

Test Report

Number: SZHH01545093S1

Applicant: YIWU ROCK SPORTING GOODS CO.,LTD
4/F, A BLOCK,NO.2 DANCHEN 1ST ROAD,
BEIYUAN DISTRICT, YIWU CITY,322000,
ZHEJIANG, CHINA
Attn: CHENG LI

Date: Apr 29, 2021

*This is to supersede Report No.
SZHH01545093 dated Apr 28,
2021*

Sample Description:

Six (6) pieces of submitted sample said to be:

Item Name : **Bicycle Glasses**
Item No. : **SP218**
Reference No. : **SP98 SP135 SP176 SP179 SP203 SP204 SP206
SP216 SP225 SP22 SP214 SP213 0089**
Date Sample Received : Mar 12, 2021 & Apr 16, 2021
Testing Period : Mar 12, 2021 ~ Apr 28, 2021

Tests conducted:

As requested by the applicant, refer to attached page(s) for details.

Conclusion:

Tested sample	Requirement	Result
Submitted samples	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

Authorized by:
For Intertek Testing Services
Shenzhen Ltd.



Rachel L. Guo
General Manager



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1 Requirements for Sunglasses (Uniformly Tinted Polarizing Lenses)

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 refers EN ISO 12311:2013 Personal protective equipment – test methods for sunglasses and related eyewear.

Number of samples tested: Six (6) pairs of sunglasses

Note:

- (1) The submitted sunglasses were declared by applicant for adult use
- (2) **Physiological compatibility**
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.
- (3) CE marking is not specified in EN ISO 12312-1:2013+A1:2015 but per Regulation (EU) 2016/425, Article 16 & Article 17, the CE marking shall be affixed visibly, legibly and indelibly to the sunglasses frame. The format of this CE marking was given in Annex II of Regulation (EC) No 765/2008

It was found that the CE marking was provided on the sunglasses frame, but the minimum height of CE marking was less than 5 mm.

Clause	Requirement	Result
4	Construction and materials	
4.1	Construction	P
4.2	Filter material and surface quality	P
4.3	Physiological compatibility	Note (2)
5	Transmittance	
5.2	Transmittance and filter categories	P
5.3	General transmittance requirements	
5.3.1	Uniformity of luminous transmittance	P
5.3.2	Requirements for road use and driving	
5.3.2.1	General requirements	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	Remark #1 (i)
5.3.3	Wide angle scattering	P



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Clause	Requirement	Result
5.3.4	Additional transmittance requirements for specific filter types	
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 prism 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 (optional specification)	NA (No claim)
7.4	Increased endurance of sunglasses (optional specification)	NA (No claim)
7.5	Resistance to perspiration (optional specification)	NA (No claim)
7.6	Impact resistance of the filter, strength level 2 or 3 (optional specification)	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 requirements	
11.1	Coverage area	P
11.2	Temporal protective requirements	NA
12	Information and labelling	
12.1	Information to be supplied with each pair of sunglasses	Remark #1 & Note (3)
12.2	Additional information	Remark #2

Abbreviation: P = Pass; NA = Not Applicable

Test data:

5.2 Transmittance and filter categories

Range	Left ocular (%)	Right ocular (%)	Filter category
380 - 780nm (τ_v)	12.62	12.38	3



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Range	Maximum transmittance (%)		Limit (%)	
	Left ocular	Right ocular	Left	Right
280-315nm (τ_{SUVB})	0.08	0.14	≤ 1.0	≤ 1.0
315 - 380nm (τ_{SUVA})	0.11	0.21	$\leq 0.5\tau_v$ (6.31)	$\leq 0.5\tau_v$ (6.19)

Requirement: (Table 1)

Consumer label	Technical label	Requirements		
Descriptive label	Filter category	Ultraviolet spectral range		Visible spectral range
		Maximum value of solar UV-B transmittance τ_{SUVB} 280 nm to 315 nm	Maximum value of solar UV-A transmittance τ_{SUVA} 315 nm to 380 nm	Range of luminous transmittance (τ_v) 380 nm to 780 nm
Light tint sunglasses	0	$0.05\tau_v$	τ_v	$\tau_v > 80\%$
	1	$0.05\tau_v$	τ_v	$43\% < \tau_v \leq 80\%$
General purpose sunglasses	2	1.0% absolute or $0.05\tau_v$, whichever is greater	$0.5\tau_v$	$18\% < \tau_v \leq 43\%$
	3	1.0% absolute	$0.5\tau_v$	$8\% < \tau_v \leq 18\%$
Very dark special purpose sunglasses	4	1.0% absolute	1.0% absolute or $0.25\tau_v$, whichever is greater	$3\% < \tau_v \leq 8\%$

5.3.1 Uniformity of luminous transmittance

Uniformity	Left ocular	Right ocular	Limit (%)
% variation within filter [relative to higher value]	4.91	8.77	≤ 10
% difference between filters [relative to lighter filter]	1.90		≤ 15

5.3.2.1a Spectral transmittance

Range	Minimum transmittance (%)		Limit (%)	
	Left ocular	Right ocular	Left ocular	Right ocular
475 - 650nm	7.82	7.78	$\geq 0.2\tau_v$ (2.52)	$\geq 0.2\tau_v$ (2.48)

5.3.2.1b Detection of signal lights

Signal light	Relative visual attenuation quotient, Q		Limit
	Left ocular	Right ocular	
Red	1.00	0.98	≥ 0.80
Yellow	1.11	1.11	≥ 0.60
Blue	0.80	0.81	≥ 0.60
Green	0.92	0.93	≥ 0.60



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5.3.3 Wide angle scattering

Wide angle scattering (%)	Left ocular	Right ocular	Requirement
	1.43	1.10	≤ 3

5.3.4.2 Polarizing filters

The plane of transmission deviation from vertical direction within filter	Left ocular	-1.6°	Limit: ± 5°
	Right ocular	-1.6°	
The misalignment between the planes of transmission of the left and right filters	3.0°		Limit: ≤ 6°

Polarization efficiency	Left ocular	96.29%	Requirement > 60% for category 1 > 78 % for categories 2, 3, 4
	Right ocular	99.40%	

6.1 Optical power of oculars mounted in spectacles

Optical power	Left ocular	Right ocular	Limit
Spherical power (m ⁻¹)	-0.04	-0.03	± 0.12
Astigmatic power (m ⁻¹)	0.06	0.008	≤ 0.12
Difference of spherical power between left and right filters (m ⁻¹)	0.01		≤ 0.18

6.3 Prism imbalance (relative prism error)

Prismatic power difference (cm/m)		Limit (cm/m)
Horizontal	Base out	0.216
	Base in	--
Vertical	0.005	≤ 0.25

7.1 Minimum robustness of filters

Assessment	Result
Filter fracture	Not found
Filter deformation	Not found

7.2 Frame deformation and retention of filters

Assessment	Result
Frame fracture or crack at any point	Not found
Frame deformation (%)	0.15
Filter displace from the frame	Not found



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8 Resistance to radiation

(a) Relative change in the luminous transmittance after irradiation

Left ocular (%)	1.19	<u>Requirement</u> ± 3% for category 0 ± 5% for category 1 ± 8% for category 2 ± 10% for categories 3 & 4
Right ocular (%)	0.65	

(b) Wide angle scattering after irradiation

Left ocular (%)	Right ocular (%)	Requirement (%)
1.12	1.05	≤ 3

(c) UV transmittance after irradiation process

Range	Maximum transmittance (%)		Limit (%)	
	Left ocular	Right ocular	Left	Right
280-315nm (τ_{SUVB})	0.02	0.10	≤ 1.0	≤ 1.0
315 - 380nm (τ_{SUA})	0.07	0.25	≤ 0.5 τ_v (6.39)	≤ 0.5 τ_v (6.23)

After the solar radiation process, the submitted sample also met the requirement for the ultraviolet spectral range for τ_v as given by Table 1 of the standard.

Remarks:

#1 - 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.

- a) Identification of model.
- b) Name and address of the manufacturer.
- c) Reference to this part of ISO 12312.
- d) Type of filter, if photochromic and/or polarizing.
- e) Number of the filter category (in both the faded and darkened states for photochromic filters) marked preferably on the frame or on the filter.
- f) Description of the filter category in the form of a symbol and/or verbal description and explanation of these symbols. The minimum height of the symbols shall be 5 mm.
- g) Restrictions of use, which shall include at least the following:
 - 1) Not for direct observation of the sun;
 - 2) Not for protection against artificial light sources e.g. solaria;
 - 3) Not for use as eye protection against mechanical impact hazards (for products not satisfying the requirements of 7.3 or 7.6);
 - 4) Any other restrictions deemed appropriate to be communicated by the manufacturer, e.g. increased or decreased transmittance of photochromic glasses due to high or low temperatures or to low light conditions.



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- h) When the filter does not meet the necessary requirements for driving and for filter category 4, the following warning: "Not suitable for driving and road use" in the form of either of the symbols shown in figure 2 of EN ISO 12312-1:2013+A1:2015 and/or in writing. The minimum height of the symbol shall be 5 mm.
- i) When 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"The same warning applies to photochromic filters for which the luminous transmittance in the faded conditions is less than 75%.
- j) If relevant, instructions for care and cleaning if the wrong use of cleaning products might damage the sunglasses and a list of damaging products not suitable for cleaning.

#2 - 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.

End of report

The statements of conformity reported have considered the decision rule agreed, namely that Intertek have taken account of measurement uncertainty as calculated by Intertek, and applied according to ILAC-G8/09:2019 (Non-binary acceptance based on guard band $w = U$) except designation from the customer, regulation or test specification. This decision rule only applies to the numeric test results.

The sample(s) and sample information hereto are provided by the client who shall be solely responsible for the authenticity and integrity thereof. The results shown in this report relate only to the sample(s) tested. It is not intended to be a recommendation for any particular course of action. Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client insofar as is expressly contained in the terms and conditions governing Intertek's provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or wilful misconduct. This report shall not be reproduced unless with prior written approval from Intertek Testing Services Shenzhen Ltd.



To: YIWU ROCK SPORTING GOODS CO.,LTD
Attention: CHENG LI

Date: Apr 29, 2021

Re : Report Revision Notification

Intertek Testing Services Report Number SZHH01545093 Dated Apr 28, 2021

Please be informed that all the content recorded in the above captioned report will be void. This captioned report is now superseded by a revised Intertek Testing Services Report Number SZHH01545093S1 Dated Apr 29, 2021

Thank you for your attention.

Authorized by:
For Intertek Testing Services
Shenzhen Ltd.



Rachel L. Guo
General Manager

