# SLOVENSKI STANDARD
# SIST EN ISO 8098:2023

**01-maj-2023**

**Nadomešča:**
**SIST EN ISO 8098:2014**

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**Kolesa - Varnostne zahteve za kolesa za mlajše otroke (ISO 8098:2023)**

Cycles - Safety requirements for bicycles for young children (ISO 8098:2023)

Fahrräder - Sicherheitstechnische Anforderungen an Kinderfahrräder (ISO 8098:2023)

Cycles - Exigences de sécurité pour les bicyclettes pour jeunes enfants(ISO 8098:2023)



**Ta slovenski standard je istoveten z:** **EN ISO 8098:2023**

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**ICS:**

| | | |
|---|---|---|
| 43.150 | Kolesa | Cycles |
| 97.190 | Otroška oprema | Equipment for children |

**SIST EN ISO 8098:2023** **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN ISO 8098

January 2023

ICS 43.150; 97.190

Supersedes EN ISO 8098:2014

English Version

# Cycles - Safety requirements for bicycles for young children (ISO 8098:2023)

Cycles - Exigences de sécurité pour les bicyclettes pour jeunes enfants(ISO 8098:2023)

Fahrräder - Sicherheitstechnische Anforderungen an Kinderfahrräder (ISO 8098:2023)

This European Standard was approved by CEN on 30 December 2022.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**



Ref. No. EN ISO 8098:2023 E

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## European foreword

This document (EN ISO 8098:2023) 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 July 2023, and conflicting national standards shall be withdrawn at the latest by July 2023.

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

This document supersedes EN ISO 8098:2014.

Any feedback and questions on this document should be directed to the users’ national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.



## Endorsement notice

The text of ISO 8098:2023 has been approved by CEN as EN ISO 8098:2023 without any modification.

INTERNATIONAL STANDARD

**ISO 8098**

Fourth edition
2023-01

# Cycles — Safety requirements for bicycles for young children

*Cycles — Exigences de sécurité pour les bicyclettes pour jeunes enfants*



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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.

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 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.



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 fourth edition cancels and replaces the third edition (ISO 8098:2014), which has been technically revised.

The main changes are as follows:

— addition of the terms "3.3 conventional brake-lever", "3.4 parallel brake-lever", and "3.19 wheel and tyre assembly";

— improvement of 4.4.2 Minimum failure torque;

— addition of 4.7.2.3.2 Parallel brake-lever;

— improvement of 4.8.1 Handlebar — Dimensions and end fittings;

— improvement of 4.8.2 Handlebar grips;

— "Wheels" and "Rims, tyres and tubes" are merged as "4.11 Wheels and tyre assembly";

— improvement of 4.11.2 Wheel and tyre assembly — Clearance;

— improvement of 4.12.6 Crank assembly — Fatigue tests;

— improvement of 4.14 Chain-wheel and belt-drive protective device.

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.

# 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 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.

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

For safety requirements for toy bicycles intended for very young children see national regulations and standards.

# Cycles — Safety requirements for bicycles for young children

## 1 Scope

This document specifies safety and performance requirements and test methods for the design, assembly and testing of fully assembled bicycles and sub-assemblies for young children. It also provides guidelines for instructions on the use and care of the bicycles.

This document is applicable to bicycles with a maximum saddle height of more than 435 mm and less than 635 mm, propelled by a transmitted drive to the rear wheel.

It is not applicable to special bicycles intended for performing stunts (e.g. BMX bicycles).

NOTE For bicycles with a maximum saddle height of 435 mm or less, see national regulations for ride-on toys, and with a maximum saddle height of 635 mm or more, see ISO 4210-1 to ISO 4210-9[5]-[13].

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1101, *Geometrical product specifications (GPS) — Geometrical tolerancing — Tolerances of form, orientation, location and run-out*

ISO 6742-2, *Cycles — Lighting and retro-reflective devices — Part 2: Retro-reflective devices*

ISO 8124-1:2018, *Safety of toys — Part 1: Safety aspects related to mechanical and physical properties*

ISO 11243, *Cycles — Luggage carriers for bicycles — Requirements and test methods*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

**3.1**
**bicycle**
two-wheeled vehicle that is propelled solely or mainly by the muscular energy of the person on that vehicle, in particular by means of pedals

[SOURCE: ISO 4210-1:2023, 3.1.1]

**3.2**
**brake-lever**
lever that operates a braking device

[SOURCE: ISO 4210-1:2023, 3.4.2]

**3.3**
**conventional brake-lever**
*brake-lever* (3.2) with a rotational axis perpendicular to the handlebar

**3.4**
**parallel brake-lever**
*brake-lever* (3.2) with rotational axis parallel to the handlebar

**3.5**
**braking force**
tangential rearward force between the tyre and the ground or the tyre and the drum or belt of the test machine

[SOURCE: ISO 4210-1:2023, 3.4.4]

**3.6**
**crank assembly**
assembly consisting of the drive side and the non-drive side crank arm the bottom-bracket spindle or crank spindle, and all component of the drive system that are affixed to the crankset

[SOURCE: ISO 4210-1:2023, 3.8.2, modified — EXAMPLE has been removed.]

**3.7**
**exposed protrusion**
protrusion which through its location and rigidity could present a hazard to the rider either through heavy contact with it in normal use or should the rider fall onto it in an accident

[SOURCE: ISO 4210-1:2023, 3.2.3]



**3.8**
**fracture**
unintentional separation into two or more parts



[SOURCE: ISO 4210-1:2023, 3.2.4]

**3.9**
**highest gear**
gear ratio which gives the greatest distance travelled for one rotation of the cranks

[SOURCE: ISO 4210-1:2023, 3.8.4]

**3.10**
**lowest gear**
gear ratio which gives the shortest distance travelled for one rotation of the cranks

[SOURCE: ISO 4210-1:2023, 3.8.5]

**3.11**
**maximum inflation pressure**
maximum tyre pressure recommended by the tyre or rim manufacturer for a safe and efficient performance, and if the maximum rim pressure was marked on both the tyre and rim, maximum tyre pressure according to the lower marked maximum inflation pressure on the rim or tyre

[SOURCE: ISO 4210-1:2023, 3.7.3, modified — Note 1 to entry has been removed.]

**3.12**
**maximum saddle height**
vertical distance from the ground to the point where the top of the seat surface is intersected by the seat-post axis, measured with the seat in a horizontal position and with the seat-post set to the minimum insertion-depth mark

[SOURCE: ISO 4210-1:2023, 3.2.6]

**3.13**
**tread surface**
surface of a pedal that is presented to the underside of the foot

[SOURCE: ISO 4210-1:2023, 3.8.6]

**3.14**
**quick-release devices**
lever actuated mechanism that connects, retains, or secures a wheel or any other component

[SOURCE: ISO 4210-1:2023, 3.2.8]

**3.15**
**stabilizers**
removable auxiliary wheels fitted to enable the rider to balance

**3.16**
**toe-clip**
device attached to the pedal to grip the toe end of the rider's shoe but permitting withdrawal of the shoe

[SOURCE: ISO 4210-1:2023, 3.8.8]

**3.17**
**toe-strap**
device to securely locate a rider's shoe on a pedal



**3.18**
**visible crack**
crack which results from a test where that crack is visible to the naked eye

[SOURCE: ISO 4210-1:2023, 3.2.11]



**3.19**
**wheel and tyre assembly**
assembled wheel fitted with tyre and wheel include all necessary parts for its intended use

[SOURCE: ISO 4210-1:2023, 3.7.7]

# 4 Requirements and test methods

## 4.1 Brake tests and strength tests — Special requirements

### 4.1.1 Brake tests to which special requirements apply

Brake tests to which maximum permissible error requirements apply, as in 4.1.4, are those specified in 4.7.2.3 to 4.7.8.4 inclusive.

### 4.1.2 Strength tests to which special requirements apply

Strength tests to which maximum permissible error requirements apply, as in 4.1.4, are those involving static, impact or fatigue loading as specified in 4.8 to 4.13 inclusive and 4.15.

### 4.1.3 Numbers and condition of specimens for the strength tests

In general, for static, impact and fatigue tests, each test shall be conducted on a new test sample, but if only one sample is available, it is permissible to conduct all of the tests on the same sample with the sequence of testing being fatigue, static and impact.