

ICS 83.160.20

CCS G41



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

GB/T 15324-2023

Replacing GB/T 15324-2004

**Test method of the physical properties for inner tube of aircraft
tyres**

航空轮胎内胎物理性能试验方法

Issued on: December 28, 2023

Implemented on: July 1, 2024

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

Table of Contents

- 1 Scope
- 2 Normative reference documents
- 3 Terms and definitions
- 4 Test requirements

Foreword

This document complies with the provisions of GB/T 1:1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting: This document replaces GB/T 15324-2004 "Test Methods for Physical Properties of Aerospace Tire Inner Tubes" and is consistent with GB/T 15324-2004 In addition to structural adjustments and editorial changes, the main technical changes are as follows:

- a) Changes in the preparation requirements for tensile property test specimens (see 5:1:2; 4:1:1:3 of the:2004 edition);
- b) The aging performance test requirements have been changed (see 5:2:2; 4:2:2:1 of the:2004 edition);
- c) The preparation requirements for hardness determination tests have been changed (see 5:4:1; 4:5:1:2 of the:2004 edition);
- d) Added the bonding strength test between the baseless valve and the rubber pad (see 5:7);

e) Added the bonding strength test between the reinforcing cord and the tire body rubber (see 5:8): Please note that some content in this document may be subject to patents: The publisher of this document assumes no responsibility for identifying patents: This document is proposed by China Petroleum and Chemical Industry Federation: This document is under the jurisdiction of the National Tire and Rim Standardization Technical Committee (SAC/TC19): This document was drafted by: China National Chemical Corporation Shuguang Rubber Industry Research and Design Institute Co., Ltd., Guilin Lanyu Aviation Tire Development Co., Ltd: Company, Sanyak Co., Ltd., and Tsinghua University: The main drafters of this document: Gao Jing, Li Yuting, Lu Hengyu, Huang Zhiyi, Zhao Jun, Lai Xiaomei, Wu Yang, Su Changyan, Wang Peng, Liu Dameng: This document was first published in:1994, revised for the first time in:2004, and this is the second revision: Test methods for physical properties of aviation tire inner tubes

1 Scope

GB/T 15324-2023 is the Chinese national standard on test method of the physical properties for inner tube of aircraft tyres, in the field of rubber and plastic industries. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 28 December 2023 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 July 2024. Classification: ICS 83.160.20, CCS G41. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document describes the tensile, aging, tearing, hardness, brittleness temperature, and adhesion strength between the valve and rubber pad of the vulcanized rubber of aviation tire inner tubes: Test method for properties such as strength, bonding strength between reinforcing cord fabric and tire body rubber: This document is applicable to the physical performance testing of aviation tire inner tubes:

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, the dated quotations For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document:

GB/T 528 Determination of tensile stress and strain properties of vulcanized rubber or thermoplastic rubber

GB/T 529 Determination of tear strength of vulcanized rubber or thermoplastic rubber (trouser-shaped, right-angled and crescent-shaped specimens) GB/T 531:

1 Test method for indentation hardness of vulcanized rubber or thermoplastic rubber Part 1: Shore durometer method (Shore hardness)

GB/T 532 Determination of bonding strength between vulcanized rubber or thermoplastic rubber and fabrics

GB/T 1682 Single sample method for determination of low-temperature brittleness of vulcanized rubber

GB/T 2941 Rubber physical test methods General procedures for specimen preparation and adjustment

GB/T 3512 Hot air accelerated aging and heat resistance test of vulcanized rubber or thermoplastic rubber

HG/T 2198 General requirements for physical test methods of vulcanized rubber

3 Terms and definitions

The terms and definitions defined in GB/T 528 apply to this document:

4 Test requirements

1 Sample placement Sample placement should meet the following requirements:

- a) All finished products that undergo physical performance testing must be placed in the natural environment for no less than 12 hours after vulcanization before sampling;
 - b) The polished specimen shall be placed at standard laboratory temperature for no less than 16 hours in accordance with the provisions of GB/T 2941 before cutting;
 - c) Before the test, the sample shall be placed in a standard laboratory environment for no less than 2 hours in accordance with the provisions of GB/T 2941;
 - d) After reaching the specified aging time, take out the specimen from the aging box, and place the removed specimen in the test to be tested in a stress-free manner: Adjustment in the environment required by the performance shall be no less than 16 hours and no more than 6 days, and shall be tested in accordance with the relevant performance test methods:
- 4:

2 Other requirements Finished product samples should meet the following requirements:

- a) When the thickness of the finished product sample is less than that specified in the standard, samples shall be taken according to the original thickness of the adhesive layer and noted in the test report;