

ICS 83.160.10

CCS G41



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

GB/T 1702-2017

Replacing GB/T 1702-2008

Cycle tyres

力车轮胎

Issued on: July 12, 2017

Implemented on: June 1, 2018

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Illustration of types
- 5 Requirements
- 6 Test methods
 - 6.2 Tread rubber tensile test
 - 6.3 Tread rubber wear test
 - 6.4 Sidewall ozone aging resistance test
 - 6.8 Adhesion strength test
- 7 Marking, packaging, transport and storage
- 8 Others

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 1702-2008 "Cycle tires". As compared with GB/T 1702-2008, the main technical changes are as follows: - MODIFY the various types of illustrations for a more complete cross- sectional view of the tire components (SEE Clause 4; Clause 4 of the 2008 version); - MODIFY the item 3 in "Table

1 Tire performance", changing "non-black tire sidewall resistance to ozone aging" into "sidewall rubber resistance to ozone aging"; MODIFY this performance index "Within fracturing C-2 as specified in Appendix D" into "the fracturing degree does not exceed the C- 2 as specified in Appendix D" (SEE 5.3; clause

5.3 of 2008 version); - MODIFY the item 5 in "Table

1 Tire performance", changing the "tension strength of bead ring / KN" into "tensile strength of bead ring / KN", and changing the "straight edge, hooked edge and hooked straight edge tire" in this performance indicator column into "the tire using steel wire or fiber material as the bead ring" (SEE 5.3; clause

5.3 of 2008 version); - MODIFY the item 6 and item 7 in the "Table

1 Tire performance", CHANGE the test result unit of the cord fabric tensile strength and adhesive strength from kN/m into N/mm (SEE 5.3; clause

5.3 of 2008 version); - MODIFY the footnote "a" of Table 1, changing the tread wear test stroke from

1.61 km (SEE 5.3; clause

5.3 of the 2008 version); - In the preparation of tread wear test specimens, MODIFY the "the cut specimen is ground on a grinding wheel to a thickness of

0.2 mm" into "the thickness of the cut specimen is

0.2 mm" [see

b) of 6.3.2; clause

6.3.2.2 of 2008 version]; - In the cord tensile strength test, MODIFY the "use of cord tension tester, canvas tension tester or rubber tension tester" into the "use of tension tester" (SEE 6.7; clause

6.7 of 2008 version); - In the adhesion strength test between tread rubber and fabric layer, MODIFY the "use rubber tension tester's fixture to clamp the specimen" into the "use the tension tester's fixture to clamp the specimen" (SEE 6.8.1; clause

1 Scope

GB/T 1702-2017 is the Chinese national standard on cycle 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 12 July 2017 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 June 2018. Classification: ICS 83.160.10, 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 standard specifies the terms and definitions, types, requirements, test methods, markings, packaging, transportation, and storage of the cycle tires. This standard applies to pneumatic tires specified in GB/T 7377. This standard does not apply to tubular racing tires and non-pneumatic tires.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are

applicable to this standard.

GB/T 528 Rubber, vulcanized or thermoplastic - Determination of tensile stress-strain properties

GB/T 1689 Rubber vulcanized - Determination of abrasion resistance (Akron machine)

GB/T 2941 Rubber - General procedures for preparing and conditioning test pieces for physical test methods

GB/T 6326 Tyre - Terms and definitions

3 Terms and definitions

The terms and definitions defined in GB/T 6326 and the following apply to this document.

3.1 Non-weighted type The tire which has a tire load less than 120 kg is non-weighted tire.

4 Illustration of types

4.1 The straight-side (SS) tire is shown in Figure 1a).

4.2 The hooked-side (HB) tire is shown in Figure 1b).

4.3 The soft-side (BE) tire is shown in Figure 1c).

5 Requirements

5.1 Tire specifications, basic parameters and major dimensions The specifications, basic parameters, and major dimensions of the tire shall meet the requirements of GB/T 7377.

5.2 Appearance Tires are installed on rims that meet the requirements of GB/T 7377 or agreed between the supplier and the purchaser. There must be no visible oscillation during visual inspection.

5.3 Performance Tire performance shall meet the requirements of Table 1.

6 Test methods

6.1 Determination of basic parameters and major dimensions of tire Tests for the basic parameters and major dimensions of the tires are carried out in accordance with the provisions of HG/T 2906.

6.2 Tread rubber tensile test

6.2.1 Test is performed in accordance with the provisions of GB/T 528, and the type 2 cutter is used.

6.3 Tread rubber wear test

6.3.1 Determination of cycle tire tread rubber wear is performed in accordance with the provisions of GB/T 1689.

6.3.2 The sample preparation is as follows:

6.3.3 The tread rubber specimen crown rubber is ground surface.

6.3.4 If it is difficult to take sample, it can be tested by preparing the tread rubber into standard specimen in accordance with GB/T 2941.

6.4 Sidewall ozone aging resistance test

6.5 Tire lug bending test From the tested tire, CUT a 100 mm long tire lug rubber as the specimen, STRIP off the adhesive tape from the tire lug rubber, LET the middle part of the bottom of the specimen be in perpendicular contact with a round rod which has a diameter of 10 mm, BEND it around the rod slowly to make it into a straight angle, LET it be standing for 1 min, CHECK whether there is fracturing. The test is performed at laboratory conditions.

6.6 Tire bead tensile strength test CUT a tire bead with a length of approximately 200 mm at the tire bead area, USE a tensile tester with an accuracy of $\pm 2\%$ to perform test at room temperature, the decreasing speed of the tensile tester is 25 mm/min.

6.7 Cord fabric tensile strength test From the corresponding part of the tire crown, along the longitudinal direction of first layer of the cord fabric, MAKE a test piece with a width of 10 mm, USE the tensile tester to perform test. The test shall be carried out under laboratory conditions. The tensile speed shall be 200 mm/min ~ 300 mm/min.

6.8 Adhesion strength test

6.9 Strength test The tube strength test of the tire is carried out in accordance with the provisions of GB/T 9749.

6.10 Detachment hydraulic test The detachment hydraulic pressure of tire is tested in accordance with the provisions of GB/T 9749.

6.11 Durability test The durability test of the tire is carried out in accordance with the provisions of GB/T 9749.

6.12 Static load test The static load test of the tire is carried out in accordance with the provisions of HG/T 2906.

7 Marking, packaging, transport and storage

7.1 Marking Tires shall have the following markings, where