

Mechanical & Hardgoods Laboratory

 Report No. :
 YAN0075/2018

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 Date :
 DEC. 05, 2018
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## SHANGHAI JHEYEWEAR CO.,LTD

806, 3388 Gongexinroad, Jingan District, 200436, China

The following merchandise was submitted and identified by the applicant as:Product Description:RPET SUNGLASSESReference No.:SHHL1811064519SG

We have tested the submitted sample(s) as requested and the following results were obtained:

Test Requested:

- 1. EN ISO 12312-1:2013+A1:2015 Eye and face protection Sunglasses and related eyewear Part 1:Sunglasses for general use
- 2. UV 400 Transmittance (The transmittance between 280nm and 400nm)

Test Method & Result: --- See following sheet(s) ---

Date of Receipt: NOV. 22, 2018

<u>Testing Period:</u> --- See Next Page --- NOV. 22 ~ DEC. 04, 2018



Laboratory address: 61, Kai-Fa Road, Nanzih Export Processing Zone, 81170, Kaohsiung, Taiwan

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Test Method & Result				
1. EN ISO 12312-1:2013+A1:2015 Eye and face protection — Su eyewear — Part 1: Sunglasses for general use	unglasses and re	lated		
Clause				Result
4 Construction and materials				-
4.1 Construction				Pass
<b>Finding</b> Sample 1 was assessed. None of the defects listed in the Standard w	vas appeared.			
4.2 Filter material and surface quality				Pass
<b>Finding</b> Sample 1 was assessed. None of the defects listed in the Standard w	as appeared.			
4.3 Physiological compatibility Sunglasses shall be designed and manufactured in such a way that v	when used under	the		<u>N/E</u>

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.

#### 5 Transmittance

5.2 Transmittance and filter categories

rmung					
Sampla	Filter	Danga	Dequirement	Test Value	
Sample	Category	Kange	Requirement	Left Ocular	Right Ocular
		380 ~ 780 nm	18 ~ 13 %	21.09.%	22 13 %
		Luminous Transmittance (Tv)	10 ~ 45 %	%         21.09 %         22.13 %           0.00 Ty         0.00 Ty	
	2	280 ~ 315 nm	< 1.0 %	0.00 Tv	0.00 Tv
	2	TSUVB	< 1.0 /0	(0.01 %)	(0.01 %)
		315 ~ 380 nm	$< 0.5 \mathrm{Ty}$	0.00 Tv	0.00 Tv
		TSUVA	< 0.5 TV	(0.01 %)	(0.01 %)

# Finding

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#### Test Result

Clause

5.3 General transmittance requirements

5.3.1 Uniformity of luminous transmittance

#### Finding

Sampla	Filter	Test Item	Dequirement	Test Value	
Sample	Category	Test Itelli	Kequitement	Left Ocular	Right Ocular
1 2	2	Variation within filter	<10 %	0.68 %	0.11 %
	Z	Difference between filter	≦15 %	4.7	/0 %

5.3.2 Requirements for road use and driving

5.3.2.1 General

Filters suitable for road use and driving shall be of categories 0, 1, 2 or 3 and shall additionally meet the following two requirements.

(a) Spectral transmittance

#### Finding

Sample	Sample Filter Range		Requirement (Minimum	Test	Value
Sample	Category	Kange	Spectral Transmittance)	Left Ocular	Right Ocular
1	2	475 ~ 650 nm	$\geq$ 0.2 Tv	0.86 Tv (18.22 %)	0.87 Tv (19.19 %)

## (b) Detection of signal lights

#### Finding

Sampla	Filter	The Relative Visual	Dequirement	Test Value	
Sample	Category	Attenuation Quotient Q	Kequitement	Left Ocular	Right Ocular
		Red	$\geq 0.80$	1.00	1.00
		Yellow	$\geq 0.60$	0.97	0.98
	2	Green	$\geq 0.60$	1.02	1.02
		Blue	$\geq 0.60$	1.05	1.05

# 5.3.2.2 Driving in twilight or at night

Note 1\*: Sunglass filters with a luminous transmittance of less than 75% shall not be used for road use and driving in twilight or at night.

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Pass

See Note 1\*



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# Test Result

<u>Clause</u> 5.3.3 Wide angle scattering

Finding	

Sampla Paquirament	Test Value			
Sample	Requirement	Left Ocular Right Ocular		
1	<b>≦</b> 3 %	2.1 %	1.8 %	

6 Refractive power

6.1 Spherical and astigmatic power

#### Finding

Comula Dequinque ent		Spherical Power (m <sup>-1</sup> )		Astigmatic Power (m <sup>-1</sup> )		
Sample	Requirement	$\pm 0.12$		$\leq 0.12$		
2	Test Value	Left Ocular	Right Ocular	Left Ocular	Right Ocular	
		-0.02	-0.03	0.00	0.00	

Sample	The Spherical Powers Difference Between Right And Left Filters (m <sup>-1</sup> )	Test Value (m <sup>-1</sup> )
2	$\leq 0.18$	0.01

6.2 Local variations in refractive power

6.3 Prism imbalance (relative prism error)

Finding

		Prism Imbalance			
		Horizontal (cm/m)		Ventical (and /m)	
Sample	Requirement	Base Out	Base In	vertical (cm/m)	
		< 1.00	< 0.25	< 0.25	
2	Test Value		0.05	0.00	

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<u>N/A</u>

Pass

<u>Result</u> <u>Pass</u>

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# <u>Test Result</u>

<u>Clause</u> 7 Robustness 7.1 Minimum robustness of filters

## Finding

Sample 3 was assessed. None of the defects listed in the Standard was appeared on both left and right oculars.

7.2 Frame deformation and retention of filters

#### Finding

Sample 4 was assessed. None of the defects listed in the Standard was appeared.

8 Resistance to solar radiation

## Finding

Sample Filter Category	Filter Catagory	Permitted Relative Change In	Test Value		
	Filler Calegory	Luminous Transmittance After Test	Left Ocular	<b>Right Ocular</b>	
1	2	±8 %	0.71 %	-1.45 %	

## Following additional requirements shall be complied with also after the irradiation process.

#### Finding

a. Wide angle scattering

Sample	Sample Baquirament	Test	Value
Sample	Requirement	Left Ocular	Right Ocular
1	$\leq 3 \%$	2.6 %	2.1 %

#### b. Requirements For The Ultraviolet Spectral Range For Initial Tv (Luminous Transmittance)

Sampla	Filter	ry Range	Requirement	Test Value	
Sample	Category			Left Ocular	<b>Right Ocular</b>
1		280 ~ 315 nm	<1 %	0.00 Tv	0.00 Tv
	2	Тѕиув		(0.01 %)	(0.01 %)
		315 ~ 380 nm	<0.5 Tv	0.00 Tv	0.00 Tv
		TSUVA		(0.01 %)	(0.01 %)

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## **Test Result**

Clause 9 Resistance to ignition

## Finding

Sample 3 was assessed. Sample was not ignited or continued to glow after removal of the steel rod.

## 11 Protective requirements

11.1 Coverage area

#### Finding

Sample	Requirement	Test Value	
3	Horizontal diameter $\geq$ 40 mm	> 40 mm	
	Vertical diameter $\geq 28 \text{ mm}$	> 28 mm	
	The centres of which are separated by 64 mm	Pass	

# 12 Information and labelling

## 2. UV 400 Transmittance (The transmittance between 280nm and 400nm)

#### Finding

Sample	Test	Dequirement	Test Value	
	Item	Requirement	Left Ocular	Right Ocular
1	UV 400	In the case where it is claimed that a filter has less than x % UV transmittance, the solar UV transmittance of the filter shall not exceed (x + 0.5) % by referring to clause $5.3.5.2.3$ of EN ISO 12312-1:2013+A1:2015	0.01 %	0.02 %

Note \*. UV transmittance x% of UV400 is claimed as 0.00% by applicant.

Remark: 1. The lenses are uniformly tinted filters claimed by applicant.

- 2. The sunglasses with inter-papillary distance 64 mm are claimed by applicant.
- 3. Samples were provided by applicant and samples were randomly selected to be assessed.
- 4. Only applicable clauses were shown
- 5. N/E = Not Evaluated
- 6. N/A = Not applicable

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No Claim

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- Picture(s) -



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