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# Kaitserõivad. Kaitse vihma eest KONSOLIDEERITUD TEKST

Protective clothing - Protection against rain CONSOLIDATED TEXT



## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 343:2003+A1:2007 sisaldab Euroopa standardi EN 343:2003+A1:2007 ingliskeelset teksti.	This Estonian standard EVS-EN 343:2003+A1:2007 consists of the English text of the European standard EN 343:2003+A1:2007.		
Käesolev dokument on jõustatud 30.10.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.	This document is endorsed on 30.10.2007 with the notification being published in the official publication of the Estonian national standardisation organisation.		
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.		
Käsitlusala:	Scope:		
This European Standard specifies	This European Standard specifies		

Nasiliusaia.	Scope.
This European Standard specifies	This European Standard specifies
requirements and test methods applicable	requirements and test methods applicable
to materials and seams of protective	to materials and seams of protective
clothing against the influence of	clothing against the influence of
precipitation (e. g. rain, snowflakes), fog	precipitation (e. g. rain, snowflakes), fog
and ground humidity. The testing of rain	and ground humidity. The testing of rain
proofness of ready made garments is	proofness of ready made garments is
excluded in this standard at this time	excluded in this standard at this time
because a separate test method for such	because a separate test method for such
a property is currently being prepared	a property is currently being prepared
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ICS 13.340.10	44

Võtmesõnad: climate, instructions, safety, specification (ap, specifications, testing, textiles, thermal insulation, thermal resistance, watertightness, water-vapour tests, weather, weather protection systems, weather resistance, weather-proof clothing, winds, workplace safety

# EUROPEAN STANDARD NORME EUROPÉENNE

## EN 343:2003+A1

**EUROPÄISCHE NORM** 

August 2007

ICS 13.340.10

Supersedes EN 343:2003

**English Version** 

## Protective clothing - Protection against rain

Vêtements de protection - Protection contre la pluie

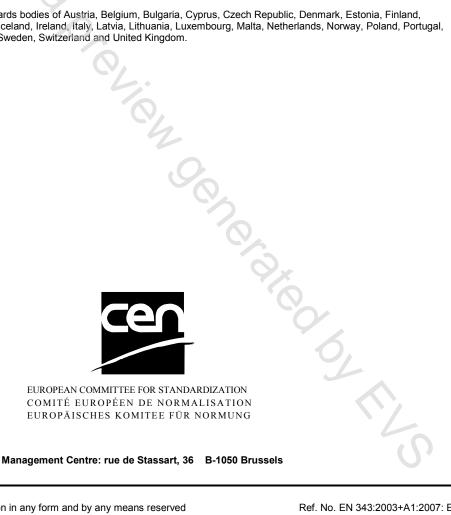
Schutzkleidung - Schutz gegen Regen

This European Standard was approved by CEN on 2 July 2003 and includes Amendment 1 approved by CEN on 25 July 2007.

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Ref. No. EN 343:2003+A1:2007: E

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## Foreword

This document (EN 343:2003+A1:2007) 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 February 2008 and conflicting national standards shall be withdrawn at the latest by February 2008.

This document includes Amendment 1, approved by CEN on 2007-07-25.

This document supersedes A EN 343:2003 (A.

The start and finish of text introduced or altered by amendment is indicated in the text by tags  $\triangle$   $\triangle$ .

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(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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In this European Standard the measured properties of materials and seams of protective clothing and their subsequent classification are intended to ensure an adequate protection level. Water proofness and water vapour resistance are the essential properties to be tested and marked on the label.

Water proofness is the most important property and it is measured on material of the outer garment layer. Tests are made on new and pretreated fabric samples and on parts with seams.

Some waterproof materials are impermeable to water vapour transmission. However other materials on the market combine water proofness with water vapour permeability. This property expressed by low water vapour resistance enhances sweat evaporation and significantly contribute to body cooling. This is valuable, because it contributes to better comfort and less physiological strain and prolongs the wearing time in certain climatic is a one liew of not here by the set of the conditions (see annex A).

#### 1 Scope

This European Standard specifies requirements and test methods applicable to materials and seams of protective clothing against the influence of precipitation (e. g. rain, snowflakes), fog and ground humidity.

The testing of rain proofness of ready made garments is excluded in this standard at this time because a separate test method for such a property is currently being prepared.

#### 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, 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 (including amendments).

EN 340, Protective clothing — General requirements

EN 388, Protective gloves against mechanical risks

EN 530:1994, Abrasion resistance of protective clothing material — Test methods

EN 20811, Textiles — Determination of resistance to water penetration — Hydrostatic pressure test

EN 31092, Textiles — Determination of physiological properties — Measurement of thermal and water-vapour resistance under steady-state conditions (sweating guarded - hotplate test) (ISO 11092:1993)

EN ISO 1421, Rubber- or plastics-coated fabrics — Determination of tensile strength and elongation at break (ISO 1421:1998)

EN ISO 7854:1997, Rubber- or plastics-coated fabrics — Determination of resistance to damage by flexing (ISO 7854:1995)

A EN ISO 12947-1, Textiles — Determination of the abrasion resistance of fabrics by the Martindale method — Part 1: Martindale abrasion testing apparatus

EN ISO 12947-2, Textiles — Determination of the abrasion resistance of fabrics by the Martindale method — Part 2: Determination of specimen breakdown (A)

EN ISO 13934-1, Textiles — Tensile properties of fabrics — Part 1: Determination of maximum force and elongation at maximum force using the strip method (ISO 13934-1:1999)

EN ISO 13935-2, Textiles — Tensile properties of fabrics — Part 2: Determination of maximum force using the grab method [A] (ISO 13935-2:1999) [A]

ISO 1817, Rubber, vulcanized — Determination of the effect of liquids

A ISO 4674, Rubber- or plastics-coated fabrics — Determination of tear resistance (A