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Textiles - Solar UV protective properties - Part 2: Classification and marking of apparel

This European Standard was approved by CEN on 7 Mai 2003 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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Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreword</td>
<td>3</td>
</tr>
<tr>
<td>Introduction</td>
<td>4</td>
</tr>
<tr>
<td>1 Scope</td>
<td>5</td>
</tr>
<tr>
<td>2 Normative references</td>
<td>5</td>
</tr>
<tr>
<td>3 Terms and definitions</td>
<td>5</td>
</tr>
<tr>
<td>4 Requirements</td>
<td>6</td>
</tr>
<tr>
<td>4.1 General clothing design requirements</td>
<td>6</td>
</tr>
<tr>
<td>4.2 UVR protection</td>
<td>6</td>
</tr>
<tr>
<td>5 Marking, labelling</td>
<td>6</td>
</tr>
<tr>
<td>Annex A (informative) Protection, marketability, comfort and aesthetic appeal</td>
<td>8</td>
</tr>
</tbody>
</table>
Foreword

This document (EN 13758-2:2003+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of an identical text or by endorsement, at the latest by June 2007, and conflicting national standards shall be withdrawn at the latest by June 2007.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 $\Delta$ $\textit{A1}$.

It is part 2 of a series of two standards on UV protective properties of clothing.

Annex A is informative.

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.
Introduction

Recent international research has shown that prolonged exposure of the skin to the sun can produce both short and long-term harmful effects. The major cause, ultraviolet radiation, can be significantly reduced by clothing. However, the level of protection offered by clothes varies considerably and is dependent on many factors. Most significant are the fabric properties and the design of the garments.
1 Scope

This European Standard specifies the requirements for marking of clothing which are designed to offer the wearer protection against solar ultraviolet radiation exposure.

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 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 13758-1 Textiles – Solar UV protective properties – Part 1: Method of test for apparel fabrics

3 Terms and definitions

For the purposes of this European standard, the following terms and definitions apply:

3.1 solar ultraviolet radiation (UVR)
electromagnetic radiation with wavelength between 290 and 400 nm

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

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

3.4 ultraviolet protection factor (UPF)
ultraviolet protection factor (UPF) as determined by EN 13758-1

3.5 average UV-A transmission
average UV-A transmission as defined by EN 13758-1

3.6 upper body
the torso, from the base of the neck down to the hip, and cross the shoulders down to ¾ of the upper arm

3.7 lower body
part of the body from the waist down to below the patella
4 Requirements

4.1 General clothing design requirements

Clothing designed to offer protection to the upper body shall at least cover the upper body completely.

Clothing designed to offer protection to the lower body shall at least cover the lower body completely.

Clothing designed to offer protection to both the upper and lower body shall at least cover the upper and lower body completely.

4.2 UVR protection

The UPF of all materials used for the clothing assembly shall be measured according to EN 13758-1. The lowest UPF value shall be larger than 40. The UVA_{average} transmission in the case of uniform samples or sample UVA transmission in the case of non-uniform samples determined according to EN 13758-1 shall be smaller than 5 %.

5 Marking, labelling

UV protective clothing for which compliance with this standard is claimed shall permanently be marked with:

- the number of this standard, i.e. EN 13758-2.
- UPF 40+

UV protective clothing for which compliance with this standard is claimed shall be marked with:

- the pictogram (sun yellow with Pantone Process Yellow CVU or white), shading, outline and characters shall be black (Pantone Black 6 CVP) with a minimum 10 point font size, see Figure 1.
- the wording: “Sun exposure causes skin damage”
- the wording: “Only covered areas are protected”
- the wording: “The protection offered by this item may be reduced with use or if stretched or wet.”

UV protective clothing for which compliance with this standard is claimed can be marked with:

- the wording “provides UVA + UVB protection from the sun”

It is recommended that a small leaflet is attached to the garment to explain the danger of UV radiation exposure and the ability of the garment to reduce this exposure.
EN 13758-2

Figure 1 — Pictogram
Protection, marketability, comfort and aesthetic appeal

This standard endeavours to strike a compromise over a number of conflicting aspects: protection, marketability, comfort and aesthetic appeal. The aim is to ensure that garments cover significant areas of the body and use fabrics that are adequate. The minimum fabric requirements specified in this standard give sufficient protection in all but the most extreme situations which are highly unlikely to be met in normal wearing circumstances, whilst the garment design specifications should ensure that merchandising remains viable. Furthermore, it does not radically conflict with existing national standards.