

1. Scope:

This standard specifies the ultraviolet coefficient performance evaluation, and the basic requirements of the standards and test methods evaluation for protective clothing (does not apply to non-from UV Sunlight) for anti-solar ultraviolet textiles, clothing and other apparel items (such as hats).

2. Definitions:

- 2.1. Ultraviolet Protection Factor, UPF: is defined as the ratio between "detected average effective erythemat ultraviolet radiation flow (W/m^2) with no skin protection from sample" and "detected average effective erythemat ultraviolet radiation flow (W/m^2) with skin protection from sample".
- 2.2. Solar UV-A: solar ultraviolet radiation with wavelength between 315 and 400 nm.
- 2.3. Solar UV-B: solar ultraviolet radiation with wavelength between 280 and 315 nm.
- 2.4. Effective UVR transmission: ratio between "detected average effective erythemat ultraviolet radiation flow (W/m^2) with skin protection from sample" and "detected average effective erythemat ultraviolet radiation flow (W/m^2) with no skin protection from sample", expressed in percentages.

3. Grades:

Washing resistance test conducted according to provisions 5.2 in CNS 15001 "Performance evaluation of UV fabric":

Table 1 UPF categories

UPF	Erythemat ultraviolet penetration rate (%)	Grade
40-50, 50+	≤ 2.5	A
25-39	2.5~4.1	B
15-24	6.7~4.2	C

4. Test method:

Conducted according to provisions in CNS 15001 "Performance evaluation of UV fabric".

5. Mark:

Type	UPF	Classification
I (Needs washing)	40-50, 50+	AAAAA (Excellent)
	25-39	AAA (Good)
	15-24	A (Fair)
II (No washing)	40-50, 50+	AAAAA (Excellent)
	25-39	AAA (Good)
	15-24	A (Fair)

Note: solar UV protective clothing must have UPF>40 and average solar UV-A penetration rate below 5%.

6. Reference standard:

CNS 15001 L 1035	Performance evaluation of UV fabric.
AS/NZS 2604-1998	Sunscreen products – Evaluation and classification.
AS/NZS 4174-1994	Synthetic shade cloth.
AS/NZS 4399-1996	Sun protective clothing – Evaluation and classification.
ISO 6330	Textiles – Domestic washing and drying procedures for textile testing.
BS EN 13758-2:2003	Textiles – Solar UV protective properties – Part 2: Classification and making of apparel

7. Supplementary:

This standard has been reviewed by the leader of the Specified Requirement Execution Team, and is to be issued after being approved by the chairman of the review committee, same for all revisions.

**The Committee for Conformity Assessment of Accreditation and Certification on
Functional and Technical Textiles**

Specified Requirements of Ultraviolet Protective Textiles

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Chairman, N.C. Lin	Team leader W.H. XING	Specified Requirement Execution Team

**The Committee for Conformity Assessment of Accreditation and Certification on
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Document Revision History

Specified Requirements of Ultraviolet Protective Textiles		Document No.: FTTS-FA-008	
Edition	Revision Reason and Content Description	Revised Page	Revised Date
1.0	New issuance		
2.0	Revision according to resolution 2005/01/27 of review committee: Add tag labeling method of grades: grade 5: AAAAA, AAAA, AAA, AA, A; grade 4: AAAAA, AAAA, AAA, AA; grade 3: AAAAA, AAA, A; grade 2: AAAAA, AAA	2	2005/03/03
3.0	Revision according to resolution 2008/12/26 of review committee.	1-2	2008/12/26