

No.: NBHL1706008359SD

Date: NOV. 19, 2018

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The following sample(s) was/were submitted and identified by the client as:

Sample Description	:	Wheat Straw fiber sunglasses
Sample Quantity	:	6 PCS
Sample Receiving Date	:	NOV. 06, 2018
Testing Period	:	NOV. 06, 2018 TO NOV. 19, 2018

Test Requested

- BS EN ISO 12312-1:2013+A1:2015 Eye and face protection Sunglasses and related eyewear part 1 : Sunglasses for general use (excluding clause 4.3 Physiological compatibility & Clause 7.2 Frame deformation and retention of filters & clause 12 Information and labeling As per client's requirement)
- 2. UV 400 Claim Verification (The transmittance between 280nm and 400nm)

Test method

- 1. According to BS EN ISO 12312-1:2013+A1:2015 and BS EN ISO 12311:2013
- With reference to clause 7.1.1 of BS EN ISO 12311:2013 (the calculation of mean of the weighted spectral transmittance between 280nm and 400nm is referring to clause 7.1.2 and 7.3.1 of BS EN ISO 12311:2013)

Test Results

--- Please refer to following pages ---

Signed for and on behalf of SGS-CSTC Standards Technical Services Co., Ltd. Ningbo Branch

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Sarah Li Technology supervisor



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Test Conducted:

1. BS EN ISO 12312-1:2013+A1:2015 Eye and face protection - Sunglasses and related evewear.

Scope	:	 This part of BS EN ISO 12312 is and clip-ons for general use, incorportection against solar radiation. This part of BS EN ISO 12312 is a) eyewear for protection against those used in solaria; b) eye protectors intended for sp c) sunglasses that have been m d) products intended for direct of partial or annular solar eclips e) products intended for occupation of the specific tended for occupation of the specific tended for occupation. 	s applicable to all af cluding road use and n. s not applicable to re st radiation from arti pecific sports (e.g. s redically prescribed bservation of the su e.	ocal (plano power) sunglasses d driving, intended for elated eyewear, such as: ficial light sources, such as ski goggles or other types); for attenuating solar radiation; in, such as for viewing a
Filtor Typo		Liniform filters		
Conditioning	:	$23 \pm 5^{\circ}$ C A hours		
before tests	•	20 ± 0 0, 4 10013		
Test Condition		16 °C - 32 °C 50 + 20% BH		
Test Result	:	Details shown as following table	·-	
Remark	:	Transmittance and Optical Prop centre)	erties are measured	d at reference point (visual
Test Item			<u>Result</u>	Note
Clause 4 Constr	uctio	n and materials:		
Clause 4.1 Cor	nstruc	tion	PASS	
Clause 4.2 Filte	er ma	terial and surface quality	PASS	
Clause 4.3 Phy	/siolog	gical compatibility	N/C	See Note 4
Clause 5 Transn	nittan	се		
Clause 5.2 Tra	nsmitt	tance and filter categories	Category 3	See Note 1 & Table I
Clause 5.3 Ger	neral t	ransmittance requirements		
Clause 5.3.1 I	Jnifor	mity of luminous transmittance	PASS	See Note 1
Clause 5.3.2 I	Requi	rements for road use and		
driving	-			
<u> </u>	4 0		D A O O	

PASS	
	See Note 2
PASS	
N/A	See Note 3
N/A	See Note 3
N/A	See Note 3
N/A	No claims, See Note 3
N/A	No claims, See Note 3
	PASS PASS N/A N/A N/A N/A N/A



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Clause 5.3.5.1.2 Blue-light transmittance	N/A	No claims, See Note 3
Clause 5 Transmittance		
Clause 5.3.5.2 UV absorption/transmittance		
Clause 5.3.5.2.1 General		
Clause 5.3.5.2.2 Solar UV absorption	N/A	No claims, See Note 3
Clause 5.3.5.2.3 Solar UV transmittance	N/A	No claims, See Note 3
Clause 5.3.5.2.4 Solar UV-A absorption	N/A	No claims, See Note 3
Clause 5.3.5.2.5 Solar UV-A transmittance	N/A	No claims, See Note 3
Clause 5.3.5.2.6 Solar UV-B absorption	N/A	No claims, See Note 3
Clause 5.3.5.2.7 Solar UV-B transmittance	N/A	No claims, See Note 3
Clause 5.3.5.3 Antireflective coated sunglasses	N/A	No claims, See Note 3
Clause 5.3.5.4 Enhanced infrared absorption	N/A	No claims, See Note 3
Clause 6 Refractive power		
Clause 6.1 Spherical and astigmatic power	PASS	
Clause 6.2 Local variations in refractive power	N/A	See Note 3
Clause 6.3 Prism imbalance (relative prism error)	PASS	
Clause 7 Robustness		
Clause 7.1 Minimum robustness of filters	PASS	
Clause 7.2 Frame deformation and retention of filters	PASS	
Clause 7.3 Impact resistance of the filter, strength	N/C	Optional Specification,
level 1 (optional specification)		See Note 4
Clause 7.4 Increased endurance of sunglasses	N/C	Optional Specification,
(optional specification)		See Note 4
Clause 7.5 Resistance to perspiration (optional	N/C	Optional Specification,
specification)		See Note 4
Clause 7.6 Impact resistance of the filter, strength	N/C	Optional Specification,
level 2 or 3 (optional specification)		See Note 4
Clause 8 Resistance to solar radiation	PASS	
Clause 9 Resistance to ignition	PASS	
Clause 10 Resistance to abrasion (optional	N/C	Optional Specification,
specification)		See Note 4
Clause 11 Protective requirements		
Clause 11.1 Coverage area	PASS	
Clause 11.2 Temporal protective requirements	N/A	See Note 3
Clause 12 Information and labelling	N/C	See Note 4
-		

Note(s)

: #1 No claim information of category was provided with the sample. Luminous transmittance, v (%): Left Filter 15.75% Right Filter 16.56%



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- # 2 The filter has a luminous transmittance of less than 75 % and higher than 8 %, the following warning: "Not suitable for driving in twilight or at night" or "Not suitable for driving at night or under condition of dull light" should be provided.
- # 3 "N/A" means not applicable for the submitted sample.
- # 4 "N/C" means not conducted on this report as client requested.

Table I. Category requirements for sunglasses filters for general use

			Requirements		
		Ultraviolet sp	Visible spectral range		
Description label	Filter category	Maximum value of solar UV-B transmittance, SUVB	Maximum value of solar UVA transmittance, SUVA	Range of luminous transmittance	
		280-315 nm	315-380 nm	From over %	To and include%
Light tint	0	0.05 x y	, v	80.0	100
sunglasses	1	0.05 X	v	43.0	80.0
General	2	1.0% or 0.05x v (whichever is greater)	0.5 × ×	18.0	43.0
sunglasses	3	1.0%	0.5 x V	8.00	18.0
Very dark Special Purpose sunglasses	4	1.0%	1.0% or 0.25x v (whichever is greater)	3.00	8.00

2. UV 400 Claim Verification

Performance Parameter	Value (%) (Left Filter)	Value (%) (Right Filter)	Requirements	Result
Solar UV Transmittance, τ_{SUV} (280nm – 400nm)	0.13	0.15	<u><</u> 0.5%	PASS
Solar UVA Transmittance, $\tau_{SUVA}(315nm - 400nm)$	0.15	0.17	<u><</u> 0.5%	PASS
Solar UVB Transmittance, $\tau_{SUVB}(280$ nm – 315nm)	0.1	0.1	<u><</u> 0.5%	PASS



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Sample Photo:



Test sample (Front)



Test sample (Back)

SGS authenticate the photo on original report only

End of Report



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