
Cycles — Safety requirements for bicycles for young children

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

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

[ISO 8098:2023](https://standards.iteh.ai/catalog/standards/iso/26667cd0-07a0-48d4-b293-cba960461d4d/iso-8098-2023)

<https://standards.iteh.ai/catalog/standards/iso/26667cd0-07a0-48d4-b293-cba960461d4d/iso-8098-2023>



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

[ISO 8098:2023](https://standards.iteh.ai/catalog/standards/iso/26667cd0-07a0-48d4-b293-cba960461d4d/iso-8098-2023)

<https://standards.iteh.ai/catalog/standards/iso/26667cd0-07a0-48d4-b293-cba960461d4d/iso-8098-2023>



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
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword.....	v
Introduction.....	vii
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 Brake tests to which special requirements apply.....	3
4.1.2 Strength tests to which special requirements apply.....	3
4.1.3 Numbers and condition of specimens for the strength tests.....	3
4.1.4 Tolerances.....	4
4.1.5 Fatigue test.....	4
4.1.6 Plastic material test ambient temperature.....	4
4.1.7 Impact test.....	4
4.2 Toxicity.....	4
4.3 Sharp edges.....	5
4.4 Security and strength of safety-related fasteners.....	5
4.4.1 Security of screws.....	5
4.4.2 Minimum failure torque.....	5
4.4.3 Quick-release devices.....	5
4.4.4 Foot location devices.....	5
4.4.5 Folding bicycle mechanism.....	5
4.5 Crack detection methods.....	5
4.6 Exposed protrusions.....	5
4.7 Brakes.....	6
4.7.1 Braking-systems.....	6
4.7.2 Hand-operated brakes.....	6
4.7.3 Attachment of brake assembly and cable requirements.....	8
4.7.4 Brake-block and brake-pad assemblies — Security test.....	9
4.7.5 Brake adjustment.....	9
4.7.6 Back-pedal brake.....	9
4.7.7 Braking-system — Strength tests.....	9
4.7.8 Braking performance.....	10
4.8 Steering.....	12
4.8.1 Handlebar — Dimensions and end fittings.....	12
4.8.2 Handlebar grips and end plugs.....	12
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.....	14
4.8.6 Handlebar and stem assembly — Fatigue test.....	18
4.9 Frames.....	20
4.9.1 Frame and front fork assembly — Impact test (falling mass).....	20
4.9.2 Frame and front fork assembly — impact test (falling frame).....	21
4.10 Front fork.....	22
4.10.1 General.....	22
4.10.2 Front fork — Bending fatigue test.....	22
4.11 Wheel and tyre assembly.....	23
4.11.1 Wheel and tyre assembly — Rotational accuracy.....	23
4.11.2 Wheel and tyre assembly — Clearance.....	24
4.11.3 Wheel and tyre assembly — Static strength test.....	25
4.11.4 Wheels — Wheel retention.....	25
4.11.5 Tyre inflation pressure.....	26
4.11.6 Wheel and tyre assembly — Overpressure test.....	26

4.12	Pedals and pedal/crank drive system	26
4.12.1	Pedal tread	26
4.12.2	Pedal clearance	27
4.12.3	Pedal — Impact test	27
4.12.4	Pedal/pedal-spindle — Dynamic durability test	28
4.12.5	Drive system static strength test	29
4.12.6	Crank assembly — Fatigue tests	30
4.13	Saddles and seat-posts	31
4.13.1	Limiting dimensions	31
4.13.2	Seat-post — Insertion-depth mark or positive stop	31
4.13.3	Saddle and seat-post security test	32
4.13.4	Saddle — Static strength test	32
4.13.5	Saddle and seat-post assembly fatigue test	33
4.14	Chain-wheel and belt-drive protective device	34
4.15	Stabilizers	35
4.15.1	Mounting and dismounting	35
4.15.2	Dimensions	35
4.15.3	Vertical load test	36
4.15.4	Longitudinal load test	36
4.16	Luggage carriers	37
4.17	Lighting systems and reflectors	37
4.17.1	Front and rear light	37
4.17.2	Reflectors	37
4.17.3	Wiring harness	38
4.18	Warning device	38
5	Instructions	38
6	Marking	39
6.1	Requirement	39
6.2	Durability test	40
6.2.1	Requirement	40
6.2.2	Test method	40
<u>ISO 8098:2023</u>		
Annex A (informative)	Steering geometry	41
Annex B (informative)	Verification of free fall velocity	42
Bibliography		43

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.

This corrected version of ISO 8098:2023 incorporates the following correction:

- In [4.8.2.3](#), "of 100 N" has been added to the sentence.

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

[ISO 8098:2023](#)

<https://standards.itih.ai/catalog/standards/iso/26667cd0-07a0-48d4-b293-cba960461d4d/iso-8098-2023>

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.

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

[ISO 8098:2023](https://standards.iteh.ai/catalog/standards/iso/26667cd0-07a0-48d4-b293-cba960461d4d/iso-8098-2023)

<https://standards.iteh.ai/catalog/standards/iso/26667cd0-07a0-48d4-b293-cba960461d4d/iso-8098-2023>