INTERNATIONAL STANDARD

ISO 21634

First edition
2022-11

Rubber flaps for tyres — Requirements and test methods

Flaps en caoutchouc pour pneumatiques – Exigences et méthodes d'essai

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Reference number
ISO 21634:2022(E)

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Published in Switzerland

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 31, *Tyres, rims and valves.*

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1 Scope

This document specifies requirements and test methods for tube-type tyres in automotive vehicles that require rubber flaps, in order to ensure they are protected against damages to the inner tube caused by the rim or tyre.

This document is applicable to tyres for road vehicles. It does not apply to 2/3 wheeler and non-road tyres.

Requirements and test methods for rubber flaps for non-road tyres are provided in Annex E.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 37, *Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties*

ISO 48-2, *Rubber, vulcanized or thermoplastic — Determination of hardness — Part 2: Hardness between 10 IRHD and 100 IRHD*

ISO 188, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*

ISO 4209-2, *Truck and bus tyres and rims (metric series) — Part 2: Rims*

ASTM D412, *Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers — Tension*

ASTM D573, *Standard Test Method for Rubber — Deterioration in an Air Oven*

ASTM D2240, *Standard Test Method for Rubber Property — Durometer Hardness*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 Materials, form and fit

4.1 Flaps shall be manufactured, using a suitable compound of natural or synthetic rubber or a blend thereof, to the design requirements given in 4.2 and 4.3 and shall be of the endless type.

4.2 Flaps shall be free from flaws and shall be suitable for tyre/rim/inner tube combinations for the minimum widths, which shall be in accordance with Annex A.

4.3 The inside diameter (see key 6 in Figure 1) of a flap, which is determined by measuring the circumference of the flap on the rim-side surface (see key 5 in Figure 1) at the centre region using

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