

This is a preview of "ISO 4210-7:2023". [Click here to purchase the full version from the ANSI store.](#)

Second edition  
2023-01

---

---

# Cycles — Safety requirements for bicycles —

## Part 7: Wheel and rim test methods

*Cycles — Exigences de sécurité pour les bicyclettes —*

*Partie 7: Méthodes d'essai des roues et des jantes*



Reference number  
ISO 4210-7:2023(E)

© ISO 2023



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2023

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 4210-7:2023". [Click here to purchase the full version from the ANSI store.](#)

## Contents

Page

|   |           |
|---|-----------|
| <b>Foreword</b> .....   | <b>iv</b> |
| <b>Introduction</b> .....   | <b>v</b>  |
| <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 Test methods</b> .....   | <b>1</b>  |
| 4.1 Wheel and tyre assembly — Rotational accuracy.....  | 1         |
| 4.2 Wheel and tyre assembly — Static strength test — Test method.....   | 3         |
| 4.3 Wheels — Front/rear wheel retention devices secured — Test method.....                                    | 4         |
| 4.4 Wheel and tyre assembly — Greenhouse effect test for composite wheels — Test method.....                  | 4         |
| 4.5 Wheel and tyre assembly — Heat-resistance test for composite rims used in conjunction with rim brake..... | 5         |
| 4.6 Wheel — Impact test — Test method.....  | 6         |
| 4.7 Wheel and tyre assembly — Overpressure test — Test method.....  | 7         |
| 4.7.1 Wheel and tyre assembly preparation.....  | 7         |
| 4.7.2 Test method.....  | 8         |
| <b>Annex A (informative) Wheel and tyre assembly — Fatigue test for city and trekking bicycles</b> .....      | <b>9</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 149, *Cycles*, Subcommittee SC 1, *Cycles and major sub-assemblies*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 333, *Cycles*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 4210-7:2014), which has been technically revised.

The main changes are as follows:

- addition of [4.5](#);
- addition of [4.6](#);
- addition of [4.7](#).

A list of all parts in the ISO 4210 series can be found on the ISO website.

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 is a preview of "ISO 4210-7:2023". [Click here to purchase the full version from the ANSI store.](#)

## Introduction

This document has been developed in response to demand throughout the world, and the aim has been to ensure that bicycles manufactured in conformity with this document will be as safe as is practically possible. The tests have been designed to ensure the strength and durability of individual parts as well as of the bicycle as a whole, demanding high quality throughout and consideration of safety aspects from the design stage onwards.

The scope has been limited to safety considerations and has specifically avoided standardization of components.

If the bicycle should be used on public roads, national regulations apply.