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BSI Standards Publication

# Motorcyclists' protective clothing against mechanical impact

Part 3: Motorcyclists' chest protectors - Requirements and test methods

bsi.

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# National foreword

This British Standard is the UK implementation of EN 1621-3:2018.

The UK participation in its preparation was entrusted to Technical Committee PH/3/9, Motorcyclists Personal Protective Equipment.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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NORME EUROPÉENNE

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ICS 13.340.10

English Version

# Motorcyclists' protective clothing against mechanical impact – Part 3: Motorcyclists' chest protectors - Requirements and test methods

Vêtements de protection contre les chocs mécaniques pour motocyclistes - Partie 3 : Protecteurs de poitrine pour motocyclistes - Exigences et méthodes d'essai.

Motorradfahrerschutzkleidung gegen mechanische Belastung - Teil 3: Brustprotektoren für Motorradfahrer - Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 14 November 2018.

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.

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# Contents

Page

**European foreword** ... **iii**

**Introduction** ... **iv**

**1 Scope** ... **5**

**2 Normative references** ... **5**

**3 Terms and definitions** ... **5**

**4 Requirements** ... **6**
4.1 General ... 6
4.2 Innocuousness ... 6
4.3 Minimum dimensions of zones of protection ... 6
4.3.1 General ... 6
4.3.2 Levels of protection ... 7
4.4 Impact Attenuation ... 7
4.5 Impact Distribution ... 7
4.6 Ergonomic requirements ... 7

**5 Test equipment** ... **7**
5.1 Dropping apparatus ... 7
5.2 Bar Impactor ... 8
5.3 Hemispherical Impactor ... 8
5.4 Anvil ... 8
5.5 Force measurement instrumentation ... 9
5.6 Tolerance and uncertainty ... 9
5.7 Ergonomic Assessment ... 9
5.7.1 General ... 9
5.7.2 Tests ... 10

**6 Test methods** ... **10**
6.1 Samples ... 10
6.2 Boundary and Feature marking ... 10
6.2.1 General ... 10
6.2.2 Full Chest protectors — Impact Attenuation Template ... 10
6.2.3 Full Chest Protectors — Impact Distribution Impact Points ... 11
6.2.4 Divided Chest protectors — Impact Attenuation Template ... 11
6.2.5 Divided Chest protectors — Impact Distribution Impact Points ... 11
6.3 Impact attenuation test ... 11
6.3.1 General ... 11
6.3.2 Impact sites ... 12
6.3.3 Test results ... 14
6.4 Impact distribution test ... 14
6.4.1 General ... 14
6.4.2 Impact Sites ... 14
6.4.3 Test Results ... 15
6.5 Sample preconditioning ... 15
6.5.1 Ambient impact test ... 15
6.5.2 Wet impact test ... 15
6.5.3 Optional high temperature impact test ... 15
6.5.4 Optional low temperature impact test ... 15
6.6 Expression of Test Results ... 15
6.7 Test report ... 16

**7 Marking** ... **16**

**8 Information supplied by the manufacturer** ... **17**

**Bibliography** ... **19**

This is a preview of "BS EN 1621-3:2018". Click here to purchase the full version from the ANSI store.

# European foreword

This document (EN 1621-3:2018) has been prepared by Technical Committee CEN/TC 162 “Protective clothing including hand and arm protection and lifejackets”, the secretariat of which is held by DIN.

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 June 2019, and conflicting national standards shall be withdrawn at the latest by June 2019.

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 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 89/686/EEC and Regulation (EU) 2016/425.

EN 1621 consists of the following parts, under the general title “Motorcyclists’ protective clothing against mechanical impact”:

— Part 1: Motorcyclists' limb joint impact protectors - Requirements and test methods

— Part 2: Motorcyclists' back protectors - Requirements and test methods

— Part 3: Motorcyclists' chest protectors - Requirements and test methods

— Part 4: Motorcyclists' inflatable protectors - Requirements and test methods

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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# Introduction

Motorcyclists' chest protectors are devices worn within or on top of other protective clothing, covering the chest of the rider.

The performance requirements have been chosen as a best practical compromise between protection, comfort, and ergonomic requirements. Protectors that are too stiff or heavy will not be worn. The test methods are designed to provide information on protection against impacts against edges such as kerbstones or corner of car roofs. The force levels in the tests do not compare directly with the forces to which riders are exposed in accidents, but experiences have shown that products meeting the requirements of this European Standard may reduce the incidence and severity of injuries.

This standard accommodates two different typologies of protector, which are offered to encourage the adoption of certified protection within the different disciplines of motorcycling and the type of rider. These are namely the divided and full protector, the definition of which are provided in Clause 3.

Two performance levels are specified for motorcyclists' chest protectors against impacts. These are level 1 for soft protectors which fulfil only the force transmission requirements, and level 2 for more rigid protectors which fulfil both the force transmission and force distribution requirements. There may be, however, weight and restriction penalties associated with providing level 2 protection.

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## 1 Scope

This document specifies the minimum coverage to be provided by motorcyclists' chest protectors. The standard contains the requirements for the performance of the protectors under impact and details of the test methods, dimensions, ergonomic requirements, and requirements for innocuousness, labelling and the provision of information.

This document defines a product which provides limited protection against mechanical impacts and falls on the chest. If the product is only intended to protect against lofted stones (commonly used in off-road riding) then EN 14021 will be used. Where a product is intended to protect against mechanical impacts and lofted stones this document will be used.

## 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 14021, *Stone shields for off-road motorcycling suited to protect riders against stones and debris — Requirements and test methods*

ISO 6487, *Road vehicles — Measurement techniques in impact tests — Instrumentation*

EN 1621-1, *Motorcyclists' protective clothing against mechanical impact — Part 1: Motorcyclists' limb joint impact protectors — Requirements and test methods*

## 3 Terms and definitions

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

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

• IEC Electropedia: available at http://www.electropedia.org/

• ISO Online browsing platform: available at http://www.iso.org/obp

**3.1**
**chest protector**
protector with dimensions and form to protect the rider's chest to reduce the severity of injuries caused by mechanical impacts and falls to the chest

**3.2**
**full chest protector**
protector designed as a single piece with dimensions and form to protect the rider's chest

**3.3**
**divided chest protector**
protector designed in two separate halves with dimensions and form to protect the rider's chest

**3.4**
**zone of protection**
specific area of the protective equipment that is intended to provide protection and this area is subject to specific testing

**3.5**
**Type A protector**
protector of smaller dimension; these are more commonly (although not exclusively) optimised for use with smaller riders