KENYA STANDARD

KS 2525:2014
ICS …..

Plastic crates— Specification

1st **Edition 2014**

TECHNICAL COMMITTEE REPRESENTATION

The following organizations were represented on the Technical Committee:

University Of Nairobi – Chemistry Dept
Kenya Industrial Research and training Institute
National Environment Management authority
East African Packaging Industries
Kenya flower council
Export promotion council
Consumer Information Network
Government Chemist
Sumaria Industries Ltd.
GS1 Kenya
Nakumatt Holdings Ltd
Uchumi Supermarkets Ltd.
Kenya Association Of Manufacturers (KAM)
Ministry of Industrialization & Enterprise development
Tetrapak
Nestle Ear
Coca Cola East & Central Africa Ltd
Barcode Global Standards 1 (Ea) Ltd
Institute of Packaging of Kenya
Kenya Bureau of Standards — Secretariat

REVISION OF KENYA STANDARDS

In order to keep abreast of progress in industry, Kenya Standards shall be regularly reviewed. Suggestions for improvements to published standards, addressed to the Managing Director, Kenya Bureau of Standards, are welcome.

KENYA BUREAU OF STANDARDS (KEBS)

Head Office: P.O. Box 54974, Nairobi-00200, Tel.: (+254 020) 605490, 602350, Fax: (+254 020) 604031
E-Mail: info@kebs.org, Web:http://www.kebs.org

Coast Region
P.O. Box 99376, Mombasa-80100
Tel.: (+254 041) 229563, 230939/40
Fax: (+254 041) 229448

Lake Region
P.O. Box 2949, Kisumu-40100
Tel.: (+254 057) 23549, 22396
Fax: (+254 057) 21814

Rift Valley Region
P.O. Box 2138, Nakuru-20100
Tel.: (+254 051) 210553, 210555

Foreword

This standard has been prepared by the Technical Committee on packaging under the guidance of the Standards Projects Committee, and it is in accordance with the procedures of the Kenya Bureau of Standards.

Plastic crates are either used as transport packaging or primary packaging. When goods are directly put into the crates in this case they are being used as primary packages. However, if primary packages are arranged in crates then they are known as distribution or transport packages.

This standard shall be useful to manufacturers or importers of plastic crates in checking its quality. Parameters covered in the Standard include,dimension,drop test, impact resistance among others

During the preparation of this Standard reference was made on;

IS 15532:2004 Plastic creates for fruits and vegetables—Specifications.

Acknowledgment is hereby made for the assistance derived from this source.

Plastic crates— Specification

1. Scope

This Kenya standard prescribes the requirements and test methods for rigid plastic crates for holding and transportation of beverages, fruits and vegetables, bread and milk among others.

2. Requirements

2.1 The crates shall consist of a rigid or collapsible plastic container with base and side walls, either solid or perforated or its combination.

2.2 Material

The base raw material for crates shall unpigmented plastic such as high density polyethylene (HDPE),polypropylene copolymer (PPCP),polyethylene etc.

3 Performance requirements

3.3.1 Drop strength

When tested in accordance with Annex A at room temperature, plastic crate shall show no splitting, permanent distortion or other signs of failure.

3.3.2 Impact strength

When tested in accordance with KS 1581-1 at room temperature, the plastic crate shall show no splitting, permanent distortion or other signs of failure.

3.3.3 Deformation resistance

The lateral or longitudinal distortion of the crate shall not exceed 10 % when tested in accordance with Annex B.

4. Finish

4.1. The body of the crates shall be smooth and free from flashes and shall have no sharp edges.

4.2 Each plastic crate shall be formed in such a manner that a provision for handling is incorporated, with two longitudinally firm gripping places located at the top of the crate. The gripping part for handling shall have no sharp corners or edges.

5 Packaging and marking

5.1 Packaging

5.1.1 Plastic crates shall be so packed or protected as to prevent damage to the surfaces during transportation and handling.

5.2 Marking

The plastic crate shall be indelibly and legibly marked with the following information:

a) manufacturer's name;

b) registered trade mark, if any;
c) Instructions for correct effective use
d) Disposal and safety requirements
e) country of origin or manufacture;
f) Dimesion of the crates

g) batch number; or code

h) Serial number.

Annex A
(Normative)
Drop test

A.1 Principle

The drop test is used to determine the ability of the plastic crate to withstand rough and sudden drop from a height when loaded.

A.2 Procedure

Fill the crate with sand or any other weights to designated load. Elevate it to a height of 3 ± 0.05 m, keeping it in a vertical position. Drop it from this position in such a manner as to fall freely and to strike the concrete floor. Repeat the test three times.

After each drop observe any physical damage to the plastic crate.

Annex B
(Normative)
Deformation resistance test

B.1 Principle

The deformation resistance test is used to determine the ability of the plastic crate to withstand compression loads in a packed position when stored, one on top of the other.

B.2 Procedure

B.2.1 With the plastic crate in a packed condition, record the top dimensions of the crate, both the width and length.

B.2.2 On the top of crate, add designate weight. After 60 ± 5 minutes record the width and length of the crate again. Calculate the percentage distortion of the crate using the formula below.

$$\text{Distortion (\%), in length} = \frac{l - l_o}{l_o} \times 100\,\%$$

where

l = final length in mm,
l_o = original length in mm.

and

$$\text{Distortion (\%), in width} = \frac{W - W_o}{W_o} \times 100\,\%$$

where

W = final width in mm, and
W_o = original width in mm.

