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

GB/T 37269-2018

Brake pad assemblies for automobiles

汽车用盘式制动衬块总成

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1 Scope

China's national standard for automotive disc brake pad assemblies. It specifies the terms and definitions, the requirements, the test methods, the inspection rules and the marking, packaging, transport and storage. A brake pad is a friction material bonded to a steel backing plate, and it is the component of a car that is designed to wear out - the whole system works by converting the vehicle's kinetic energy into heat in a part that is consumed doing it. What the standard has to guarantee is that the friction coefficient is what the vehicle's brake system was designed around, and that it stays there. A pad whose coefficient is too low lengthens the stopping distance; one that is too high locks the wheels or unbalances the braking front to rear; and one whose coefficient falls as it heats fades on a long descent. The bond between friction material and backing plate is the other critical item, since a pad that delaminates removes braking from that wheel entirely and without warning.

This Standard specifies the requirements, test methods, inspection rules, marking, packaging, transportation, and storage of disc brake pad assembly for automobile (hereinafter known as "disc brake pad" for short). This Standard applies to disc brake pad

assembly for hydraulic and pneumatic disc brakes for type M, type N, and type O vehicles.

2 Normative references

The following documents are indispensable for the application of this document. For the dated references, only the editions with the dates indicated are applicable to this document. For the undated references, the latest edition (including all the amendments) are applicable to this document.

GB/T 2828.1 Sampling procedures for inspection by attributes - Part 1. Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection (GB/T 2828.1-2012, ISO 2859-1.1999, IDT)

GB/T 5620 Road vehicles - Braking of automotive vehicles and their trailers - Vocabulary (GB/T 5620-2002, idt ISO 611.1994)

GB 5763-2018 Brake linings for automobiles

GB/T 15089 Classification of power-driven vehicles and trailers

GB/T 22309 Road vehicles - Brake linings - Shear test procedure for disc brake pad and drum brake shoe assemblies (GB/T 22309-2008, ISO 6312.2001, IDT)

GB/T 22310 Road vehicles - Brake linings - Effects of heat on dimensions and form of disc brake pads-test procedure (GB/T 22310-2008, ISO 6313.1980, IDT)

GB/T 22311 Road vehicles - Brake linings - Compressive strain test method (GB/T 22311-2008, ISO 6310.2001, IDT)

GB/T 29065 Road vehicles - Brake lining friction materials - Evaluation method of corrosion effects on painted backing plates and brake shoes (GB/T 29065-2012, ISO 27667.2011, IDT) [

GB/T 15089-2001, Definition 3.3]

3 Cargo vehicles with a maximum design total mass of more than 12000 kg. [

GB/T 15089-2001, Definition 3.3.3]

3.2.2 Type N

2 Cargo vehicles with a maximum design total mass of more than 3500 kg but no more than 12000 kg. [

GB/T 15089-2001, Definition 3.3.2]

3.3 Type O Trailers (including semi-trailers). [

GB/T 15089-2001, Definition 3.4]

3.3.2 Type O

2 Trailers with a maximum design total mass of more than 750 kg but no more than 3500 kg. [

GB/T 15089-2001, Definition 3.4.2]

3.3.3 Type O

3 Trailers with a maximum design total mass of more than 3500 kg but no more than 10000 kg. [

GB/T 15089-2001, Definition 3.4.3]

3.3.4 Type O

4 The shear strength of disc brake pad (bond type), at 300 °C, shall not be less than

1.5 MPa. The area of the brake lining remaining on the backing plate after shearing shall not be less than 70%.

4.7 Density The density of disc brake pad shall be agreed upon by both the supplier and the purchaser. The deviation shall not be more than $\pm 10\%$ of the nominal value.

4.8 Corrosion resistance Under the neutral salt spray NSS test conditions, the test chamber temperature is $(35 \pm 2)^\circ\text{C}$; the sodium chloride concentration is $(50 \pm 5)\text{g/L}$; the pH is 6.5~7.2; the test period is 96 h; painted backing plate shall have no defects such as blistering; and the rusted area shall not exceed 50% of the area of friction lining. After the corrosion resistance test, the shear strength test is carried out. The room temperature shear strength shall not be less than

4.9 Brake performance requirements

4.9.1 The brake performance requirements for disc brake pads for type M1 vehicles shall comply with the provisions of QC/T 564.

4.9.2 The brake performance requirements for disc brake pads for type M2, M3, N, and O vehicles shall comply with the provisions of QC/T 239.

5 Test methods

5.1 Appearance quality Appearance quality inspection shall be carried out according to JC/T 2103-2012.

5.2 Dimensional deviation Dimensional deviation is measured using a measuring tool with an accuracy of not less than

0.02 mm.

5.3 Basic requirements related to health and safety The basic requirements related to health and safety shall be tested in accordance with Clause 5 of GB 5763-2018.

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