

ICS 83.160.10

CCS G 41



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

GB/T 31548-2023

Replacing GB/T 31548-2015

Series of electric bicycle tyres

电动自行车轮胎系列

Issued on: December 28, 2023

Implemented on: July 1, 2024

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

Table of Contents

Foreword	3
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Classification	5
5 Specification marking, basic parameters and main dimensions	7
6 Measurement methods for tyre size	12
Annex A (normative) Calculation of main tyre dimensions	14
Annex B (informative) Tyres with new tyre section width (S) exceeding 54 mm -- Basic parameters and main dimensions	17

Foreword

This document was drafted in accordance with the rules given in GB/T 1.1-2020 "Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents".

This document replaces GB/T 31548-2015 "Series of electric bicycle tyres". Compared with GB/T 31548-2015, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- a) Change the classification of tyres (see Chapter 4 of this Edition; Chapter 4 of Edition 2015);
- b) Change the requirements and examples of the old markings for hook straight edge and straight edge tyre specifications (see 5.2.1 of this Edition; 5.2.1 of Edition 2015);
- c) Add tubeless tyre specification identification, basic parameters, main dimensions and related content (see 5.1, 5.4, Table 3 of this Edition);
- d) Add footnote "c" for the main dimensions of new tyres in the tyre parameter table (see Table 1 and Table 2 of this Edition);
- e) Add specific measurement tools, measurement conditions and measurement steps (see Chapter 6 of this Edition; Chapter 6 of Edition 2015);
- f) Add the normative reference document GB/T 31546 (see 6.2.1 of this Edition).

Delete the original normative reference document HG/T 2906 (see Chapter 6 of Edition

2015);

g) Change and refine the value requirements of K (see A.1.1.2 of this Edition; A.1.1.2 of Edition 2015).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The issuing authority shall not be held responsible for identifying any or all such patent rights.

This document was proposed by China Petroleum and Chemical Industry Federation.

This document shall be under the jurisdiction of National Technical Committee on Tyres and Rims of Standardization Administration of China (SAC/TC 19).

The drafting organizations of this document. Jiangsu General Technology Co., Ltd., New Dongyue Group Co., Ltd., Xiamen Chengshin Rubber Industry Co., Ltd., Bengbu Innova Tyre Co., Ltd., Tengzhou Saiyang Rubber Industry Co., Ltd., Guangzhou Feixuan Rubber Co., Ltd., Hebei Xiemei Rubber Products Co., Ltd., Sichuan Yuanxing Series of electric bicycle tyres

1 Scope

This document specifies the classification, specification marking, basic parameters, main dimensions and measurement methods of electric bicycle tyres.

This document applies to pneumatic tyres for electric bicycles.

This document does not apply to non-pneumatic tyres.

2 Normative references

GB/T 6326

GB/T 8170

GB/T 31546

GB/T 31580

3 Terms and definitions

For the purposes of this document, the terms and definitions defined in GB/T 6326 as well as the followings apply.

3.1 Croctchet type tyre

A tyre whose bead core is made of steel wire or other high-strength material and whose bead profile is shaped to match the hook-and-straight-edge (CT) rim.

4.1 Bead structure

Electric bicycle tyres are divided into four categories according to the structural form of the tyre bead and rim. croctchet type (CT) tyre, see Figure 1a); straight-side (SS) 5.5.2 The maximum outer diameter (D_{max}) and minimum outer diameter (D_{min}) of a new tyre are calculated according to formula (3) and formula (4). Where, D_{max} - the maximum outer diameter of a new tyre, in millimeters (mm);

H - the section height of a new tyre, in millimeters (mm);

b - the section height tolerance coefficient, which is 0.05;

D_N - the nominal rim diameter, in millimeters (mm);

D_{min} - the minimum outer diameter of a new tyre, in millimeters (mm).

The calculation results shall be integer values according to GB/T 8170.

5.6 Correction value for section width of new tyre installed on permitted rim

The correction value for the section width of a new tyre installed on an allowable rim is 0.4 times the difference between the nominal inner width of the measured rim and the allowable rim.

6.1 Measuring tools

6.1.1 Air pressure gauge. accuracy is ± 5 kPa.

6.1.2 Flat steel tape measure. accuracy is ± 1 mm.

6.1.3 Vernier caliper. accuracy is ± 0.02 mm.

6.2 Measurement conditions

6.2.1 The appearance quality of the test tyres shall comply with the requirements of GB/T 31546.

6.2.2 Install the test tyre on the measuring rim specified in GB/T 31580. Inflation it to the inflation pressure specified in the standard.

6.2.3 Place the test tyre and rim assembly at a laboratory temperature of $25^{\circ}\text{C} \pm 10^{\circ}\text{C}$ for at least 3 h. Annex A (normative) Calculation of main tyre dimensions A.1 Size calculation of croctchet type tyres, straight-side tyres and tubeless tyres A.1.1 Size calculation of new croctchet type tyres, straight-side tyres and tubeless tyres A.1.1.1 The section width (S) of a new tyre is calculated according to formula (A.1). Where, S - New tyre section width, in millimeters (mm);

S_N - Tyre nominal section width, in millimeters (mm).

A.1.1.2 The section height (H) of a new tyre shall be calculated according to formula (A.2).
Where, H - New tyre section height, in millimeters (mm);

K - Increased height, ranging from 2 mm to 3.5 mm (when $S \leq 44$, $K = 2$; when $44 < S \leq 54$, $K = 2.5$; when $S > 54$, $K = 3.5$).

A.1.1.3 The outer diameter of a new tyre (D0) is calculated according to formula (A.3).
Where, D0 - New tyre outer diameter, in millimeters (mm);

Dr - Nominal rim diameter, in millimeters (mm).

A.1.2 Maximum use size calculation of croctchet type tyres, straight-side tyres and