

ICS 55.160
CCS A 82



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 6543-2025

Replacing GB/T 6543-2008

Single and double corrugated boxes for transport packages

运输包装用单瓦楞纸箱和双瓦楞纸箱

Issued on: May 30, 2025

Implemented on: December 1, 2025

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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1 Scope

This document provides classification of single and double corrugated boxes for transport packages (hereinafter referred to as "corrugated boxes"). It specifies requirements, inspection rules, marking, packaging, transportation and storage, and describes test methods.

This document applies to the design, production and inspection of corrugated boxes with a content mass not exceeding 55 kg.

2 Normative references

GB/T 191

GB/T 462

GB/T 2828.1-2012

GB/T 4857.4

GB/T 6544-2008

GB/T 6545

GB/T 6546

GB/T 6547

GB/T 6548

GB/T 10739

GB/T 17497.3-2012

3 Terms and definitions

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

3.1 Corrugated fiberboard

A composite fiberboard consisting of one or more layers of corrugated paper bonded between several layers of paper or fiberboard.

[Source. GB/T 6544-2008, 3.1.2, modified]

3.2 Corrugated box

A box made of corrugated fiberboard (3.1) as the main material.

3.3 Inside dimension of length plus width and depth

The sum of the length, width and height of the inner dimensions of the box.

[Source. GB/T 16717-2013, 3.1]

3.4 Hole of box corner

Holes at the corners of a corrugated box (3.2) after it is formed.

3.5 Prime section

The part of the printed image that reflects the theme.

3.6 Subprime section

Any part of the printed image or text other than the prime section (3.5).

4.1 Types of corrugated boxes

Corrugated boxes are divided into 2 categories and 20 types based on the maximum mass of the contents, the inside dimension of length plus width and depth, the distribution environment, and the type of corrugated fiberboard used. See Table 1. The performance of

the corrugated fiberboard used in each type of corrugated box must not be lower than the specified values in Table 1 of GB/T 6544-2008. Category 1 boxes are primarily used in relatively harsh distribution environments, while Category 2 boxes are primarily used in more favorable distribution environments.

4.2 Basic box type and code

The basic types and codes of corrugated boxes are listed in Annex A. Depending on the contents, other types of corrugated boxes may be used. Corrugated boxes may contain accessories such as partitions, padding, and bases. Their types and codes are listed in Annex B.

5.1 Appearance

5.1.1 The outer surface of the corrugated box should be smooth and free of obvious defects such as dirt, scratches, and corner wrapping. The outer surface of the box should not have obvious color differences within the same batch of boxes.

5.1.2 The content of printed labels on corrugated boxes should comply with the

requirements of the drawings confirmed by both the customer and the supplier, with clear patterns and texts and no obvious color difference.

5.1.3 The nails on the corrugated boxes should be firmly nailed and fully nailed. There should be no defects such as overlapping nails, warped nails, or poor corners.

5.1.4 There should be no defects such as glue overflow and glue see-through when bonding corrugated fiberboard boxes.

5.2 Dimensions and deviations

The external dimensions of rigid rectangular corrugated boxes should comply with GB/T 4892. The dimensional tolerances for length, width, and height should be ± 3 mm for single corrugated boxes and ± 5 mm for double corrugated boxes. The unfolded dimensions, internal dimensions, external dimensions, extension, and their relationships for 0201 boxes are shown in Annex C. Other boxes may refer to this guide.

5.3 Squareness

For boxes with an inside dimension of length plus width and depth not exceeding 1000 mm, the difference between the lengths of the top and bottom diagonals should not exceed 5 mm. For boxes with an inside dimension of length plus width and depth exceeding 1000 mm, the difference should not exceed 8 mm.

5.4 Hole of box corner

When the box is stretched and formed, the maximum size of the hole of box corner of the box should not be greater than 5 mm.

5.5 Nailing

When nailing, the spacing between nail lines should be no more than 80 mm for a single nail and no more than 110 mm for a double nail. Nail along the centerline of the overlapping portion, using diagonal nails (at approximately a 45° angle to the vertical edge of the box) or horizontal nails. The distance between the top end of the head nail and the centerline of the top indentation and the bottom end of the tail nail and the centerline of the bottom indentation should be no more than 25 mm. The width of the tongue edge of the nailed overlap of corrugated boxes should be no less than 30 mm for single corrugated boxes and no less than 35 mm for double corrugated boxes.

5.6.1 Overlapping tongue width

For single corrugated boxes, the width should not be less than 20 mm. For double corrugated boxes, the width should not be less than 30 mm.

5.6.2 Bond strength

The bond strength is expressed as the peel rate. When tested according to the method in 6.7, no less than 70% of the bonded surface should be damaged during peeling.

5.7 Fold-resistant swing cover

When tested according to method 6.8, the face paper should not have any cracks, and the total length of the cracks in the lining paper should not be greater than 25% of the flap length.

5.8 Properties of fiberboard after processing

After corrugated fiberboard is processed into corrugated boxes, its thickness and edge

6.1 Appearance

Conduct visual inspection under natural light, at a distance of 1 m.

6.2 Dimensions and deviations

To measure the inside dimensions, stretch the box to form a square. After the two adjacent non-overlapping surfaces form a right angle, measure the length and width at the lap joint, 50 mm from the flap indentation. Measure the height as the distance between the inner