INTERNATIONAL STANDARD

**ISO 4210**

Fourth edition
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# Cycles — Safety requirements for bicycles

*Cycles — Exigences de sécurité des bicyclettes*




Reference number
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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.

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.

International Standard ISO 4210 was prepared by Technical Committee ISO/TC 149, *Cycles*.

This fourth edition cancels and replaces the third edition (ISO 4210:1989), which has been technically revised.

The main changes in this edition are as follows:

a) enhanced brake performance requirements;

b) requirements for wheel quick-release mechanisms;

c) enhanced requirements for chainguards to cover multi-chainwheel assemblies;

d) new requirements for fatigue testing of handlebar assemblies, front forks, pedal crank assemblies and saddle pillars.

Annexes A, B and C of this International Standard are for information only.

# Introduction

In producing this International Standard, the aim bas been to ensure that bicycles manufactured in compliance with it 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.

# Cycles — Safety requirements for bicycles

## Section 1: General

### 1.1 Scope

This International Standard specifies safety and performance requirements for the design, assembly and testing of bicycles and sub-assemblies, and lays down guidelines for instructions on the use and care of bicycles.

It applies to bicycles intended for use on public roads, and on which the saddle can be adjusted to provide a saddle height of 635 mm or more.

It does not apply to specialized types of bicycle such as tradesmen's delivery bicycles, tandems, toy bicycles and bicycles designed and equipped for use in sanctioned competitive events.

### 1.2 Normative references

The following standards contain provisions, which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 5775-1:1994, *Bicycle tyres and rims — Part 1: Tyre designations and dimensions.*

ISO 5775-2:1989, *Bicycle tyres and rims — Part 2: Rims.*

ISO 6742-1:1987, *Cycles — Lighting and retro-reflective devices — Photometric and physical requirements — Part 1: Lighting equipment.*

ISO 6742-2:1985, *Cycles — Lighting and retro-reflective devices — Photometric and physical requirements — Part 2: Retro-reflective devices.*

ISO 7636:1984, *Bells for bicycles and mopeds — Technical specifications.*

ISO 9633:1992, *Cycle chains — Characteristics and test methods.*

### 1.3 Definitions

For the purposes of this International Standard, the following definitions apply.

**1.3.1 cycle:** Any vehicle that has at least two wheels and is propelled solely by the muscular energy of the person on that vehicle, in particular by means of pedals.

**1.3.2 bicycle:** Two-wheeled cycle.

**1.3.3 delivery bicycle:** Bicycle designed for the primary purpose of carrying goods.