



NSAI
Standards

Irish Standard
I.S. EN ISO 4210-6:2015

Cycles - Safety requirements for bicycles - Part 6: Frame and fork test methods (ISO 4210-6:2015)

I.S. EN ISO 4210-6:2015

Incorporating amendments/corrigenda/National Annexes issued since publication:

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I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

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NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

I.S. EN ISO 4210-6:2015 is the adopted Irish version of the European Document EN ISO 4210-6:2015, Cycles - Safety requirements for bicycles - Part 6: Frame and fork test methods (ISO 4210-6:2015)

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EUROPEAN STANDARD

EN ISO 4210-6

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2015

ICS 43.150

Supersedes EN ISO 4210-6:2014

English Version

Cycles - Safety requirements for bicycles - Part 6: Frame and fork test methods (ISO 4210-6:2015)

Cycles - Exigences de sécurité des bicyclettes - Partie 6:
Méthodes d'essai du cadre et de la fourche (ISO 4210-
6:2015)

Fahrräder - Sicherheitstechnische Anforderungen an
Fahrräder - Teil 6: Prüfverfahren für Rahmen und
Gabel (ISO 4210-6:2015)

This European Standard was approved by CEN on 8 August 2015.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

EN ISO 4210-6:2015 (E)

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European foreword

This document (EN ISO 4210-6:2015) has been prepared by Technical Committee ISO/TC 149 “Cycles” in collaboration with Technical Committee CEN/TC 333 “Cycles” the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2016, and conflicting national standards shall be withdrawn at the latest by March 2016.

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

This document supersedes EN ISO 4210-6:2014.

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Endorsement notice

The text of ISO 4210-6:2015 has been approved by CEN as EN ISO 4210-6:2015 without any modification.

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**INTERNATIONAL
STANDARD**

**ISO
4210-6**

Second edition
2015-09-01

**Cycles — Safety requirements for
bicycles —**

**Part 6:
Frame and fork test methods**

Cycles — Exigences de sécurité des bicyclettes —

Partie 6: Méthodes d'essai du cadre et de la fourche



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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

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ISO 4210-6:2015(E)

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).

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).

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

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 149, *Cycles*, Subcommittee SC 1, *Cycles and major sub-assemblies*.

This second edition cancels and replaces the first edition (ISO 4210-6:2014), which has been technically revised.

ISO 4210 consists of the following parts, under the general title *Cycles — Safety requirements for bicycles*:

- *Part 1: Terms and definitions*
- *Part 2: Requirements for city and trekking, young adult, mountain and racing bicycles*
- *Part 3: Common test methods*
- *Part 4: Braking test methods*
- *Part 5: Steering test methods*
- *Part 6: Frame and fork test methods*
- *Part 7: Wheels and rims test methods*
- *Part 8: Pedal and drive system test methods*
- *Part 9: Saddles and seat-post test methods*

Introduction

This International Standard has been developed in response to demand throughout the world, and the aim has been to ensure that bicycles manufactured in compliance with this International Standard 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 is to be used on public roads, national regulations apply.

Cycles — Safety requirements for bicycles —

Part 6: Frame and fork test methods

1 Scope

This part of ISO 4210 specifies the frame and fork test methods for ISO 4210-2.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4210-1, *Cycles — Safety requirements for bicycles — Part 1: Terms and definitions*

ISO 4210-2:2015, *Cycles — Safety requirements for bicycles — Part 2: Requirements for city and trekking, young adult, mountain and racing bicycles*

ISO 4210-3:2014, *Cycles — Safety requirements for bicycles — Part 3: Common test methods*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4210-1 apply.

4 Frame test methods

4.1 Frame — Impact test (falling mass)

4.1.1 General

Manufacturers of frames are permitted to conduct the test with a dummy fork (see [Annex A](#)) fitted in place of a front fork.

Where a frame is convertible for male and female riders by the removal of a bar, test it with the bar removed.

Where a suspension fork is fitted, test the assembly with the fork extended to its unloaded free length. Where a rear suspension system is incorporated in the frame, secure the suspension in a position equivalent to that which would occur with an 80 kg rider seated on the bicycle. For young adult bicycles, secure the suspension in a position equivalent to that which would occur with a 40 kg rider seated on the bicycle; if the type of suspension system does not permit it to be locked, then replace the spring/damper unit by a solid link of the appropriate size and with end fittings similar to those of the spring/damper unit.

4.1.2 Test method

Assemble a roller of mass less than or equal to 1 kg and with dimensions conforming to those shown in [Figure 1](#) in the fork. The hardness of roller shall be not less than 60 HRC at impact surface. If a dummy fork is used in place of a fork, the bar shall have a rounded end equivalent in shape to the roller. Hold

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