SLOVENSKI STANDARD

SIST EN 13590:2003

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Embalaġa ï Proġne vreļ e za noġenje razliļ nega blaga ï Sploġne znaļ ilnosti in preskusne metode za ugotavljanje prostornine in nosilnosti

Packaging - Flexible carrier bags for the transport of various retail goods - General characteristics and test methods for the determination of volume and carrying capacity

Verpackung - Tragetaschen für den Transport verschiedener Einzelhandelsgüter - Allgemeine Eigenschaften und Prüfverfahren für die Bestimmung des Volumens und der Tragekapazität

Emballage - Sacs en matériau souple pour le transport de marchandises de détail variées - Caractéristiques générales et méthodes d'essai pour la détermination du volume et de la capacité de transport

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ICS:

55.080	Vreļ e. Vreļ ke	Sacks. Bags

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Packaging - Flexible carrier bags for the transport of various retail goods - General characteristics and test methods for the determination of volume and carrying capacity

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This European Standard was approved by CEN on 6 December 2002.

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 Management Centre 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 Management Centre has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION
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Contents

Foreword

This document (EN 13590:2003) 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of an identical text or by endorsement, at the latest by September 2003, and conflicting national standards shall be withdrawn at the latest by September 2003.

Annex A is normative.

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

Introduction

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 pack.

1 Scope

This European Standard specifies general characteristics and test methods for determination of volume and carrying capacity of flexible carrier bags with handles for transport of various unspecified retail goods.

For specific retail goods there should be an agreement between supplier and buyer about the application of this standard.

This standard is applicable to carrier bags made of paper, thermoplastic material and or any other flexible material.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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

EN ISO 8367-1, *Packaging - Dimensional tolerances for general purpose sacks - Part 1: Paper sacks (ISO 8367-1:1993).*

EN ISO 8367-2, *Packaging - Dimensional tolerances for general purpose sacks - Part 2: Sacks made from thermoplastic flexible film (ISO 8367-2:1993).*

3 Terms and definitions

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

3.1
gusset
fold inserted in the longitudinal edge of a tube or bag

3.2
base gusset
fold inserted in the bottom of the bag

3.3
tube
one or more plies in the form of a flattened cylinder cut into prescribed lengths

3.4
ply
film or sheet of flexible material, or combination of such materials, forming the walls of a bag

3.5
length of bag, *a*
greatest distance between the transverse edges of the flat bag, perpendicular to the bottom

3.6
width of bag, *b*
distance between the longitudinal edges of the flat bag, gusset not included, parallel to the bottom

3.7
width of gusset, *e*
distance between the external creases of the unfolded gusset

3.8
width of bottom, *c*
distance between the two bottom edge folds or the external creases of the base gusset, measured at the centre, parallel to the bag's length

3.9
handle
device forming part of the bag allowing the insertion of hands for the easy carrying of a load

3.10
length of handle, *d*
overall length from the top to the maximum possible filling height of the bag

3.11
width of handle, *f*
minimal width of a handle measured on the flat bag

4 General

4.1 Material

The material shall be agreed between supplier and buyer.

The carrier bags may be made of paper, thermoplastic material and or any other flexible material.

NOTE Materials should be chosen and joined together in such a way that recovery is promoted.

4.2 Shape and dimensions

The shape and dimensions shall be agreed between supplier and buyer.

This standard applies to carrier bags with any shape and dimension. Bags may be provided with gussets.

Some examples are shown in Figure 1, including reference to the definitions given in paragraph 3.

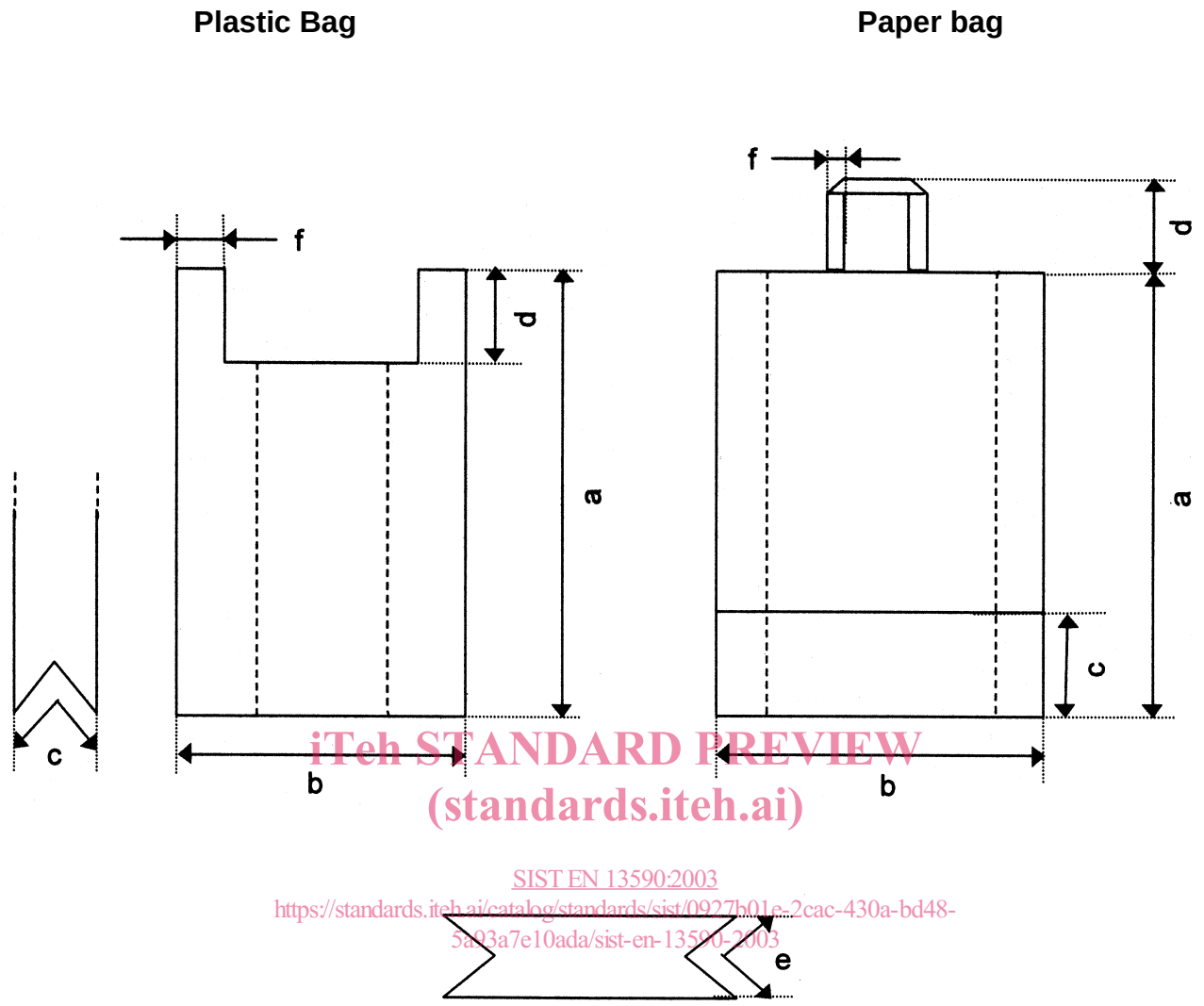

Figure 1 — Example of carrier bags to illustrate definitions

For all dimensions, if not otherwise agreed, the general values of tolerances shall be in accordance with EN ISO 8367-1 or EN ISO 8367-2.

The width of handles shall be such that they can fulfil their carrying purposes.

4.3 Volume

The volume shall be agreed between supplier and buyer.

The volume of the carrier bag shall be determined in accordance with the test method given in 5.5.1.

4.4 Carrying capacity

The carrying capacity shall be agreed between supplier and buyer.

The carrying capacity of the carrier bag shall be determined in accordance with the test method given in 5.5.2.

5 Test methods

5.1 Sampling

In order to assure the performance of the bags produced, a type test has to be done once for each type with at least 100 bags manufactured under normal industrial conditions selected at random.

5.2 Conditioning

The samples shall be conditioned and tested in accordance with EN ISO 2233, condition G, i.e. temperature 23 °C ± 2 °C (with relative humidity 50 % ± 5 % for bags sensitive to humidity).

5.3 Filling material

5.3.1 Filling material for the determination of the volume

The filling material used for testing the volume of carrier bags consist of plastic granules with bulk specific mass between 500 kg/m^3 and 600 kg/m^3.

For the determination of bulk density a 1 litre capacity cylinder with an inner diameter of 75 mm ± 5 mm is filled to the top with the plastic granules.

The cylinder content is compacted by impacting the cylinder twice onto a table and then the volume is measured. The granules are weighted and the bulk specific mass is calculated.

5.3.2 Filling material for testing the carrying capacity

The filling material used for testing the carrying capacity of carrier bags shall consist of high density polyethylene (HDPE) cylinders as specified in annex A.

5.4 Equipment

An example of equipment for testing the volume and the carrying capacity is shown in Figure 2. This equipment tests one carrier bag at a time.