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BSI Standards Publication

Protective clothing - Protection against rain

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National foreword

This British Standard is the UK implementation of EN 343:2019. It supersedes BS EN 343:2003+A1:2007, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PH/3, Protective clothing.

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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English Version

Protective clothing - Protection against rain

Habillement de protection - Protection contre la pluie

Schutzkleidung - Schutz gegen Regen

This European Standard was approved by CEN on 5 November 2018.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Contents	Page
European foreword.....	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	6
4 Performance assessment and requirements	7
4.1 General requirements and innocuousness.....	7
4.2 Resistance to water penetration, WP.....	7
4.3 Water vapour resistance, R_{et}	8
4.4 Tensile strength of the woven outer shell material.....	8
4.5 Tear resistance of the woven outer shell material	8
4.6 Bursting strength of the knitted outer shell material.....	8
4.7 Dimensional change of the protective clothing.....	9
4.8 Seam strength of the outer shell material.....	9
4.9 Waterproofness of a readymade garment (optional).....	9
5 Pretreatment	9
5.1 General.....	9
5.2 Pretreatment by cleaning.....	9
5.3 Pretreatment by abrasion.....	9
5.4 Pretreatment by repeated flexing.....	10
5.5 Pretreatment with fuel and oil.....	10
6 Test methods	11
6.1 Sampling.....	11
6.2 General requirements and innocuousness.....	11
6.3 Water penetration, WP	11
6.4 Water vapour resistance, R_{et}	11
6.5 Tensile strength.....	11
6.6 Tear resistance.....	11
6.7 Bursting strength	11
6.8 Dimensional change after cleaning	11
6.9 Testing of seam strength	12
6.10 Testing the waterproofness of a readymade garment (optional)	12
6.11 Ageing.....	12
7 Size designation	12
8 Marking and care labelling.....	12
9 Information supplied by the manufacturer.....	13
Annex A (informative) Recommendations for wearing time	14
Annex B (informative) Test device for one sided exposure to fuel and oil	15
Annex C (informative) Significant changes between this document and the previous edition	16
Annex ZA (informative) Relationship between this European Standard and the essential requirements of Regulation (EU) 2016/425 of the European parliament and of the Council of 9 March 2016 on personal protective equipment aimed to be covered.....	17
Bibliography	18

This is a preview of "BS EN 343:2019". [Click here to purchase the full version from the ANSI store.](#)

European foreword

This document (EN 343:2019) 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 2019, and conflicting national standards shall be withdrawn at the latest by September 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 supersedes EN 343+A1:2007.

This document has been prepared under a standardization request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of Regulation (EU) 2016/245.

For relationship with Regulation (EU) 2016/245, see informative Annex ZA, which is an integral part of this document.

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

In this document 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 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 pretreated fabric samples and on parts with seams.

A test method for an optional readymade garment test after cleaning is described (rain tower test). 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 conditions (see Annex A).

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1 Scope

This document specifies requirements and test methods for the performance of materials and ready-made garments for protection against the effects of precipitation (e.g. rain, snowflakes), fog and ground humidity. Garments for protection against other effects than precipitation (e.g. water splashes, waves) are excluded from this standard. The protective effects and requirements of footwear, gloves and separate headwear are excluded from the scope of this document.

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, *Protective gloves against mechanical risks*

EN 530:2010, *Abrasion resistance of protective clothing material - Test methods*

EN 14360:2004, *Protective clothing against rain - Test method for ready made garments - Impact from above with high energy droplets*

EN 20811:1992, *Textiles — Determination of resistance to water penetration — Hydrostatic pressure test*

EN ISO 1421:2016, *Rubber- or plastics-coated fabrics - Determination of tensile strength and elongation at break (ISO 1421:2016)*

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

EN ISO 11092:2014, *Textiles - Physiological effects - Measurement of thermal and water-vapour resistance under steady-state conditions (sweating guarded-hotplate test) (ISO 11092:2014)*

EN ISO 12947-1:1998, *Textiles - Determination of the abrasion resistance of fabrics by the Martindale method - Part 1: Martindale abrasion testing apparatus (ISO 12947-1:1998)*

EN ISO 12947-2:2016, *Textiles - Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown (ISO 12947-2:2016)*

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

EN ISO 13934-1:2013, *Textiles - Tensile properties of fabrics - Part 1: Determination of maximum force and elongation at maximum force using the strip method (ISO 13934-1:2013)*

EN ISO 13935-2:2014, *Textiles - Seam tensile properties of fabrics and made-up textile articles - Part 2: Determination of maximum force to seam rupture using the grab method (ISO 13935-2:2014)*

EN ISO 13938-1:1999, *Textiles - Bursting properties of fabrics - Part 1: Hydraulic method for determination of bursting strength and bursting distension (ISO 13938-1:1999)*

EN ISO 13938-2:1999, *Textiles - Bursting properties of fabrics - Part 2: Pneumatic method for determination of bursting strength and bursting distension (ISO 13938-2:1999)*