

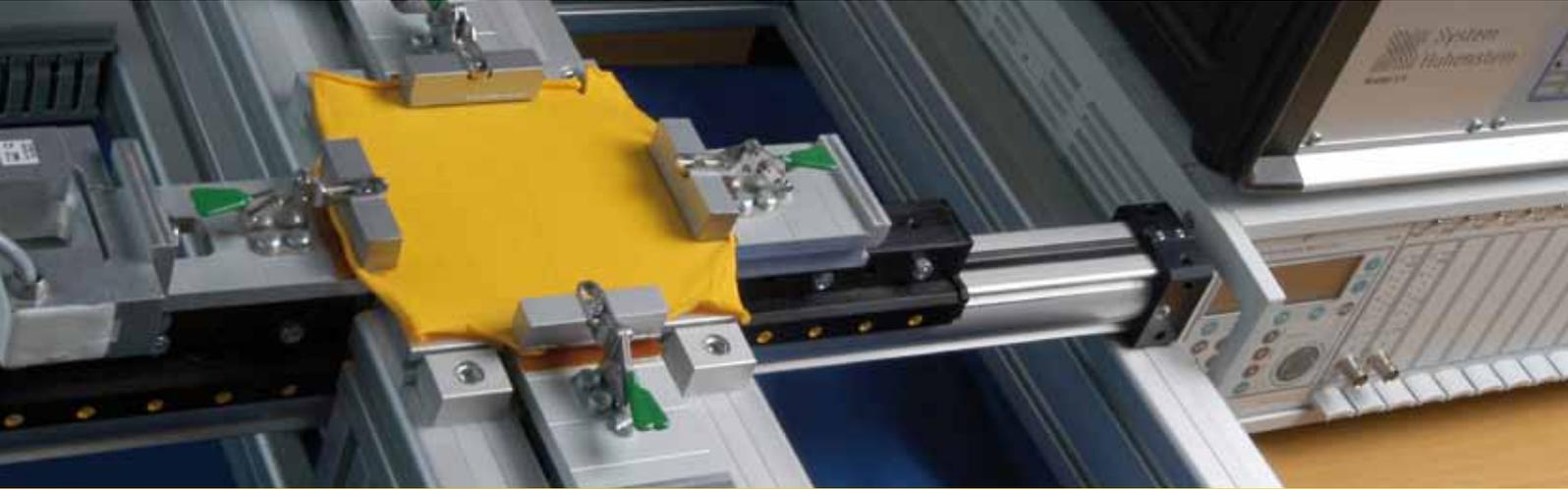


UV STANDARD 801  
Test-No. 0000 Institute



UV STANDARD 801  
Test-No. 00000 Institute

INTERNATIONAL TESTING ASSOCIATION  
FOR APPLIED UV PROTECTION



# UV-STANDARD 801

## GENERAL AND SPECIAL CONDITIONS



**General and special conditions for the award of the entitlement to mark consumer products with the UV Standard 801 label**

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## 1 Purpose

UV Standard 801 is a normative document published by the International Testing Association for Applied UV Protection to which the institutes listed in Appendix 1 belong.

This standard stipulates general and specific requirements for the award of the entitlement to mark consumer products with the UV Standard 801 labels illustrated in Appendix 2.

The Institutes of the International Testing Association for Applied UV Protection have set themselves the goal of determining the UV protection of a consumer product by taking account of everyday loads applied to the material. With this goal in mind, the UV Standard 801 goes far beyond the requirements of the Australian/New Zealand Standard AS/NZS 4399:1996 and rectifies the significant weak points.

## 2 Application

This standard applies to all flat consumer products, e.g. textiles, clothing, shoes, awnings, sunshades, leather, sheets, etc., which offer any kind of UV protection to human skin.

This standard does not apply to chemicals, auxiliary agents or colorants.

## 3 Definitions

### 3.1 UV RADIATION

UV radiation on or near the earth's surface is an invisible component of sunlight, divided into UVA radiation (wavelength 315 - 400 nm) and UVB radiation (wavelength 280 - 315 nm). UV radiation penetrates the skin and may result in skin damage (ageing, sunburn, skin cancer, etc.).

### 3.2 UV PROTECTION FACTOR

The "UV protection factor" is a value for increasing the natural protection period of human skin imparted by a consumer product which protects the area of skin from direct irradiation. The natural protection period for human skin (approximate safe period in the sun) depends on skin type (see Appendix 3). Human skin is divided into 6 skin types, of which Type 1 has the shortest natural protection period and Type 6 the longest. If a UV protection factor is given for a consumer product, the natural protection period can be multiplied by this value. The additional use of cosmetic sun-protection substances is strongly recommended for areas of skin, which are temporarily or permanently exposed.

Consumer products which offer UV protection but which do not cover human skin, e.g. sun hats, sunshades, awnings, etc., only protect against direct radiation and offer no protection against reflected UV radiation. The additional use of cosmetic sun-protection substances is therefore strongly recommended when using these products.

The UV protection factor is determined by measurement in accordance with Appendix A of the Australian/New Zealand Standard AS/NZS 4399:1996 with regard to the erythema-effectiveness table indicated in Appendix B1 and the spectral irradiance indicated in Appendix B2.

The aim of this UV Standard 801 is to determine the UV protection factor by taking account of the practical demands on consumer products. Thus it is expected that the factor determined by Standard 801 will be significantly lower than according to the Australian/New Zealand standard which only takes into account the new, dry and unstretched condition of the textile which is to be tested.

### 3.3 UV STANDARD 801 LABEL

A consumer product can be provided with the UV Standard 801 label when the general and special requirements have been fulfilled and when the right to label a consumer product has been granted by an Institute of the International Testing Association for Applied UV Protection.

Labelling in accordance with UV Standard 801 testifies that the labelled consumer product fulfils the conditions set out in this standard and that the product and its conformity test, as also stipulated in this standard, are subject to monitoring by an Institute of the International Testing Association for Applied UV Protection.

Labelling in accordance with UV Standard 801 is not a quality mark. The label refers to the condition of the sample of the consumer product tested according to the UV Standard 801.

Labelling makes no statement concerning other properties of the product, such as physiological behaviour in respect of clothing, suitability for use, reaction to product care, properties relating to use in buildings, burning behaviour, etc.

Labelling also makes no statement regarding damage to single specimens of the labelled product which may negatively influence the UV protection factor through, for example, transport or storage damage (and improper cleaning following such damage) or improper processing, etc. Nor does it make any statement concerning possible alteration of the UV protection factor through improper or inappropriate use of the product.

Labelling differs between two kinds of article groups: „Clothing and clothing fabrics“ and „shading textiles“ (see Appendix 2).

### 3.4 MANUFACTURER

The manufacturer of a consumer product is that company which manufactures the product or carries out the manufacture on behalf of another company for whom the product is being manufactured.

### 3.5 DISTRIBUTOR

The distributor of a consumer product is the company which markets the product as a wholesale dealer or retailer (department stores, mail-order houses etc.).

## 4 Conditions for certification

### 4.1 APPLICATION FOR CERTIFICATION

The applicant submits a written application on the appropriate application form for the right to use the UV Standard 801 label. The application is to be submitted to an Institute of the International Testing Association for Applied UV Protection or to a laboratory authorised by the International Association. The applicant must describe the consumer product to be tested and/or to be certified in full detail according to the best of his knowledge, corresponding to the table in the application. Where possible, evidence of this information (e.g. test certificates from the materials supplier) should be submitted.

The application contains a legally binding declaration of commitment through which the applicant undertakes himself and declares that

- the conditions valid at the time and set out in the UV Standard 801 are well known and are being adhered to
- the specified conditions for the UV Standard 801 label are known and are being adhered to
- the consumer product to be certified has been described as accurately as possible with reference to material composition, weight per square metre, colour, finish, coating and care labelling, insofar as these parameters cannot be verified by one or more test reports from accredited testing institutes
- an appropriate number of samples are made available to an Institute of the International Testing Association for Applied UV Protection if the testing has not yet taken place
- a declaration of conformity is provided with the application for certification
- before any change in the product or the production process takes place the Institute of the International Association which processed the application or issued the certificate will be informed the change will only be implemented following the written consent of the Institute
- all necessary measures and precautions will be taken to ensure that the manufactured products correspond to the certified sample and that an appropriate quality-management system will be set up, including, in particular, regular product inspections and their documentation
- a representative of the International Testing Association for Applied UV Protection is allowed to take random samples from current production
- the costs for any further monitoring tests will be borne by the applicant.

### 4.2 DECLARATION OF CONFORMITY

The declaration of conformity is a constituent part of the certification application and must be made by the applicant and signed with legally binding effect. By making this declaration, the applicant confirms that the consumer products manufactured or sold by him correspond to the currently valid UV Standard 801 and to the sample for which a certification application for the UV Standard 801 label was made at an Institute of the International Testing Association for Applied UV Protection.

The applicant's declaration of conformity is addressed to the International Testing Association for Applied UV Protection and to the customers of the applicant.

#### **4.3 SAMPLE MATERIAL**

The applicant must submit sufficient and representative sample materials (for testing and reference) of the consumer product which is to be labelled in the colour and designs requiring certification. This also applies in the case of an application for an extension of the certificate.

#### **4.4 TESTING**

The sample submitted by the applicant, as well as specimens taken at the place of manufacture, are tested by an Institute of the International Testing Association for Applied UV Protection according to the conditions laid down in this UV Standard 801.

#### **4.5 QUALITY ASSURANCE**

The applicant must establish an appropriate quality management system in order to guarantee that the consumer product which is being produced or sold corresponds to the certified sample and to the requirements of UV Standard 801 and, in addition, must maintain this quality management system throughout the validity period of entitlement to the UV Standard 801 label. Assurance must be given and the Institute of the International Testing Association for Applied UV Protection must be provided with satisfactory information that the products are regularly tested. This also applies in particular to the different finishing and dye lots, etc. Using appropriate means the applicant must document not only measures guaranteeing conformity, but also the implementation of tests and must make them available to the Institute for Applied UV Protection.

The statutory regulations concerning the manufacturer's responsibility for defective products are unaffected by the establishment of UV Standard 801.

For so long as the certificate is valid, the Institute is entitled at any time to carry out control tests on the certified product by random sampling. If a significant deterioration of UV protection is established, a further test is carried out on another sample. If the second test also results in discrepancies, the Institute of the International Testing Association for Applied UV Protection will immediately revoke the right to label the consumer product with UV Standard 801. In this case labelling of the corresponding product as well as any other use (for example, in advertising material) of the UV Standard 801 label shall cease with immediate effect.

Recognition of the credibility of quality assurance in the applicant's company is a precondition for granting the right to use the UV Standard 801 label.

The applicant is responsible for the quality assurance of the labelled product. He can transfer parts of the quality assurance to the manufacturer, supplier or importer. The Institute of the International Testing Association for Applied UV Protection must be satisfactorily informed also of the effectiveness of the transferred quality assurance.

## 5 Label

The manufacturer or seller may only apply the UV Standard 801 label to the products which are entitled to bear the UV Standard 801 label as specified by an Institute of the International Testing Association for Applied UV Protection.

Consumer products which carry a UV Standard 801 label must have a valid certificate in accordance with UV Standard 801.

Ready-to-wear articles require a special certificate. If the ready-to-wear product is made of material which has already been certified, certification can be simplified. In each case certification is based on the lowest UV protection factor of the processed individual items which cover the wearer's body.

### 5.1 AUTHORISATION

When all the requirements of this UV Standard 801 are fulfilled and the tests show no deviation from the details provided by the applicant, the applicant is issued with a certificate entitling him to mark the consumer product with the UV Standard 801 label during the period of authorisation. It is the responsibility of the recipient of the label to mark a consumer product with the UV Standard 801 label.

If this UV Standard 801 is modified, the corresponding certified consumer products have a transition period up to the expiry of the certificate. When this period has expired, the valid conditions pertaining to an extension of the certificate must be fulfilled.

### 5.2 PERIOD OF AUTHORISATION

The applicant is entitled to mark a consumer product with the UV Standard 801 label for a maximum of one year. During the period of authorisation the test criteria for UV Standard 801 apply from the time the certificate is issued. At the applicant's request the start of the authorisation can be postponed for a maximum of three months following the issuing of the report.

When the authorisation period of the UV Standard 801 label has expired, the recipient of the label can apply to extend the entitlement for a further year.

As soon as the conditions laid down in the application cease to apply, the right to mark the consumer product with the UV Standard 801 label expires, provided that the Institute of the International Testing Association for Applied UV Protection has not already been informed of the changes and established by means of a subsequent test that the requirements of UV Standard 801 continue to be fulfilled.

### 5.3 WITHDRAWAL OF AUTHORISATION

If it is established, through production controls, market controls or in any other manner, that the details provided are no longer correct, the labelling authorisation will be withdrawn.

Authorisation is also withdrawn when the registration ceases to fulfil the requirements of the UV Standard 801 or for any other compelling reason.

If a consumer product continues to be labelled improperly after the withdrawal of authorisation, the International Testing Association for Applied UV Protection is entitled to publicise the withdrawal immediately. The recipient of the label is responsible for any damages which the International Testing Association incurs through improper use of the UV Standard 801 label.

### 5.4 TYPE OF LABEL

When the authorisation is issued, the applicant may mark the consumer product with UV Standard 801 (see Appendix 2).

Details concerning the certificate number and the testing institute which has issued the certificate are absolutely essential and must accord with the corresponding certificate.

The label can be complemented e.g. for hang tags with explanatory information. Completion of the label is the responsibility of the applicant.

Whenever the UV Standard 801 label is used, the label must clearly indicate to which consumer product it applies. The label can be used, for example, in collections, brochures, etc.

## 6 Regulations of testing

The institutes of the International Testing Group for Applied UV Protection have the aim of determining the UV Protection Factor of a product in such a way that the demands and strains to which the material is subject in practical use are taken into account. With this objective the UV Standard goes far beyond the requirements of the Australian/New Zealand Standard AS/NZS 4399:1996 and remedies the main weaknesses of this standard, which only takes into account the conditioned, unstretched material as new in determining the UV Protection Factor.

The testing regulations of this UV Standard 801 takes into account, inter alia, the demands made on the product through its use and maintenance .

The institutes of the International Testing Group for Applied UV Protection are committed to maintaining regular exchanges of information and experience in order to guarantee the comparability of established values and to continue the development of UV Standard 801 . Co-operation with the relevant and independent organisations in cancer prevention and with representatives of medical expertise is a basic element of this work.

The continued development of UV Standard 801 is supported by co-operative experiments, in which institutes of the International Testing Group for Applied UV Protection and laboratories authorised by the group participate.

In the following sections the procedure is set out for the determining of the UV Protection Factor for the granting of entitlement to UV Standard 801 registration.

### 6.1 CATEGORISATION OF ARTICLES/RANGE AND PROGRAMME OF TESTING

The samples submitted by the applicant to an institute of the International Testing Group for Applied UV Protection for the purpose of certification are ordered according to the table of products given below. The range of the programme can be ascertained from the table.

Category*	Loads			Measurement of UV protection factor						
	Abrasion	Washing and/or dry cleaning	Weathering	New material	Stretched	Wetted	After abrasion	After washing	After dry cleaning	After weathering
1	+	+	-	+	+	+	+	+	+	-
2	-	-	+	+	+	+	-	-	-	+

\* Category:  
 1 Clothing and fabrics for clothing, e.g. sports wear, leisure wear, etc.  
 2 Shading textiles (sun-protective textiles), e.g. awnings, blinds, sunshades, etc.

**6.2 TESTING AS NEW - SCREENING**

If several samples, e.g. a collection, are submitted for testing and certification, the parameters of construction, weight per metre square and fibre composition must be identical. Only differences in colour are permissible.

A screening measurement for the UV protection factor as new is carried out on all samples submitted following proper acclimatisation and preparation of the sample.

If the values for the UV protection factor determined during screening have a large range, then there is a consultation with the applicant prior to carrying out further tests or subjecting the samples to the stresses and strains of wear or use.

The size of the control sample to be taken for subsequent stages of testing and certification is determined by the number of samples submitted in different colours. Thus, if a three-coloured sample is submitted for testing, each colour is to be screened. The complete testing programme is then carried out on the colour with the lowest UPF.

Number of samples (colours)	Size of sample
1 - 3	1
4 - 10	2
11 - 20	3
21 - 30	4
31 - 40	5
etc.	etc.

**6.3 TESTING UNDER CONDITIONS OF USE**

The method in which the UV protection factor is determined under real conditions of use (stretching or stretching and wetting) is different for each article group.

**6.3.1 “Clothing and clothing fabrics” article group**

In the “Clothing and clothing fabrics” article group, the UV protection factor is determined for fabrics when new, abraded, laundered and/or dry cleaned, both in a stretched and in a stretched and wet state. For this, 6 or 8 test samples are taken from a control sample (colour). The UV protection factor is determined for two test samples when new, both when stretched and when stretched and wet. The UV protection factor is determined for the other test samples in the same manner after two test samples have been abraded, washed and/or dry-cleaned in each instance.

**6.3.2 “Shading textiles” article group**

In the “shading textiles” article group, the UV protection factor of new and weathered fabric is determined both in a stretched, and in a stretched and wet state.

For this, 4 test samples are taken from a control sample. The UV protection factor is determined for two test samples when new, both when stretched and when stretched and wet. The UV protection factor is determined for two other test samples in the same manner after weathering.

#### 6.4 EVALUATION AND CERTIFICATION

The UV protection factor is determined using measurements in line with the Australian/New Zealand Standard AS/NZS 4399:1996. The erythral effectiveness and the spectral irradiation of the sun are also taken into consideration. The applicant receives a test report detailing the values determined.

For the test samples in the "Shade textiles" article group, the values of the UV protection factor when stretched and when stretched and wet are determined for new material and for weathered material in the same manner. For test samples in the "Clothing and clothing fabrics" article group, the values of the UV protection factor when stretched and when stretched and wet are determined for new material, abraded, washed and/or dry-cleaned material.

In accordance with the objective of the UV Standard 801, the samples submitted are certified on the basis of the lowest UV protection factor determined.

Certification is allocated using the following factors 2; 5; 10; 15; 20; 30; 40; 60; 80, with the value determined being rounded down to the next lowest level.

The certificate authorises consumer products that conform to the sample submitted to be labelled with the UV Standard 801 (see Appendix 2).

## APPENDIX 1: INSTITUTES OF THE INTERNATIONAL TESTING ASSOCIATION

Currently the following institutes are members of the International Testing Association for Applied UV Protection:



### **AITEX – Instituto Tecnológico Textil**

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.../...

Continuation ·

APPENDIX 1: INSTITUTES OF THE INTERNATIONAL TESTING ASSOCIATION

International Testing Association for Applied UV Protection



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## APPENDIX 2: UV STANDARD 801 LABEL

### UV Standard 801 label

Labelling is the responsibility of the applicant.

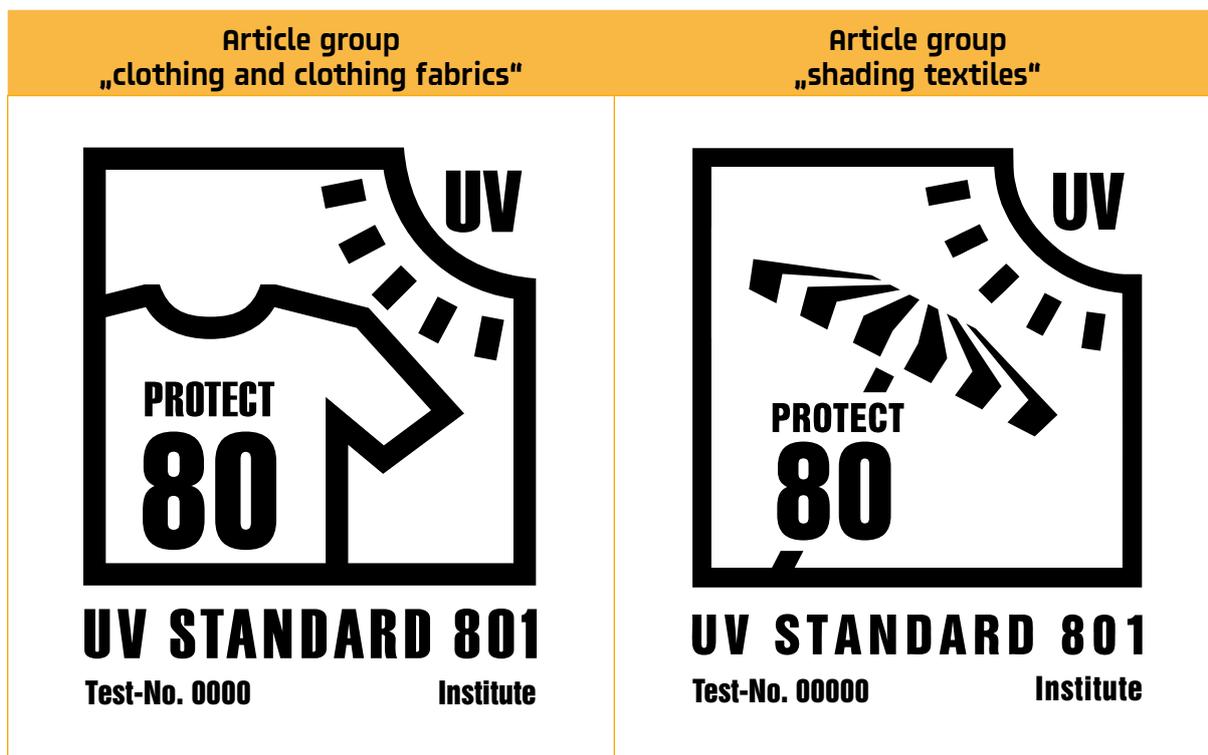
Labels must be written in the appropriate national language and include the certificate number and the testing institute which issued the certificate.

The label can be complemented e.g. for hang tags with explanatory information. Completion of the label is the responsibility of the applicant.

For a permanently labelled product (e.g. sew-in label) the following abbreviated form is to be used.

The artwork of this label can be requested from the testing institute.

The label differs between two kinds of article groups.



(Abbreviated form, e.g. for factor 80)

## APPENDIX 3: SKIN TYPES

### skin types

				
CHARACTERISTICS	SKIN TYPE 1	SKIN TYPE 2	SKIN TYPE 3	SKIN TYPE 4
SKIN	very fair-skinned	fair-skinned	light/dark brown	light brown, olive
HAIR	red or blond	blond, brown	light brown, brown	dark brown/black
EYES	blue, rarely brown	blue, green, grey	grey, brown	brown/dark
SUNBURNS	always heavy, aching	mostly heavy, aching	less frequently, moderate	hardly ever
SELF-PROTECTION TIME OF SKIN	5 - 10 minutes	10 - 20 minutes	20 - 30 minutes	40 minutes
PROTECTION BY A TEXTILE WITH A UPF OF 20	100 – 200 minutes	200 – 400 minutes	400 – 600 minutes	900 minutes

REMARK: Skin Type 5 & 6 are not listed here as they show no risk of erythema.

Source: Arbeitsgemeinschaft Dermatologische Prävention (ADP) e.V., Hamburg and Schweizer Krebsliga, Berne

# UV-STANDARD 801 · GENERAL AND SPECIAL CONDITIONS

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