

Textiles — Solar UV protective properties —

Part 1: Method of test for apparel fabrics

The European Standard EN 13758-1:2001, incorporating amendment A1:2006, has the status of a British Standard

ICS 59.080.30; 61.020

National foreword

This British Standard is the UK implementation of EN 13758-1:2001, incorporating amendment A1:2006. It supersedes BS 7914:1998 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee TCI/66, Apparel.

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.

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 28 January 2002

Amendments issued since publication

Amd. No.	Date	Comments
13962 Corrigendum No. 1	18 June 2002	Correction of clause numbering for Clauses 8 and 9
17118	31 May 2007	Implementation of CEN amendment A1:2006

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English Version

Textiles - Solar UV protective properties - Part 1: Method of test for apparel fabrics

Textiles - Propriétés de protection contre le rayonnement
UV solaire - Partie 1: Méthode d'essai pour étoffes
destinées à l'habillement

Textilien - Schutzeigenschaften gegen ultraviolette
Sonnenstrahlung - Teil 1: Prüfverfahren für
Bekleidungstextilien

This European Standard was approved by CEN on 5 October 2001 and includes Amendment 1 approved by CEN on 23 November 2006.

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 Central Secretariat or to any CEN member.

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 Central Secretariat has the same status as the official versions.

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Foreword

This European Standard (EN 13758-1:2001+A1:2006) has been prepared by Technical Committee CEN/TC 248, "Textiles and textile products", the secretariat of which is held by BSI.

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 2007, and conflicting national standards shall be withdrawn at the latest by June 2007.

This document includes Amendment 1, approved by CEN on 2006-11-23.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** **A1**.

This standard includes a normative annex A and informative annexes B and C.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, 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.

1 Scope

This European Standard specifies a method for the determination of the erythemally weighted ultraviolet (UV) radiation transmittance of standard conditioned apparel fabrics to assess their solar UV protective properties.

This method is not suitable for fabrics which offer protection at a distance such as umbrellas, shade structures or artificial sources.

NOTE This standard may not be appropriate for fabrics with small colour and construction variations.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate place 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 20139:1992, *Textiles — Standard atmospheres for conditioning and testing (ISO 139:1973)*.

3 Terms, definitions and abbreviations

For the purposes of this European Standard the following terms and definitions apply.

3.1.1

wavelength (λ)

spatial period of radiation expressed in nanometres

3.1.2

ultraviolet radiation (UVR)

electromagnetic radiation with wavelength between 180 and 400 nm

UV-A: ultraviolet radiation with wavelength between 315 and 400 nm

UV-B: ultraviolet radiation with wavelength between 280 and 315 nm

3.1.3

solar irradiance ($E(\lambda)$)

quantity of energy emitted by the sun received at the surface of the earth per unit wavelength and per unit area. It is expressed as $\text{W m}^{-2} \text{nm}^{-1}$. The solar UVR spectrum as measured at the earth's surface extends between 290 nm and 400 nm

3.1.4

erythema

reddening of the skin caused by various physical or chemical agents

3.1.5

erythema action spectrum $\varepsilon(\lambda)$

relative erythema effectiveness of radiation with wavelength λ