



## Test Report

No.: SL118002354979TX

Date: May 17, 2018

Page 1 of 4

WAMA  
18235 FRIAR ST.  
TARZANA, LOS ANGELES,  
CA 91335, UNITED STATES

The following sample was submitted and identified by the client as:

One sample of knitted cutting in black

Buyer : WAWA  
Brand : WAWA  
Colour : BLACK  
Sample Receiving Date : May 10, 2018  
Test Performing Period : May 11, 2018 – May 17, 2018  
Test Performed : Selected test(s) as requested by applicant (details please refer to result page(s)).

\* \* \* \*

Test Results : Please refer to the next page(s).

Signed for and on behalf of  
SGS Hong Kong Ltd.

Chau Shui King, Ginny  
Technical Manager

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



**Test Results :**

**Transmittance or Blocking of Erythemally Weighted Ultraviolet Radiation through Fabrics**

(AATCC 183-2014)

Test conditions

- 1 Air temperature: 21±1 °C
- 2 Relative humidity: 65±2% R.H.
- 3 Orientation of test specimen: Specimens were clamped on sample holder. Fabric face side is facing the incident UV light.
- 4 Test was conducted in wavelength range : 280 - 400 nm
- 5 Instrument : UV-Vis Spectrophotometer
- 6 No. of Scans : 6

Test sample: As Received

Test results

	<b>Dry Evaluation</b>	<b>Wet Evaluation</b>	<b><u>Specified Requirement</u></b>
Percent Transmittance, T (UV-A) :	0.08	0.07	/
Percent Transmittance, T (UV-B) :	0.02	0.01	
The Percent Blocking, UV-A :	99.92	99.93	
The Percent Blocking, UV-B :	99.98	99.99	
Mean Ultraviolet Protection Factor (UPF) :	3618	6351	
Standard Deviation :	310	693	
Standard Error :	512	1144	
Rated UPF :	50+	50+	/
Protection Category :	Excellent	Excellent	/

Remarks :

- (1) Refer to ASTM D6603, the UV protection category is determined by the UPF values,

UPF 40 or greater	Excellent UV Protection
UPF in between 25 to 39	Very Good UV Protection
UPF in between 15 to 24	Good UV Protection
UPF less than 15	Unclassified

- (2) Ultraviolet Protection Factor (UPF) is the ratio of the average effective ultraviolet radiation (UV-R) irradiance transmitted and calculated through air to the average effective UV-R irradiance transmitted and calculated through fabric.

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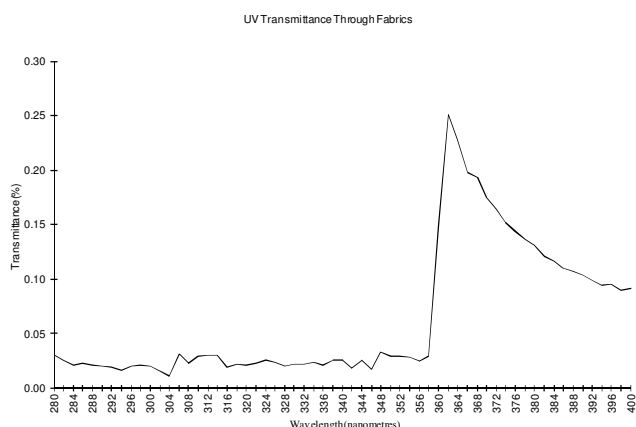
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- (3) The limits of the spectral range of ultraviolet radiation are not well defined and may vary according to the user. Committee E-2.12 of the International Commission on Illumination (CIE) distinguishes in the spectral range between 400 and 100 nm :  
 UV-A : 315 - 400 nm  
 UV-B : 280 - 315 nm  
 UV-R : 280 - 400 nm
- (4) This method can also be used to determine the UPF of the fabrics in a stretched state. However, the techniques for stretching the specimens are not part of this method and are addressed in a separate test procedure. It must be noted that stretching the specimens could change the UPF properties.
- (5) The listed protection category is for reference only, the market claims for labeling UV-Protection product shall follow "Standard Guide For Labeling UV-Protection Textiles" as stated in ASTM D6603.

Note : Graph Appendix is attached

**Test Sample: As Received**

**Dry evaluation**

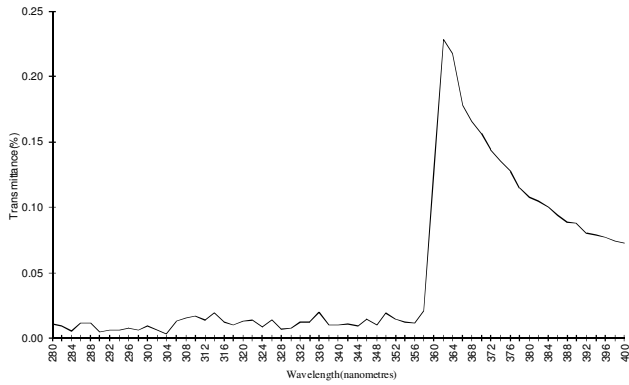


**Wet evaluation**

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UV Transmittance Through Fabrics



\*\*\* End of Report \*\*\*

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