



BSI Standards Publication

**Cycles — Components and assemblies used in
bicycles — Innovative requirements and test methods**

National foreword

This Published Document is the UK implementation of CEN/TR 17653:2021.

The UK participation in its preparation was entrusted to Technical Committee GME/25, Cycles.

A list of organizations represented on this committee can be obtained on request to its committee manager.

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

This publication is not to be regarded as a British Standard.

© The British Standards Institution 2021
Published by BSI Standards Limited 2021

ISBN 978 0 539 13322 6

ICS 43.150

Compliance with a Published Document cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 30 June 2021.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

TECHNICAL REPORT

CEN/TR 17653

RAPPORT TECHNIQUE

TECHNISCHER BERICHT

June 2021

ICS 43.150

English Version

Cycles - Components and assemblies used in bicycles - Innovative requirements and test methods

Fahrräder - Verbundwerkstoffe für Fahrräder - Neue
Spezifische Prüfverfahren für aus Verbundwerkstoffe
hergestellte Komponenten

This Technical Report was approved by CEN on 30 May 2021. It has been drawn up by the Technical Committee CEN/TC 333.

CEN members are the national standards bodies of 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, Turkey and United Kingdom.



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

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

Contents

Page

European foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Frames designed for disc brake	4
4.1 Background	4
4.2 Test methods	5
4.2.1 Rear brake mount tests.....	5
4.2.2 Static rear brake torque test.....	5
4.2.3 Rear brake mount fatigue test.....	5
5 Fork made of composite materials designed for disc brakes	7
5.1 General.....	7
5.2 Test methods	7
6 Wheel impact test.....	9
6.1 Background	9
6.2 Requirements	9
6.3 Test methods	10
7 Front mudguard.....	12
7.1 Background	12
7.2 Requirements	12

European foreword

This document (CEN/TR 17653:2021) has been prepared by Technical Committee CEN/TC 333 “Cycles”, the secretariat of which is held by UNI.

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.

1 Scope

The purpose of this document is to provide innovative requirements and test methods applicable to any components and assemblies of any category of bicycles (city, trekking, MTB, young adult and racing). Its aim is to provide technical solutions that reduce the risk of component failure and rider injury during the specified use of such bicycles.

This document makes reference to current “state of the art” standards in the field of bicycles, agreed at CEN level through the publication of the EN ISO 4210 series of standards. Therefore, the requirements and tests proposed in this document are intended to be read and applied in accordance with the appropriate EN ISO 4210 standard.

NOTE The tests described in this document refer in places to clause numbers from the applicable EN ISO 4210 series.

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.

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

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

EN ISO 4210-4:2014, *Cycles - Safety requirements for bicycles - Part 4: Braking test methods (ISO 4210-4:2014)*

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

EN ISO 4210-7:2014, *Cycles - Safety requirements for bicycles - Part 7: Wheels and rims test methods (ISO 4210-7:2014)*

3 Terms and definitions

No terms and definitions are listed in this document.

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

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

4 Frames designed for disc brake

4.1 Background

The forces applied to a bicycle frame by disc brakes are different in magnitude and location to those applied by rim brakes, so specific tests and requirements are necessary to ensure safety. This section sets out test procedures and minimum safety requirements for disc brake frames.