
**Heavy commercial vehicles and buses —
Straight-ahead braking on surfaces with
split coefficient of friction — Open-loop
test method**

*Véhicules utilitaires lourds — Freinage en ligne droite sur surfaces à
adhérence mixte — Méthode d'essai en boucle ouverte*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 16234 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 9, *Vehicle dynamics and road-holding ability*.

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Introduction

The dynamic behaviour of a road vehicle is a most important aspect of active vehicle safety. Any given vehicle, together with its driver and the prevailing environment, constitutes a unique closed-loop system. The task of evaluating the dynamic behaviour is therefore very difficult, since significant interactions of these driver-vehicle-road elements are each complex in themselves. A description of the behaviour of the road vehicle must inevitably involve information obtained from a number of tests of different types.

Since this test method quantifies only a small part of the complete handling characteristics, the results of this test can only be considered significant for a correspondingly small part of the overall dynamic behaviour.

Moreover, sufficient knowledge is not available to correlate overall vehicle dynamic properties with accident prevention. A large amount of work is necessary to acquire sufficient and reliable data on the correlation between accident prevention and vehicle dynamic properties in general, and the results of this test in particular. Therefore, it is not possible to use this method and test results for regulation purposes.

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Heavy commercial vehicles and buses — Straight-ahead braking on surfaces with split coefficient of friction — Open-loop test method

1 Scope

This international Standard describes an open-loop test method for determining vehicle reactions during a straight-line braking manoeuvre on a surface having a split coefficient of friction.

It applies to heavy vehicles, i.e. commercial vehicles, commercial vehicle combinations, buses and articulated buses as defined in ISO 3833 (trucks and trailers with maximum weight above 3,5 tonnes and buses and articulated buses with maximum weight above 5 tonnes, according to ECE and EC vehicle classification, categories M3, N2, N3, O3 and O4).

The method is limited to vehicles in which at least the first unit is equipped with an anti-lock braking system. It is valid for braking with service-brake systems only or in combination with retarders and/or engine brakes.

2 Normative references

The following referenced documents are indispensable for the application 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 611, *Road vehicles — Braking of automotive vehicles and their trailers — Vocabulary*

ISO 3833, *Road vehicles — Types — Terms and definitions*

ISO 8855, *Road vehicles — Vehicle dynamics and road-holding ability — Vocabulary*

ISO 15037-2:2002, *Road vehicles — Vehicle dynamics test methods — Part 2: General conditions for heavy vehicles and buses*

3 Terms, definitions and symbols

3.1 Terms and definitions

For the purposes of this International Standard, the terms and definitions in ISO 611, ISO 15037-2:2002 and ISO 8855 apply.

3.2 Symbols

For the purposes of this International Standard, the symbols in ISO 15037-2:2002 and ISO 8855 apply.