



TEST REPORT

Technical Report: (9923)356-0078

January 3, 2024

Date Received: December 22, 2023

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APPLICANT NAME Dora Xue
APPLICANT COMPANY NAME WENZHOU WEATLEY INT'L FOREIGN TRADE CO.,LTD
APPLICANT STREET ADDRESS 2002 C BUILDING, ZHONGFU MANSION, YANDANG WEST
CITY, STATE, ZIP ROAD, LONGWAN, WENZHOU

Sample Description: KWIAT SUNGLASSES

Color:	/	Style No(s):	/
Order No.:	/	P.O. No.:	/
Model No.:	/	Batch No.:	/
Age Grade:	/	Product End Use:	/
Vendor:	/	Retest No.:	/
Manufacturer:	/	Supplier Reference:	/
Buyer:	KWIAT LTD	Country of Origin:	/
Test Period:	December 22, 2023 to January 3, 2024	Country of Destination:	/
Fiber Content:	/		
Care Instruction:	/		
Brand:	KWIAT(all models), ADRIANA ROTH(all models), COSMOLINE(all models), DENI ROTH(all models), VOX(all models), H8S(all models)		

Sunglasses for general use, brand with the following series: 1000 to 20000

SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION	REMARK
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 5.3.2.2 Driving in twilight or at night - Clause 12 Information and labelling	PASS	
Nickel Release	PASS	

DK

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REMARK

If there are questions or concerns on this report, please contact the following persons:

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**BUREAU VERITAS
CONSUMER PRODUCTS SERVICE
SHEN'OU(WENZHOU)CO., LTD**

PREPARED
BY :

Gavin

**San Shen
General Manager**



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Photo of the Submitted Sample





TEST RESULTS

Test standard: EN ISO 12312-1:2013 +A1 2015 Eye and Face Protection – Sunglasses and Related Eyewear Part 1: Sunglasses for General Use

Test method: EN ISO 12311:2013 Personal protective requirement – Test methods for sunglasses and related eyewear.

Test samples: A Silver sunglasses

Section	Test	Result
4	Construction and materials	
4.1	Construction	P
4.2	Filter material and surface quality	P
4.3	Physiological compatibility	#1
5	Transmittance	
5.2	Transmittance and filter categories	P
5.3.1	Uniformity of luminous transmittance	P
5.3.2.1a	Spectral transmittance	P
5.3.2.1b	Detection of signal lights	P
5.3.2.2	Driving in twilight or at night	#2
5.3.3	Wide angle scattering	P
5.3.4.1	Photochromic filters	NA
5.3.4.2	Polarizing filters	P
5.3.4.3	Gradient filters	NA
5.3.5	Claimed transmittance properties	NA (No claim)
6	Refractive power	
6.1	Spherical and astigmatic power	P
6.2	Local variations in refractive power	NA
6.3	Prism imbalance (relative prim error)	P
7	Robustness	
7.1	Minimum robustness of filters	P
7.2	Frame deformation and retention of filters	P
7.3	Impact resistance of the filter, strength level 1	NA (No claim)
7.4	Increased endurance of sunglasses	NA (No claim)
7.5	Resistance to perspiration	NA (No claim)
7.6	Impact resistance of the filter strength level 2 or 3	NA (No claim)
8	Resistance to solar radiation	P
9	Resistance to ignition	P
10	Resistance to abrasion (optional specification)	NA (No claim)
11	Protective requirement	
11.1	Coverage area	P
11.2	Temporal protective requirements	NA
12	Information and labeling	
12.1	Information to be supplied with each pair of sunglasses	#3
12.2	Additional information	#4

Note: P=PASS; NA=Not applicable, M=Meet, F=Fail

TEST RESULTS

5.2: Transmittance and Filter Categories

Luminous Transmittance (τ_V) (380 nm to 780 nm), %	Left ocular	Right ocular
	9.44	9.47
Determined Filter Category	3	

Parameter	Requirement (%)		Result	
	Left ocular	Right ocular	Left ocular	Right ocular
Solar UVA Transmittance(315 nm to 380 nm)	$\leq 0.5\tau_V$ (4.72)	$\leq 0.5\tau_V$ (4.74)	<0.10	<0.10
Solar UVB Transmittance(280 nm to 315 nm)	1	1	<0.10	<0.10

Requirement(s) :					
Type (Claimed Filter Category, If Applicable)	0	1	2	3	4
Parameter(s)	Limit				
Luminous Transmittance (τ_V) (%) (380 nm to 780 nm)	> 80	> 43 and ≤ 80	> 18 and ≤ 43	> 8 and ≤ 18	> 3 and ≤ 8
Determined Filter Category	0	1	2	3	4
Maximum Solar Ultraviolet A (UVA) Transmittance (τ_{SUVA}) (%) (315 nm to 380 nm)	τ_V	τ_V	0.5 τ_V	0.5 τ_V	1 or 0.25 τ_V
Maximum Solar Ultraviolet B (UVB) Transmittance (τ_{SUVB}) (%) (280 nm to 315 nm)	0.05 τ_V	0.05 τ_V	1 or 0.05 τ_V	1	1

Lens Category: 0&1= Light tint sunglasses, 2&3= General purpose sunglasses, 4= Very dark special purpose sunglasses

5.3.1: Uniformity of luminous transmittance

Parameter	Results		Requirement
	Left Ocular	Right Ocular	
Relative Difference in Luminous Transmittance within filter, %	1.48	1.16	$\leq 10\%$ (Category 0,1,2,3) $\leq 20\%$ (Category 4)
	0.32		$\leq 10\%$
Relative Difference in Luminous Transmittance between filter, %	0.32		$\leq 15\%$

5.3.2.1a: Spectral transmittance

Spectral Transmittance (%) (475-650 nm)	Limit (%)		Minimum transmittance (%)	
	Left ocular	Right ocular	Left ocular	Right ocular
	$\geq 0.2\tau_V$ (1.89)	$\geq 0.2\tau_V$ (1.89)	8.07	7.97

TEST RESULTS

5.3.2.1b: Detection of signal lights

Signal Light	Limit	Left ocular	Right ocular
Relative Visual Attenuation Quotient - Red, Q	≥ 0.80	1.22	1.22
Relative Visual Attenuation Quotient - Yellow, Q	≥ 0.60	1.01	1.01
Relative Visual Attenuation Quotient - Blue, Q	≥ 0.60	1.15	1.15
Relative Visual Attenuation Quotient - Green, Q	≥ 0.60	0.99	0.99

5.3.3: Wide angle scattering

Requirement(s) :	Results	
Wide angle scattering of filters in the condition as supplied by the manufacturer shall not exceed the value of 3 %	Left Ocular	Right Ocular
	0.83	0.71

5.3.4.2 Polarizing filters

Requirement(s) :	Results		
The planes of transmission do not deviate from the vertical direction by more than $\pm 5^\circ$	Left Ocular	Right Ocular	Rating
	-2.3°	0.5°	PASS
The misalignment between the plane of transmission of the left and right filters shall not be greater than 6°	2.8°		PASS
The polarizing efficiency shall be $>78\%$ for filter categories 2,3,4 and $>60\%$ for filter category 1. Filters of category 0 do not have any useful polarizing effect.	99.9%	99.9%	PASS

6.1: Spherical and Astigmatic Power

Optical Power	Right Ocular	Left Ocular	Requirement
Spherical Power	-0.04	-0.02	± 0.12
Difference of spherical power between left and right filters (m^{-1})	0.02		≤ 0.18
Astigmatic Power	0.01	0.00	≤ 0.12

6.3: Prism Imbalance (Relative Prism Error)

Optical Power			Result	Requirement
Prismatic Power Difference	Horizontal	Base out cm/m	0.01	≤ 1.00
		Base in cm/m	-	≤ 0.25
	Vertical cm/m		0.02	≤ 0.25

TEST RESULTS

7.1: Minimum robustness of filters

Evaluation	Criteria	Result
	For complete sunglasses, including the filter portion of those where the sunglass frame and filter are integral parts of each other, when tested as specified in ISO 12311:2013, 9.1, none of the following defects shall appear.	M
Note: <ol style="list-style-type: none"> 1) Filter fracture. A filter is considered to have fractured when <ul style="list-style-type: none"> - it cracks through its entire thickness and across a complete diameter into two or more separate pieces, or - a person with a visual acuity of at least 1,0 (6/6 or 20/20) can see, when viewing without magnification but wearing the appropriate correction, if any, for near vision, either a piece of material that has become detached from the filter surface or a corresponding surface defect. 2) Filter deformation. A filter is considered to have been deformed if a mark appears on the white paper on the opposite side to that contacted by the ball. 		

7.2: Frame Deformation and Retention of Filters

Evaluation	Criteria	Result
Frame Deformation	The frame shall not permanent distortion of ± 2 % of the distance between the boxed centers.	M Distortion:0.39%
	It shall not be fracture or crack at any point	M
	Neither filter shall not be displaced from the frame.	M

8: Resistance to radiation

Parameter	Left Ocular	Right Ocular	Requirement
Wide Angle Scattering %	0.80	0.62	$\leq 3\%$
Relative Change in the Luminous Transmittance (τ_v), % (380-780nm)	0.42	0.21	$\leq \pm 3\%$ (Category 0) $\leq \pm 5\%$ (Category 1) $\leq \pm 8\%$ (Category 2) $\leq \pm 10\%$ (Category 3,4)
Solar UVA transmittance, % (315 – 380nm)	<0.10	<0.10	It shall be complied with the requirement of the table in clause 5.2.
Solar UVB transmittance, % (280 – 315nm)	<0.10	<0.10	

TEST RESULTS

9: Resistance to ignition

Evaluation	Criteria	Result
Resistance to ignition	When sunglasses are tested in accordance with ISO 12311:2013, 9.9, they shall not ignite or continue to glow after withdrawal of the test rod.	M

11.1: Coverage area

Requirement(s) :	Results
<p>The sunglasses shall cover two ellipses with a horizontal diameter of 40 mm and a vertical diameter of 28 mm, the centres of which are separated by 64 mm and symmetrically placed on either side of the centre of the bridge of the frame.</p> <p>For sunglasses intended to be worn by children, the sunglasses shall cover two ellipses with a horizontal diameter of 34 mm and a vertical diameter of 24 mm, the centres of which are separated by 54 mm and symmetrically placed on either side of the centre of the bridge of the frame.</p>	PASS

Note:

1 = Physiological compatibility

Note: Sunglasses shall be designed and manufactured in such a way that when used under the conditions and for the purposes intended, they will not compromise the health (and safety) of the wearer. The risks posed by substances leaking from the device that may come into prolonged contact with the skin shall be reduced by the manufacturer to below any regulatory limit. Special attention shall be given to substances which are allergenic, carcinogenic, mutagenic or toxic to reproduction.

#2 = The applicant is drawn attention to include the following warning will be printed on the labels, packaging, etc that accompanies the sunglasses at the point of the sale:

- "Not suitable for driving in twilight or at night" or
- "Not suitable for driving at night or under condition of dull light"

#3 = The manufacturer shall provide information for the user with each pair of sunglasses. This information shall be in the form of markings on the frame or separate information on labels, packaging, etc., that accompanies the sunglasses at the point of sale. Where pictograms are used, an explanation of the significance of these pictograms shall also be available.

#4 = The following information shall be available from the manufacturer on request.

- a) An explanation of the trademarks that are not universally recognized or foreseen by the users of this part of ISO 12312.
- b) The position of the reference point when different from the one defined in this part of ISO 12312.
- c) The country of origin (e.g. "made in").
- d) The nominal value of luminous transmittance.
- e) Transmission requirements applicable to this product.
- f) Polarization efficiency in cases of polarizing filters.
- g) The base material of filters and frame.

TEST RESULT

Nickel Release for Spectacle Frames and Sunglasses intended to come into Close and Prolonged Skin Contact - European Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) with Amendments up to EC No. 494/2011, Annex XVII, Entry 27, Points 1(b) and 1(c)

Test Method : EN 12472:2020 + EN 16128:2015 (Migration test)

Maximum Allowable Limit : (Any 1 of 2 trials)	0.50 µg/cm²/week
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Test Item(s)	Item / Component Description(s)	Location(s)	Style(s)
A	Silver sunglasses	-	-

Test sample	Tested part	Area of each paper ^a (cm ²)	Total area ^b (cm ²)	Volume of extraction solution ^c (mL)	Analysed nickel concentration ^d (mg/L)	Nickel release (µg/cm ² /week)
A-1	Right rim	0.661	2.64	5	<0.01	<0.05
		0.658				
	Left rim	0.663				
		0.658				
	Right side	1.05				
Left side	1.09					
A-2	Bridge	0.734	1.47	5	<0.01	<0.05
	Right rim	0.734	2.64	5	0.0606	0.115
		0.661				
	Left rim	0.658				
		0.664				
Right side	1.08	2.16				
Left side	1.08					

Overall test Conclusion^e : PASS

Remark	<p>a. Surface area of each test paper used for testing the single part of a test sample</p> <p>b. Total surface area of the test papers used for testing of combination of parts of a test sample.</p> <p>c. Volume of the extracton solution used for testing of the combination of parts of a test sample.</p> <p>d. Result of analysis for the combination of parts of a test sample.</p> <p>e. Defined by:Pass-all combinations of test parts pass, Fail – any(or all) combination(s) fails.</p> <p>f. The compliance decision is pass base on EN 16128:2015 when the result less than 0.76µg/cm2/week.</p>
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Note / Key :

ND = Not detected

“>” = Greater than

sq. cm = square centimeter(s)

mL = milliliter(s)

mcg/sq. cm/week = microgram(s) per square centimeter per week

Detection Limit (mcg/sq. cm/week) : 0.05 (For nickel release and its adjusted figure)

END