



**SLOVENSKI STANDARD**  
**oSIST prEN ISO 8098:2013**  
**01-januar-2013**

---

**Kolesa - Varnostne zahteve za kolesa za mlajše otroke (ISO/DIS 8098:2012)**

Cycles - Safety requirements for bicycles for young children (ISO/DIS 8098:2012)

Fahrräder - Sicherheitstechnische Anforderungen an Kinderfahrräder (ISO/DIS 8098:2012)

Cycles - Exigences de sécurité relatives aux bicyclettes pour jeunes enfants (ISO/DIS 8098:2012)

**Ta slovenski standard je istoveten z: prEN ISO 8098 rev**

---

[SIST EN ISO 8098:2014](https://standards.iteh.ai/catalog/standards/sist/0a7171eb-a2c3-4f0d-8d1c-8a96017a0645/sist-en-iso-8098-2014)

<https://standards.iteh.ai/catalog/standards/sist/0a7171eb-a2c3-4f0d-8d1c-8a96017a0645/sist-en-iso-8098-2014>

**ICS:**

43.150	Kolesa	Cycles
97.190	Otroška oprema	Equipment for children

**oSIST prEN ISO 8098:2013**

**en**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**DRAFT**  
**prEN ISO 8098 rev**

October 2012

ICS 43.150

Will supersede EN 14765:2005+A1:2008

English Version

## Cycles - Safety requirements for bicycles for young children (ISO/DIS 8098:2012)

Cycles - Exigences de sécurité relatives aux bicyclettes  
pour jeunes enfants (ISO/DIS 8098:2012)

Fahrräder - Sicherheitstechnische Anforderungen an  
Kinderfahrräder (ISO/DIS 8098:2012)

This draft European Standard is submitted to CEN members for parallel enquiry. It has been drawn up by the Technical Committee CEN/TC 333.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

<https://standards.italia.it/Document-Preview>  
SIST EN ISO 8098:2014

<https://standards.italia.it/Document-Preview> **Warning** : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

**Management Centre: Avenue Marnix 17, B-1000 Brussels**

<b>Contents</b>	<b>Page</b>
Foreword.....	<b>3</b>

**iTeh Standards**  
**(<https://standards.iteh.ai>)**  
**Document Preview**

[SIST EN ISO 8098:2014](https://standards.iteh.ai/catalog/standards/sist/0a7171eb-a2c3-4f0d-8d1c-8a96017a0645/sist-en-iso-8098-2014)

<https://standards.iteh.ai/catalog/standards/sist/0a7171eb-a2c3-4f0d-8d1c-8a96017a0645/sist-en-iso-8098-2014>

## Foreword

This document (prEN ISO 8098:2012) has been prepared by Technical Committee ISO/TC 149 "Cycles" in collaboration with Technical Committee CEN/TC 333 "Cereal and cereal products" the secretariat of which is held by AFNOR.

This document is currently submitted to the parallel Enquiry.

This document will supersede EN 14765:2005+A1:2008.

### Endorsement notice

The text of ISO/DIS 8098:2012 has been approved by CEN as a prEN ISO 8098:2012 without any modification.

**iTeh Standards**  
**(<https://standards.iteh.ai>)**  
**Document Preview**

[SIST EN ISO 8098:2014](https://standards.iteh.ai/catalog/standards/sist/0a7171eb-a2c3-4f0d-8d1c-8a96017a0645/sist-en-iso-8098-2014)

<https://standards.iteh.ai/catalog/standards/sist/0a7171eb-a2c3-4f0d-8d1c-8a96017a0645/sist-en-iso-8098-2014>





## DRAFT INTERNATIONAL STANDARD ISO/DIS 8098

ISO/TC 149/SC 1

Secretariat: JISC

Voting begins on  
**2012-10-04**

Voting terminates on  
**2013-03-04**

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

# Cycles — Safety requirements for bicycles for young children

*Cycles — Exigences de sécurité relatives aux bicyclettes pour jeunes enfants*

[Revision of second edition (ISO 8098:2002)]

ICS 43.150; 97.190

### ISO/CEN PARALLEL PROCESSING

This draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO-lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five-month enquiry.

Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month approval vote in ISO and formal vote in CEN.

<https://standards.iteh.ai/catalog/standards/sist/0a7171eb-a2c3-4f0d-8d1c-8a96017a0645/sist-en-iso-8098-2014>

**To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.**

**Pour accélérer la distribution, le présent document est distribué tel qu'il est parvenu du secrétariat du comité. Le travail de rédaction et de composition de texte sera effectué au Secrétariat central de l'ISO au stade de publication.**

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENT AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

**iTeh Standards**  
**(<https://standards.iteh.ai>)**  
**Document Preview**

[SIST EN ISO 8098:2014](https://standards.iteh.ai/catalog/standards/sist/0a7171eb-a2c3-4f0d-8d1c-8a96017a0645/sist-en-iso-8098-2014)

<https://standards.iteh.ai/catalog/standards/sist/0a7171eb-a2c3-4f0d-8d1c-8a96017a0645/sist-en-iso-8098-2014>

**Copyright notice**

This ISO document is a Draft International Standard and is copyright-protected by ISO. Except as permitted under the applicable laws of the user's country, neither this ISO draft nor any extract from it may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, photocopying, recording or otherwise, without prior written permission being secured.

Requests for permission to reproduce should be addressed to either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Reproduction may be subject to royalty payments or a licensing agreement.

Violators may be prosecuted.



## Contents

Page

Foreword .....	v
Introduction.....	v
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions .....	1
4 Requirements and test methods.....	3
4.1 Brake tests and strength tests – special requirements.....	3
4.1.1 Definition of brake tests.....	3
4.1.2 Definition of strength tests.....	3
4.1.3 Numbers and condition of specimens for the strength tests .....	3
4.1.4 Accuracy tolerances of test conditions for brake tests and strength tests.....	3
4.2 Toxicity .....	4
4.3 Sharp edges .....	4
4.4 Security and strength of safety-related fasteners .....	4
4.4.1 Security of screws.....	4
4.4.2 Minimum failure torque.....	4
4.4.3 Quick-release devices.....	4
4.4.4 Foot location devices.....	4
4.5 Crack detection methods.....	4
4.6 Protrusions .....	4
4.6.1 Requirement.....	4
4.6.2 Test method .....	5
4.7 Brakes.....	7
4.7.1 Braking-systems.....	7
4.7.2 Hand-operated brakes.....	7
4.7.3 Attachment of brake assembly and cable requirements.....	9
4.7.4 Brake-block and brake-pad assemblies — security test.....	9
4.7.5 Brake adjustment .....	10
4.7.6 Back-pedal brake.....	10
4.7.7 Braking-system — strength tests .....	10
4.7.8 Braking performance .....	11
4.8 Steering .....	13
4.8.1 Handlebar — dimensions and end fittings .....	13
4.8.2 Handlebar grips .....	13
4.8.3 Handlebar-stem — insertion depth mark or positive stop.....	14
4.8.4 Steering stability.....	14
4.8.5 Steering assembly — static strength and security tests .....	15
4.8.6 Handlebar and stem assembly – fatigue test .....	19
4.9 Frames.....	21
4.9.1 Frame and front fork assembly – impact test (falling mass) .....	21
4.9.2 Frame and front fork assembly – impact test (falling frame).....	22
4.10 Front fork.....	23
4.10.1 General .....	23
4.10.2 Front fork – bending fatigue test .....	23
4.11 Wheels .....	24
4.11.1 Rotational accuracy .....	24
4.11.2 Wheel/tyre assembly – clearance .....	25
4.11.3 Wheel/tyre assembly – static strength test.....	25
4.11.4 Wheel retention.....	26
4.12 Rims, tyres and tubes .....	27

## ISO/DIS 8098

4.12.1	Tyre inflation pressure .....	27
4.12.2	Tyre and rim compatibility .....	27
4.13	Pedals and pedal/crank drive system.....	27
4.13.1	Pedal tread.....	27
4.13.2	Pedal clearance.....	28
4.13.3	Pedal - Impact test .....	28
4.13.4	Pedal/pedal-spindle —dynamic durability test.....	29
4.13.5	Drive system static strength test .....	30
4.13.6	Crank assembly — fatigue tests .....	31
4.14	Saddles and seat-posts.....	32
4.14.1	Limiting dimensions.....	32
4.14.2	Seat-post – insertion-depth mark or positive stop.....	32
4.14.3	Saddle and seat-post security test .....	33
4.14.4	Saddle — static strength test .....	33
4.14.5	Saddle and seat-post assembly fatigue test.....	34
4.15	Chain-guard.....	35
4.16	Stabilizers .....	36
4.16.1	Mounting and dismounting.....	36
4.16.2	Dimensions.....	36
4.16.3	Vertical load test .....	36
4.16.4	Longitudinal load test .....	37
4.17	Luggage carriers.....	38
4.18	Lighting systems .....	38
4.18.1	Front and rear light.....	38
4.18.2	Reflectors .....	38
4.18.3	Wiring harness .....	38
4.18.4	Warning device .....	39
5	Instructions .....	39
6	Marking .....	40
6.1	Requirement.....	40
6.2	Durability test.....	40
6.2.1	Requirement.....	40
6.2.2	Test method.....	40
Annex A (informative)	Steering geometry.....	41
Bibliography	.....	42

## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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.

ISO 8098 was prepared by Technical Committee ISO/TC 149, *Cycles*, Subcommittee SC 1, *Cycles and major sub-assemblies*.

This third edition cancels and replaces the second edition (ISO 8098:2002), of which has been technically revised.

iTeh Standards  
(<https://standards.iteh.ai>)  
Document Preview

[SIST EN ISO 8098:2014](https://standards.iteh.ai/catalog/standards/sist/0a7171eb-a2c3-4f0d-8d1c-8a96017a0645/sist-en-iso-8098-2014)

<https://standards.iteh.ai/catalog/standards/sist/0a7171eb-a2c3-4f0d-8d1c-8a96017a0645/sist-en-iso-8098-2014>

**ISO/DIS 8098****Introduction**

Safety requirements for bicycles intended to be ridden on public roads by adults and children aged about eight years and older (i.e. bicycles having saddle heights of 635 mm and above) are given in ISO 4210.

While ISO 8098 follows the lines of ISO 4210, it covers requirements for bicycles suitable for young children aged from about four to eight years. These bicycles are not intended to be ridden on public roads and should not be presumed to be suitably equipped for that purpose.

For safety requirements for toy bicycles intended for very young children see EN 71-1.

**iTeh Standards**  
**(<https://standards.iteh.ai>)**  
**Document Preview**

[SIST EN ISO 8098:2014](https://standards.iteh.ai/catalog/standards/sist/0a7171eb-a2c3-4f0d-8d1c-8a96017a0645/sist-en-iso-8098-2014)

<https://standards.iteh.ai/catalog/standards/sist/0a7171eb-a2c3-4f0d-8d1c-8a96017a0645/sist-en-iso-8098-2014>

# Cycles — Safety requirements for bicycles for young children

## 1 Scope

This International Standard 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 International Standard 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 stunting (e.g. BMX bicycles).

## 2 Normative references

The following referenced documents are indispensable for the application 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 5775-1, *Bicycle tyres and rims — Part 1: Tyre designations and dimensions*

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

ISO 8124-3, *Safety of toys — Part 3: Migration of certain elements*

ISO 11243, *Cycles — Luggage carriers for bicycles – Concepts, classification and testing*

## 3 Terms and definitions

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

### 3.1

#### **bicycle**

two-wheeled cycle

### 3.2

#### **brake-lever**

a lever which operate the brake device

### 3.3

#### **braking force**

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

**ISO/DIS 8098**

- 3.4**  
**crank assembly**  
for fatigue testing it consists of the two cranks, the pedal-spindles or adaptors, the bottom-bracket spindle, and the first component of the drive system, e.g. the chain-wheel cluster
- 3.5**  
**cycle**  
any vehicle that has at least two wheels and is propelled solely or mainly by the muscular energy of the person on that vehicle, in particular by means of pedals
- 3.6**  
**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
- 3.7**  
**highest gear**  
the gear ratio which gives the greatest distance travelled for one rotation of the cranks
- 3.8**  
**lowest gear**  
the gear ratio which gives the shortest distance travelled for one rotation of the cranks
- 3.9**  
**maximum inflation pressure**  
maximum tyre pressure recommended by the tyre manufacturer for a safe and efficient performance
- 3.10**  
**maximum saddle height**  
vertical distance from the ground to the top of the saddle surface, measured with the saddle in a horizontal position with the seat-post set to the minimum insertion depth
- 3.11**  
**pedal tread surface**  
surface of a pedal that is presented to the underside of the foot
- 3.12**  
**quick-release devices**  
a lever actuated mechanism that connects, retains, or secures a wheel or any other component
- 3.13**  
**stabilizers**  
removable auxiliary wheels fitted to enable the rider to balance
- 3.14**  
**toe-clip**  
device attached to the pedal to grip the toe end of the rider's shoe but permitting withdrawal of the shoe
- 3.15**  
**toe-strap**  
device to securely locate a rider's shoe on a pedal
- 3.16**  
**visible crack**  
crack which results from a test where that crack is visible to the naked eye