

ICS 83.160.10



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

GB/T 7036.1-2023

**Inner tube for pneumatic tyres - Part 1: Inner tubes for motor
vehicle tyres**

(English Translation)

Issued on: December 28, 2023

Implemented on: July 1, 2024

Issued by: State Administration for Market Regulation

Table of Contents

Foreword...	3
Introduction...	5
1 Scope...	6
2 Normative References...	6
3 Terms and Definitions...	6
4 Categories of Materials...	6
5 Requirements...	6
6 Test Methods...	8
7 Product Marking...	9
8 Transportation...	9
9 Storage...	9

1 Scope

This document specifies the requirements, test methods, product marking, transportation and storage of the inner tubes for passenger car tyres and truck tyres.

This document is applicable to inner tubes for passenger car tyres and truck tyres. For the inner tubes for engineering machinery tyres, agricultural tyres and industrial vehicle tyres, this document may be taken as a reference.

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through the normative references in the text. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 519 Test Methods for Measuring Physical Properties of Pneumatic Tyres

GB/T 1796 (all parts) Tyre Valves

GB/T 6326 Tyre Terms and Definitions

GB/T 9768 Rules for Application and Maintenance of Tyres

3 Terms and Definitions

The terms and definitions defined in GB/T 6326 are applicable to this document.

4 Categories of Materials

In accordance with the materials commonly used in inner tube manufacturing, they are divided into Category A and Category Type B. Natural rubber or a combination of natural rubber is

Category A, and butyl rubber or a combination of butyl rubber is Category B.

5.1 Thickness

The inner tubes shall not have scars, cracks, bubbles, sponginess, impurities and other appearance defects that may affect the use.

6.1 Thickness and Physical and Mechanical Properties

Single-layer thickness, tensile strength, tensile strength change rate after aging, elongation at break, thermal tensile deformation, joint strength, adhesion between rubber cushion valve and tyre body, bonding strength between valve (with a base) and rubber cushion and adhesion between valve (without a base) and rubber cushion shall be tested in accordance with the stipulations of GB/T 519.

6.2.1 Inflatable parking test

Inflate the inner tube, until the cross-section circumference of the inner tube at the same position reaches 110% ~ 120% of the double flat-fold cross-section width of the inner tube. Stop inflating, tighten the valve core, and park for at least 24 hours. Then, measure the cross-section circumference of the inner tube. If the cross-section circumference value of the inner tube at the same position decreases by no more than 1%, it shall be deemed to have passed the test.

Otherwise, the valve core shall be replaced, and the test shall be performed again. If the cross-section circumference value decreases by more than 1% again, then, the inner tube shall be deemed to have failed the test.

6.2.2 Water tank test

6.2.2.1

Inflate the inner tube. When the cross-section circumference of the inner tube at the same position is 110% ~ 120% of the double flat-fold cross-section width of the inner tube, stop inflating and tighten the valve core.

6.2.2.2

Put the inner tube into the water tank, so that the inner tube is completely immersed in the water (the water should not be too deep). After the water stabilizes, start to observe whether there are bubbles escaping from each part of the inner tube. If no bubbles escape within 1 minute, the inner tube shall be deemed to have passed the test.

6.2.2.3

If there are bubbles escaping from the valve core, the valve core shall be replaced, and the test shall be performed again. If no bubbles escape within 2 minutes, the inner tube shall still be deemed to have passed the test. If bubbles escape from other parts of the inner tube, the inner tube shall be removed and inspected, and the test can be performed again. If no bubbles escape within 1 minute, the inner tube shall be deemed to have passed the test. Otherwise, it shall be deemed to have failed the test.

6.2.2.4

If it is difficult for large-sized inner tubes to be completely immersed in water, they can be immersed in water in sections for the test.

7 Product Marking

7.1

Each inner tube shall be clearly marked as follows:

- a) Specifications;
- b) Trademark or manufacturer's name;
- c) Production date, at least the year and month of production can be identified;
- d) Inspection mark.

Among them, items a), b) and c) are permanent marks, while item d) is a mark that cannot be washed away.

7.2

Category B inner tubes shall be marked with "BUTYL" or a blue line with a width of not less than 2 mm on the circumference.

8 Transportation

8.1

During transportation, any mechanical damage shall be prevented.

8.2

During transportation, the product shall be protected from direct exposure to the sun, rain and snow, and shall not come into contact with oil, grease, acid, alkali and other substances that may damage the quality of the inner tube.

8.3

During loading, unloading and transshipment, care shall be taken to prevent damage to the boxes and products under the pallets due to excessive height or weight.

9 Storage

9.1

Inner tubes sold as a whole with the outer tyres or shipped from the factory are stored together with the outer tyres, and the storage requirements shall comply with the relevant stipulations of GB/T 9768.

9.2

When stored in a room-temperature environment, it shall be more than 1 m away from heat sources, there shall be no direct sunlight, and light sources that emit ultraviolet rays shall not be used.

9.3

The storage room shall not contain any ozone-generating devices or flammable gases or volatile organic compounds that may produce ozone through photochemical reactions.

9.4

During storage, the product shall not come into contact with oil, grease, acid, alkali and other substances that may damage the quality of the inner tube.

9.5

During storage, biological hazards to the product shall be prevented.

.....