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

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EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 13758-1:2002 sisaldab Euroopa standardi EN 13758-1:2001 ingliskeelset teksti. Käesolev dokument on jõustatud 16.05.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 13758-1:2002 consists of the English text of the European standard EN 13758-1:2001. This document is endorsed on 16.05.2002 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: 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.	**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.

ICS 59.080.30, 61.020

Võtmesõnad: climatic protection, clothing, fabrics, properties, protection, solar radiation, testing, textiles, ultraviolet radiation, uv, woven fabrics

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13758-1

November 2001

ICS 59.080.30; 61.020

English version

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

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

This European Standard was approved by CEN on 5 October 2001.

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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 Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Ref. No. EN 13758-1:2001 E

Foreword

This European Standard 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 May 2002, and conflicting national standards shall be withdrawn at the latest by May 2002.

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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the 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 W m^{-2} 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 erythemal effectiveness of radiation with wavelength λ