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**Rubber flaps for tyres - Requirements and test methods
(English Translation)**

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Foreword

This document was drafted in accordance with the rules provided in GB/T 1.1-2020 Directives

for Standardization - Part 1.Rules for the Structure and Drafting of Standardizing Documents.

This document modifies and adopts ISO 21634.2022 Rubber Flaps for Tyres - Requirements

and Test Methods.

In comparison with ISO 21634.2022, there are many structural adjustments. A summary table

of the structural number changes between the two documents is provided in Appendix A.

In comparison with ISO 21634.2022, this document has many technical differences, which are

indicated by a vertical single line (|) in the margin of the involved clauses. A summary table of

these technical differences and their causes is provided in Appendix B.

This document makes the following editorial modification.

---Some specifications and dimensions are added to Appendix C (informative) "Main Dimensions of Finished Tyre Flaps".

Please be noted that certain content of this document may involve patents. The institution

issuing this document does not undertake the responsibility of identifying these patents.

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

This document shall be under the jurisdiction of National Technical Committee 19 on Tyres and

Rims of Standardization Administration of China (SAC/TC 19).

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1 Scope

This document specifies the requirements and test methods for rubber flaps used for tube tyres

of motor vehicles. These rubber flaps can protect the inner tube from damage by the rim or tyre.

This document applies to flaps used for truck and bus tyres, earth-mover tyres and industrial

pneumatic tyres.

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through the normative references in the text. In terms of dated references, only the version with

the specified date applies to this document. In terms of references without a specified date, the

latest version (including all the modifications) is applicable to this document.

GB/T 521 Test Methods for Measuring Peripheral Dimensions of Tyres

GB/T 528 Rubber, Vulcanized or Thermoplastic - Determination of Tensile Stress-strain Properties (GB/T 528-2009, ISO 37.2005, IDT)

GB/T 531.1 Rubber, Vulcanized or Thermoplastic - Determination of Indentation Hardness - Part 1. Durometer Method (Shore hardness) (GB/T 531.1-2008, ISO 7619-1.2004, IDT)

GB/T 2941 Rubber - General Procedures for Preparing and Conditioning Test Pieces for Physical Test Methods (GB/T 2941-2025, ISO 23529.2016, IDT)

GB/T 3512 Rubber, Vulcanized or Thermoplastic - Accelerated Ageing and Heat Resistance Tests - Air-oven Method (GB/T 3512-2014, ISO 188.2011, IDT)

GB/T 6326 Tyre - Vocabulary

3 Terms and Definitions

The terms and definitions defined in GB/T 6326 are applicable to this document.

5.1.1 The flaps shall be a ring-shaped structure, made of natural rubber, synthetic rubber,

recycled rubber, or properly proportioned mixed rubber, and shall meet the design requirements

of 5.1.2 and 5.1.3.

5.1.2 The flaps shall be free from appearance defects that affect the service life, and the

minimum unfolded width shall be suitable for mating with the tyre/rim/inner tube assembly.

5.1.3 Use a non-stretchable tape to measure the circumference of the central area of the mating

surface of the rim (see Figure 1, No.5) to calculate inner diameter of the flaps (see Figure 1, No.6). The inner diameter of the flaps shall be greater than the nominal diameter of the rim (the

nominal diameter code of rim marked on the flaps $\times 25.4$ mm) and less than the nominal diameter of rim $+30$ mm. Smoothly apply the non-stretchable tape along the circumference direction on the inner surface of the flaps. Cut the tape and use a tape measure with a minimum

scale of 1.0 mm to measure the length of the obtained tape. This length is the circumference of

the flaps. Divide the circumference by 3.1416 to calculate the diameter. Other equivalent measurement methods may also be used.

conjunction with the flaps.

5.1.5 The main dimensions of the finished rubber flaps for tyres, determined in accordance with

tyre categories and specifications, are shown in Appendix C.

5.2 Requirements for Physical and Mechanical Properties

The physical and mechanical properties and requirements of tyre flaps shall conform to the provisions of Table 1.

Table 1 -- Physical and Mechanical Properties and Requirements of Tyre Flaps

6.1 The tensile strength, elongation at break, and permanent deformation at break of rubber

flaps for tyres shall be tested in accordance with the provisions of GB/T 2941, using "Type 1 dumbbell-shaped" specimens cut from the flaps, and the tests shall be conducted in accordance

with the provisions of GB/T 528.

6.2 For the hardness test of rubber flaps for tyres, in accordance with the provisions of GB/T

2941, prepare specimens by cutting from the center of the flaps, and the test shall be conducted

in accordance with the provisions of GB/T 531.1.

6.3 The aging test of rubber flaps for tyres shall be conducted in accordance with the provisions

of GB/T 3512, ageing the dumbbell-shaped specimens in a hot air ageing chamber at 100 °C ±