

SVENSK STANDARD

SS-EN 17092-1:2020

**Skyddskläder för motorcyklister –
Del 1: Testmetoder**

**Protective garments for motorcycle riders –
Part 1: Test methods**



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The European Standard EN 17092-1:2020 has the status of a Swedish Standard. This document contains the official version of EN 17092-1:2020.

EUROPEAN STANDARD

EN 17092-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2020

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English Version

Protective garments for motorcycle riders - Part 1: Test methods

Vêtements de protection pour les motocyclistes - Partie 1 : Méthodes d'essai

Motorradfahrerschutzbekleidung - Teil 1: Prüfmethoden

This European Standard was approved by CEN on 25 November 2019.

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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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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 17092-1:2020) 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of an identical text or by endorsement, at the latest by September 2020, and conflicting national standards shall be withdrawn at the latest by March 2023.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, together with EN 17092-2:2020, EN 17092-3:2020, EN 17092-4:2020, 17092-5:2020 and EN 17092-6:2020, supersedes EN 13595-4:2002, EN 13595-3:2002, EN 13595-2:2002 and EN 13595-1:2002.

This standard is part of a series of standards specifying test methods and requirements for motorcyclists’ protective garments. EN 17092 comprises multiple parts:

- *Part 1: Test methods*
- *Part 2: Class AAA garments — Requirements*
- *Part 3: Class AA garments — Requirements*
- *Part 4: Class A garments — Requirements*
- *Part 5: Class B garments — Requirements*
- *Part 6: Class C garments — Requirements*

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SS-EN 17092-1:2020 (E)

Introduction

This document is a part of a series of standards including EN 17092-2, EN 17092-3, EN 17092-4, EN 17092-5 and EN 17092-6, which describe the requirements for motorcyclists' protective garments according to the various classes of protection offered. EN 17092-1 specifies test methods to be used to test motorcyclists' protective garments to confirm that they meet the requirements of the EN 17092-2 and following parts.

1 Scope

This document describes some of the test methods for use with EN 17092 protective garments for motorcycle riders (Part 2 and following parts). It describes the appropriate test methods for zoning, ergonomics, mechanical properties and impact abrasion resistance.

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 388:2016+A1:2018, *Protective gloves against mechanical risks*

EN 1621-1:2012, *Motorcyclists' protective clothing against mechanical impact — Part 1: Motorcyclists' limb joint impact protectors — Requirements and test methods*

EN 1621-2:2014, *Motorcyclists' protective clothing against mechanical impact — Part 2: Motorcyclists' back protectors — Requirements and test methods*

EN 1621-3:2018, *Motorcyclists' protective clothing against mechanical impact — Part 3: Motorcyclists' chest protectors — Requirements and test methods*

EN 1621-4:2013, *Motorcyclists' protective clothing against mechanical impact — Part 4: Motorcyclists' inflatable protectors — Requirements and test methods*

EN 13594:2015, *Protective gloves for motorcycle riders — Requirements and test methods*

EN ISO 3377-1:2011, *Leather — Physical and mechanical tests - Determination of tear load — Part 1: Single edge tear (ISO 3377-1:2011)*

EN ISO 4674-1:2016, *Rubber- or plastics-coated fabrics — Determination of tear resistance — Part 1: Constant rate of tear methods (ISO 4674-1:2016)*

EN ISO 5077:2008, *Textiles — Determination of dimensional change in washing and drying (ISO 5077:2007)*

EN ISO 13688:2013, *Protective clothing — General requirements (ISO 13688:2013)*

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>

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3.1

garment

jacket or trouser separate, one-piece or two-piece suit, impact protector ensemble clothing, and other protective motorcycle rider clothing types excluding protective motorcycle rider clothing for the head, neck, hands, or feet

3.2

waistline

line in the horizontal plane of the waist, at the level of the highest points of the iliac crests on a subject standing upright

3.3

beltline

line in a horizontal plane, at the level of the bottom seam, or 4 cm down from the top of the waistband, at the centre front of the trousers on a subject standing upright

3.4

loop restraint

mechanism whereby a loop of material attached to or a part of a garment limb passes around a digit of the hand

3.5

rotor

complete assembly, which spins in a clockwise rotation, comprised of the 3 arms of the sample carrier and the 3 arms of the mass carrier, also including the axle and optionally the electric motor

3.6

sample carrier

three arms of the rotor, on which the sample holders are mounted

3.7

mass carrier

three additional arms, containing the masses needed to adjust the required total rotational mass inertia of the rotor

3.8

time to stop

time between the release of the rotor and the end of the sliding of the samples on the concrete tile

3.9

distance to stop

calculated rotational distance travelled by the sample carriers, between the release of the rotor and the end of the sliding of the samples on the concrete tile

3.10

structural strong layer(s)

SSL

layer of material or combination of layers of materials that confer the mechanical properties on a garment that allows it to resist damage and mechanical stress and thereby provide protection in an accident. The layer or layers may be of leather, fabric, or other materials individually or in combination and may or may not include the outermost layer

3.11

hole

break in a test sample, in any dimension, caused by abrasion

Note 1 to entry: see 5.4.5.3.

3.12

test run

single test at a predetermined revolutions per minute, executed on three test samples

3.13

test cycle

three successive test runs (see 3.12 and 5.4.5.1) to test a material or a combination of materials

3.14

overgarment

clothing designed to be worn over a suit, jacket or trousers

3.15

undergarment

clothing designed to be worn under a suit, jacket or trousers

4 Test samples

Samples shall be provided for examination and testing according to Table 1.

Tests shall be performed on complete garments and specimens obtained from them. If it is not possible to perform any required test using an actual test sample garment, the test may be performed using a representative sample of same materials and construction as found in the complete garment.

In the case of garments with pockets or other provisions for removable impact protectors, the manufacturer shall submit for testing, samples of all impact protectors appropriate for the garment as listed in the information notice for users.

Before testing, garments and samples shall be cleaned according to the manufacturer instructions. It is not necessary to clean garments before testing where only trivial surface cleaning treatments are recommended, for example wiping with a damp sponge (see EN ISO 13688:2013, 5.2). Test samples shall be conditioned in an atmosphere of (23 ± 2) °C and (50 ± 5) % relative humidity for a minimum period of 24 h before testing.

Testing shall either be carried out in the conditioning environment or shall be started within 30 min of the removal of the test samples from that environment.

It is recommended to perform the tests in the above conditioning atmosphere; if not possible, the test atmosphere shall not exceed the temperature of (23 ± 5) °C and a relative humidity of 15 % to 75 %.

The dimensions given in the following Table 1 are intended with a tolerance of ± 5 % unless specified by the cited method.