

This is a preview of "ISO 13325:2019". [Click here to purchase the full version from the ANSI store.](#)

Second edition  
2019-07

Corrected version  
2021-03

---

---

## **Tyres — Coast-by methods for measurement of tyre-to-road sound emission**

*Pneumatiques — Méthodes en roue libre pour le mesurage de  
l'émission acoustique issue du contact pneumatique/chaussée*



Reference number  
ISO 13325:2019(E)

© ISO 2019

This is a preview of "ISO 13325:2019". [Click here to purchase the full version from the ANSI store.](#)



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

This is a preview of "ISO 13325:2019". Click here to purchase the full version from the ANSI store.

## Contents

	Page
Foreword .....	iv
<b>1 Scope .....</b>	<b>1</b>
<b>2 Normative references .....</b>	<b>1</b>
<b>3 Terms and definitions .....</b>	<b>1</b>
<b>4 Symbols and abbreviated terms .....</b>	<b>1</b>
4.1 LI .....	1
4.2 Classes of tyre .....	2
<b>5 General .....</b>	<b>2</b>
<b>6 Test site .....</b>	<b>2</b>
<b>7 Instrumentation .....</b>	<b>3</b>
7.1 Instrumentation for acoustical measurements .....	3
7.2 Microphones .....	3
7.3 Temperature measurement .....	3
7.3.1 General .....	3
7.3.2 Air temperature .....	4
7.3.3 Test surface temperature .....	4
7.4 Wind measurement .....	4
7.5 Speed measurement .....	4
<b>8 Meteorological conditions and background sound .....</b>	<b>4</b>
8.1 Meteorological conditions .....	4
8.2 Temperature correction .....	4
8.3 Background sound pressure level .....	5
<b>9 Preparation and adjustments with respect to tyres .....</b>	<b>5</b>
<b>10 Vehicle method .....</b>	<b>6</b>
10.1 General .....	6
10.1.1 Test vehicle .....	6
10.1.2 Wheel base .....	6
10.1.3 Other measures to minimize vehicle influence on measurements .....	6
10.1.4 Tyre load .....	6
10.1.5 Tyre inflation pressure .....	7
10.1.6 Vehicle operating condition .....	7
10.1.7 Speed range .....	7
10.1.8 Sound pressure level readings .....	7
10.1.9 Number of measurements .....	8
10.1.10 Recommended frequency spectrum measurement .....	8
10.2 Data processing .....	8
10.2.1 Temperature correction .....	8
10.2.2 Reference speeds .....	8
10.2.3 Normalization with respect to speed .....	8
10.3 Test report .....	9
<b>Bibliography .....</b>	<b>12</b>

## 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.

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](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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](http://www.iso.org/iso/foreword.html).

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

This second edition cancels and replaces the first edition (ISO 13325:2003), which has been technically revised. The main changes compared to the previous edition are as follows:

- Test site description has been improved.
- Preparation and adjustment depending of the tyre type has been improved.
- Trailer method has been withdrawn.
- Clarification of the formula for the determination of test result has been added.
- Parameters and calculation method have been aligned with UN regulation 117.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

This corrected version of ISO 13325:2019 incorporates the following correction: the coefficient "2" has been added to the formula of the slope of the regression line in [10.2.3](#).