

**norm****NEN-EN 13634**

Eisen en beproevingsmethoden voor  
beschermschoeisel voor beroepsmatige  
motorrijders

Publicatie uitsluitend voor commentaar

Requirements and test methods for professional motorcyclists' protective  
footwear

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ICS

English version

Requirements and test methods for professional motorcyclists'  
protective footwear

Exigences et méthodes d'essai pour les chaussures de  
protection des motocyclistes professionnels

Anforderungen und Prüfverfahren für Schutzschuhe für  
professionelle Motorradfahrer

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 162.

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.

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### Foreword

This European Standard Has been prepared by the Technical Committee CEN/TC 162 "Protective clothing including hand and arm protection and lifejackets" the secretariat of which is held by DIN.

This document is currently submitted to the CEN enquiry.

This European Standard 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.

Annex A is normative.

For relationship with EU Directive, see informative Annex ZA, which is an integral part of this European Standard.

## 0 Introduction

Motorcyclists' footwear is intended to give protection against ambient conditions without unduly impairing the user's dexterity in controlling the motorcycle and operating the foot controls. In addition, the footwear is intended to give a degree of protection to the foot and ankle in accidents. The especial hazards in motorcycle accidents are impacts with the motorcycle, conflicting vehicles and road furniture and with road surfaces. Road surface injuries are worse when the foot is trapped under the motorcycle during sliding impacts. The standard sets out a number of basic requirements considered to be essential for this type of footwear including a number of ergonomic requirements.

## 1 Scope

This European Standard applies to protective footwear for professional motorcycle riders for use while riding motorcycles for on or off road activities. It specifies the requirements for protection, ergonomic characteristics, innocuousness, mechanical properties, cleaning, marking and information for users. It also describes the appropriate test methods whereby conformity against these requirements can be assessed. The professional rider is a person who is employed to provide or contracts to perform for reward, the services requiring the riding of a motorcycle. Examples are:

- a) the delivery of letters, packets or other small freight,
- b) the transport of passengers by motorcycle,
- c) emergency medical treatment,
- d) vehicle breakdown support.

## 2 Normative References

This European Standard incorporates by dated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For a dated reference, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 344: 1992	Requirements and test methods for safety protective and occupational footwear for professional use
EN 388: 1994	Protective gloves against mechanical risks
EN 1621-1: 1997	Motorcyclists' protective clothing against mechanical impact - Part 1: Requirements and test methods for impact protectors
EN XXXX-2	Protective clothing for motorcycle riders - Jackets, trousers and one-piece or divided suits. Part 2 - Determination of impact abrasion resistance
ISO 3377: 1975	Leather - Determination of tearing load
ISO 4045: 1997	Leather - Determination of pH
ISO 4649: 1985	Rubber - Determination of abrasion resistance using a rotating cylindrical drum device
ISO 4674: 1977	Fabrics coated with rubber on plastics - Determination of tear resistance
ISO 5423: 1992	Moulded plastics footwear - Lined or unlined polyurethane boots for general industrial use - Specification
ISO 11642: 1993	Leather - Tests for colour fastness - Colour fastness to water

## 3 Definitions

For the purpose of this Standard, the following definitions apply:

**3.1 Motorcycle footwear:** A footwear primarily designed to be used on public highways.

**3.2 Zone of specific protection (Zone of protection):** The area of footwear that is intended to provide additional specific protection, and is subject to specific testing.

**3.3 Protective layer (of motorcyclists' footwear):** The leather or fabric in a single piece or multiple pieces or layers that, joined together by seams or other means, make up the continuous and mechanically strong structure of the footwear. The protective layer may be lined and may be fitted with additional decorative and safety features to its outer surface.

**3.4 Chamois leather:** A soft sheepskin leather tanned in imitation of leather prepared from wild chamois.

## 4 General requirements for motorcyclists' footwear

All motorcyclists' footwear shall comply with all basic requirements in clause 4.

## 4.1 Design

### 4.1.1 Height of upper

When measured in accordance with 4.2 of EN 344 : 1992, the minimum height shall be at least 160 mm.

### 4.1.2 The whole of the upper shall be closed.

### 4.1.3 Seams

Other than when material overlays part of the upper and at the counter, seams shall not face forward and shall not be in the outer joint or toe area of the boot.

## 4.2 Whole Footwear

### 4.2.1 Insole Construction

An insole shall be present in such a way that it cannot be removed without damaging the footwear.

### 4.2.2 Upper/outsole bond strength

When footwear is tested in accordance with the method described in 5.1 of EN 344 : 1992 the bond strength shall be not less than 4 N/mm.

## 4.3 Uppers

### 4.3.1 pH value

When leather uppers are tested in accordance with the method described in ISO 4045 : 1997, components shall have a pH of between 3,5 and 9,5 and if the pH is less than 4, the difference figure shall be less than 0,7.

## 4.4 Linings

When present, linings shall comply with the following requirements.

### 4.4.1 Tear strength

When determined in accordance with the appropriate method, the tear strength of the lining shall be not less than 30N for leather and 15N for coated fabrics and textiles.

Testing shall be carried out according to 6.3 of EN 388 : 1994.

### 4.4.2 Abrasion resistance

When tested in accordance with the method described in 5.14 of EN 344 : 1992 the wearing surface of textile linings shall not develop any holes before the following number of cycles has been performed:

- dry 25.600 cycles;
- wet 12.800 cycles.

### 4.4.3 pH value

When leather linings are tested in accordance with the method described in ISO 4045 : 1977, leather components shall have a pH value between 3,5 and 9,5, and if the pH is less than 4, the difference figure shall be less than 0,7.

## 4.5 Insoles

### 4.5.1 Water absorption and desorption

When tested in accordance with the method described in 5.15 of EN 344 : 1992, the water absorption of the layer of material adjacent to the foot shall be not less than 35% and the water desorption shall be not less than 40% of the water absorbed. Footwear fitted with non-absorbent insoles, eg. solid plastic type materials, are acceptable if covered. The abrasion test on the cover material will be carried out.

### 4.5.2 Abrasion resistance

When non-leather insoles are tested in accordance with the method described in 5.16 of EN 344 : 1992 there shall be no surface tearing before 400 cycles.

### 4.5.3 pH value

When leather insoles are tested in accordance with the method described in ISO 4045 : 1977, the pH value shall be between 3,5 and 9,5, and if the pH is less than 4, the difference figure shall be less than 0,7.

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