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CCS Q69

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB 5763-2018

Replacing GB 5763-2008

Brake linings for automobiles

汽车用制动器衬片

Issued on: November 19, 2018 **Implemented on: October 1, 2019**

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Foreword

This Standard is compulsory in full-text. This Standard is drafted in accordance with the stipulations in GB/T 1.1-2009. This Standard serves as a replacement of GB 5763-2008 Brake Linings for Automobiles. In comparison with GB 5763-2008, there are several main technical changes as follows:

---Compulsory in provisions is modified into compulsory in full-text (please refer to this Foreword; Foreword in Version 2008);

---There are changes in normative references (please refer to Chapter 2; Chapter 2 in Version 2008);

---All terms and definitions are modified (please refer to Chapter 3; Chapter 3 in Version 2008);

---Classification is deleted (please refer to Chapter 4 in Version 2008);

---"Technical Requirements" is modified into "Basic Requirements Regarding Health and Safety" (please refer to Chapter 4; Chapter 5 in Version 2008);

---The technical requirements and corresponding test methods of "appearance quality",

"dimensional deviation", "impact strength", "thermal expansion rate" and "compressive strain" are deleted (please refer to 5.1, 5.2, 5.5,

5.7 in Version 2008; 6.1, 6.2, 6.4, 6.5,

---The requirements and test methods of "harmful elements limit" are added (please refer to 4.1,

---The friction performance requirement is modified from "friction coefficient of various test temperatures of constant-speed friction test, allowable deviation of appointed friction coefficient and abrasion rate" into "small sample bench test room temperature and high-temperature friction coefficient of drum brake lining adopted on Type-M1, Type-M2, Type-N1, Type-O1, Type-O2 vehicle" and "disc lining and working friction coefficient deviation of drag test of friction performance of drum brake lining adopted on Type-M3, Type-N2, Type-N3, Type-O3, Type-O4 vehicle"; test method is also correspondingly modified (please refer to

6.3 in Version 2008);

---The requirement that "shear strength of bonded rubber base drum brake lining at room temperature shall be not less than

1.0 MPa; the area of lining that remains on the shoe after test shall be not less than 70%" is added (please refer to 4.3);

---Inspection rules are modified correspondingly (please refer to Chapter 6; Chapter 7 in Version 2008);

1 Scope

GB 5763-2018 is the Chinese national standard on brake linings for automobiles, in the field of road vehicles engineering. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 19 November 2018 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 October 2019. Classification: ICS 43.040.40, CCS Q69. 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, the basic requirements regarding health and safety, test methods, inspection rules, marking, packaging, transportation and storage of brake linings for automobiles. This Standard is applicable to brake linings for automobiles (hereinafter referred to as "linings").

2 Normative References

The following documents are indispensable to the application of this Standard. In terms of references with a specified date, only versions with a specified date are applicable to this Standard. The latest version (including all the modifications) of references without a specified date is also applicable to this Standard.

GB/T 5620 Road Vehicles - Braking of Automotive Vehicles and Their Trailers - Vocabulary

GB/T 15089 Classification of Power-driven Vehicles and Trailers

GB/T 17469 Characteristics Evaluation of Brake Lining for Automobile - Small Sample Bench Test Method

GB/T 22309 Road Vehicles - Brake Linings - Shear Test Procedure for Disc Brake Pad and Drum Brake Shoe Assemblies

GB/T 23263 Determination of Asbestos in Products

3 Terms and Definitions

What is defined in GB/T 5620 and GB/T 15089, and the following terms and definitions are applicable to this document.

3.1 Coefficient of Friction Coefficient of friction refers to the ratio of the tangential force (namely, friction) that obstructs two objects' relative motion to the normal force that applies to the surface of the objects.

3.4 Classification for Coefficient of Friction Classification for coefficient of friction refers to the classification of friction coefficient into 6 grades from small to large. C, D, E, F, G, H in small sample bench test. Please refer to GB/T 17469.In terms of drum brake lining adopted on Type-M1, Type-M2, Type- N1, Type-O1, Type-O2 vehicle, its friction coefficient shall be represented with grade code. The first letter represents friction coefficient at room temperature; the second letter represents high-temperature friction coefficient.

4.1 Limit of Harmful Elements

4.1.1 Linings shall not contain asbestos.

4.2 Friction Performance

4.2.1 The result of small sample bench test of drum lining that is adopted on Type-M1, Type-M2, Type-N1, Type-O1, Type-O2 vehicle shall comply with the following requirements.

4.2.2 The result of friction performance drag test of disc lining that is adopted on Type- M1, Type-M2, Type-N1, Type-O1, Type-O2 vehicle shall comply with the following requirements.

4.2.3 The result of friction performance drag test of disc lining and drum lining that is adopted on Type-M3, Type-N2, Type-N3, Type-O3, Type-O4 vehicle shall comply with the following requirements.

4.3 Shear Strength

4.3.1 The shear strength of bonded resin base drum lining at room temperature shall be not less than

5 Test Methods

5.1 Determination of Asbestos Content The determination of asbestos content shall comply with GB/T 23263.

5.3 Friction Performance Test

5.3.1 Small sample bench test The small sample bench test of friction performance of drum lining adopted on Type- M1, Type-M2, Type-N1, Type-O1, Type-O2 vehicle shall comply with GB/T 17469.

5.4 Shear Strength Test Shear strength test shall comply with GB/T 22309.

6 Inspection Rules

6.1 Inspection Items Before exit-factory, each batch of products shall receive inspection of friction performance and shear strength. When new products are put into production to finalize the modeling, or when there are changes in raw materials, harmful elements in the products shall also be tested.

6.2 Group Batch Principle Products shall be classified into 3 types, namely, disc lining; drum lining adopted on Type-M1, Type-M2, Type-N1, Type-O1, Type-O2 vehicle; drum lining adopted on Type- M3, Type-N2, Type-N3, Type-O3, Type-O4 vehicle.

6.3 Result Determination In accordance with the number of samples stipulated in the test method, randomly take samples. When each sample complies with the requirements in this Standard, this batch of products shall be deemed as qualified; if a sample fails to comply with any of the requirements in this Standard, take a doubled number of samples and re-inspect the non-conformance items.

7.2 Packaging

7.2.1 Linings shall be tightly and tidily placed into a clean, dry, solid and durable case (box).

7.2.2 In each packaging case (box), place linings of the same model and specification; when user demands, a full-set of linings can also be placed.