



Confidential Report

Our Ref: E-028819/D





Unit 6, Wheel Forge Way, Trafford Park,
Manchester, M17 1EH, UK.
Telephone: +44 (0) 161 876 4211
Email: onestopshop@bttg.co.uk
Website: www.bttg.co.uk

Date: 21 March 2023

Our Ref: E-028819/D
Your Ref:

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Client: BIG Arbeitsschutz GmbH
Konigsberger Str. 6
21244 Buchholz
Germany

Job Title: Solar UV properties of one fabric

Client's Order No: -

Date of Receipt: 14th December 2022
Date of Test Start: 30th January 2023

Description of Sample(s): One high-visibility yellow coloured, knitted fabric, identified as follows, was received for testing:

HV Yellow; HY-19-Y; 65% recycled polyester / 35% cotton; 320g/m²

Work Requested: We were asked to make the following test:

UV Rating according to EN 13758-1: 2002*

After 25 wash/dry cycles according to EN ISO 6330 (40°C with line drying)

* subcontracted test, UKAS accredited



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Sample was identified as follows:

HV Yellow; HY-19-Y; 65% recycled polyester / 35% cotton; 320g/m²

Laboratory Work

Where appropriate, the tests were made in Standard Atmosphere (65 ± 4 % relative humidity at 20 ± 2 °C) the sample having been freely and continuously exposed to that atmosphere for at least 24 hours prior to testing. Specimens have been taken from the sample as described in the specified standards, except where indicated otherwise.

Cleansing Pretreatment

Twenty-five wash/dry cycles according to EN ISO 6330: 2021 Procedure 4M (40°C) with line drying (Procedure A).

Ultraviolet Protection Factor

The Ultraviolet Protection Factor (UPF), of the sample supplied, was determined according to the test method specified in EN 13758-1: 2002.

Measurements were made on specimens in the dry, relaxed state.

Four specimens were tested. During measurements specimens are orientated with the outer side facing the UV radiation source.

The solar spectrum used in the calculation of the UPF is the summer spectrum measured at Albuquerque as specified in Annex A of BS EN 13758-1:2001 + A1: 2006.

The results for all tests are given in the table on the following page.



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RESULTS

Sample Ref: HV Yellow; HY-19-Y; 65% recycled polyester / 35% cotton; 320g/m²

The following abbreviations are used in the result table:

- UVA Arithmetic mean of the UVA transmittance (UVA_{average}) in the range 315 nm to 400 nm
- UVB Arithmetic mean of the UVB transmittance (UVB_{average}) in the range 290 nm to 315 nm
- Measured UPF The measured UPF of each individual specimen
- Rated UPF The rated UPF of the sample
- s.d Standard deviation

UVA %	s.d	UVB %	s.d	Measured UPF				Mean UPF	s.d	Rated UPF
				1	2	3	4			
0.4	0.09	0.6	0.04	172.6	157.2	160.0	161.1	162.7	6.78	>50

*A minimum rating of 40+ is permitted in accordance with BS EN 13758-2: 2003

Where required to make a judgement to any pass/fail criteria an estimation of uncertainty of measurement has been taken into account. Under our policy we have used a non-binary decision rule. See our decision rules policy (<http://www.bttg.co.uk/decision-rules-policy>) for further information.

Reported by: *Alex Newton* Mr A Newton, Senior Customer Service Officer

Countersigned by: *Ethel Collinson* Mrs E Collinson, Principal Technician

Enquiries concerning this report should be addressed to Customer Services.



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Annex

Summary of Uncertainty Budgets

Test Method	95% Confidence limit
UV Rating	$\pm 5.8\%$



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