining / barrier) the type and number of which are determined by specification details.

5.2 Base and lid

The base and lid shall be manufactured from any single or composite material.

NOTE The base and lid may incorporate protective linings or barriers to meet specification requirements.

The base and lid shall be connected to the sidewall in such a way as to give adequate protection to the contents of the drum.

5.3 Base chimb

The base chimb shall be manufactured from any single or composite material and shall be secured to the sidewall by pressing, rolling or other means.

5.4 Internal and external treatments

Any internal or external treatment such as a lining, a liner, or coating, shall be made of a material compatible with the contents of the drum and suitable for the intended use of the drum as notified by the purchaser (see Annex C).

5.5 Barrier

A barrier shall be made of multiple or single ply material, incorporated into the sidewall, lid and base of the drum to resist the transmission of gas or vapour into, or out of the drum.

6 Requirements for material identification symbols

All drums shall carry the relevant material identification code printed on to the lowest possible point of the external sidewall, i.e. the code identifying the material from which the drum is made. Fibreboard drum material identification symbols are given in Annex D.

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7 Designation

7.1 Drums of circular cross-section (C)

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A removable head (open head) drum (OH) manufactured in accordance with this document with a nominal capacity (NC) of 5 l to 600 l and an internal diameter (d_1) of 230 mm to 675 mm shall be designated:

Fibreboard drum OHC EN 14768 NC - 5 l to 600 l. d_1 - 230 mm to 675 mm.

For example, a fibreboard drum with a nominal capacity of 100 l, having an internal diameter of 450 mm would be designated:

Fibreboard drum OHC EN 14768 NC - 100 l. d_1 - 450 mm.

7.2 Drums of rectangular cross-section (R)

A removable head (open head) drum (OH) manufactured in accordance with this document with nominal capacity (NC) of 15 l to 250 l and internal dimension d_3 of 286 mm to 514 mm shall be designated:

Fibreboard drum OHR EN 14768 NC - 15 l to 250 l. d_3 - 286 mm to 514 mm

For example, a fibreboard drum with a nominal capacity of 100 l, having an internal dimension of 356 mm would be designated:

Fibreboard drum OHR EN 14768 NC - 100 l. d_3 - 356 mm.

NOTE Where the drums are intended to be used for the transport of dangerous goods, attention is drawn to the regulatory requirements which govern the transport of those goods in the countries concerned. In Europe, depending upon the mode of transport, this means meeting the requirements of: