
Test Report

Report No. : AGC03778230301-002S1

SAMPLE NAME : Sunglasses with cork arms, Sunglasses with UV protection
MODEL NAME : MO6231-03, MO7455-04, MO7455-05, MO7455-06,
MO7455-08, MO7455-10, MO7455-38, MO7455-48
APPLICANT : MID OCEAN BRANDS B.V
STANDARD(S) : Please refer to the following page(s).
DATE OF ISSUE : Mar. 23, 2023

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Applicant : MID OCEAN BRANDS B.V
Address : 7/F, Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong.

Report on the submitted sample(s) said to be:

Sample Name : Sunglasses with cork arms, Sunglasses with UV protection
Model : MO6231-03, MO7455-04, MO7455-05, MO7455-06, MO7455-08, MO7455-10,
MO7455-38, MO7455-48
Vendor code : 101191
Country of Origin : CHINA
Country of Destination : EUROPE
Sample Received Date : Mar. 09, 2023
Testing Period : Mar. 09, 2023 to Mar. 21, 2023
Test Requested : Selected test(s) as requested by client.

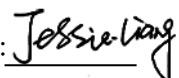
Test Requested:**Conclusion**

-EN ISO 12312-1:2013+A1:2015, exclude - Clause 12 Information and labelling

Pass

-UV400 (In-house test, and test method refer to attached pages for details)

Pass

Approved by : 

Liangdan, Jessie.Liang

Technical Director

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Report Revise Record

Report Version	Issued Date	Valid Version	Notes
/	Mar. 21, 2023	Invalid	Initial release
S1	Mar. 23, 2023	Valid	Modification of model

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The photo of the sample



The photo of AGC03778230301-002S1 is for use only with the original report.

Test Point Description

Test point	Test point description
1-6	Yellow frame

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Test Results:
Requirements for Sunglasses
Test standard:

- EN ISO 12312-1:2013+A1:2015 Eye and face protection — Sunglasses and related eyewear — Part 1: Sunglasses for general use

- EN ISO 12311:2013 Personal protective equipment — Test methods for Sunglasses and related eyewear

Note: The applicant's attention was drawn that the manufacturer should not use the frame materials which are known to cause irritation, allergic or toxic reaction during wear in a normal state of health against significant proportion of users.

CLAUSES	REQUIREMENTS		RESULTS
4 Construction and materials			
4.1	Construction		P
4.2	Filter material and surface quality		P
4.3	Physiological compatibility (Only test Nickel Release)		NA
5 Transmittance			
5.2	Transmittance and filter categories	Filter categories	Cat.2
		UV requirements	P
		IR requirements(Claimed by the manufacturer) (Remark: No claim provided by the applicant)	NA (See Remark)
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 Spectral transmittance	P
		5.3.2.1 Detection of signal lights	P
		5.3.2.2 Driving in twilight or at night	NA
5.3.3	Wide angle scattering		P
5.3.4	Additional transmittance requirements for specific filter types	5.3.4.1 Photochromic filters	NA
		5.3.4.2 Polarizing filters	NA
		5.3.4.3 Gradient filters	NA

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CLAUSES	REQUIREMENTS	RESULTS
5.3.5	5.3.5.1 Blue-light-absorption/ transmittance	NA (See Remark)
	5.3.5.2 UV absorption/transmittance	NA (See Remark)
	5.3.5.3 Antireflective coated sunglasses	NA (See Remark)
	5.3.5.4 Enhanced infrared absorption	NA (See Remark)
6 Refractive power		
6.1	Spherical and astigmatic power	P
6.2	Local variations in refractive power	P
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) (Remark: No claim provided by the applicant)	NA (See Remark)
7.4	Increased endurance of sunglasses (optional specification) (Remark: No claim provided by the applicant)	NA (See Remark)
7.5	Resistance to perspiration (optional specification) (Remark: No claim provided by the applicant)	NA (See Remark)
7.6	Impact resistance of the filter, strength level 2 or 3 (optional specification) (Remark: No claim provided by the applicant)	NA (See Remark)

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CLAUSES	REQUIREMENTS	RESULTS
8	Resistance to solar radiation	P
9	Resistance to ignition	P
10	Resistance to abrasion (optional specification) (Remark: No claim provided by the applicant)	NA (See Remark)
11 Protective requirements		
11.1	Coverage area	P
11.2	Temporal protective requirements(Filter category 4)	NA
12 Information and labelling		
12.1	Information to be supplied with each pair of sunglasses	NR
12.2	Additional information	NR

Remark: P = Pass; F = Fail; NA = Not Applicable; NR=Not require; X=checked; Cat.=Category

UV-400

CLAUSES	REQUIREMENTS	RESULT
--	UV-400 (In-house test, non-accredited test item.)	P

Remark: P = Pass; F = Fail; NA = Not Applicable; NR=Not require; X=Checked; Cat.=Category

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Construction — Clause 4.1 and Filter material and surface quality — Clause 4.2

Sample No.	Defects				Comment	Result(s)
	Construction		Filter Material and Surface Quality			
	Observed	Absent	Observed	Absent		
1-6		X		X	--	P

Requirements:

1. Construction: shall be smooth and without sharp projections;
2. Filter material and surface quality: Except in a marginal area 5 mm wide, sunglass filters shall have no material or machining defects within an area of 30mm diameter around the reference point that may impair vision, e.g. bubbles, scratches, inclusions, dull spots, pitting, mould marks, notches, reinforced points, specks, beads, water specks, pocking, gas inclusions, splintering, cracks, polishing defects or undulations.

Transmittance and filter categories — Clause 5.2

Sample No.: 1-6					
Test Items	Requirements	Left	Right	Result(s)	
Luminous transmittance, τ_v (380~780)nm (%)	For Cat. 0: 80.0~100	31.4	31.5	Cat.2	
	For Cat. 1: 43.0~80.0				
	For Cat. 2: 18.0~43.0				
	For Cat. 3: 8.0~18.0				
	For Cat. 4: 3.0~8.0				
Filter categories	Claimed Cat.: Cat.2	Cat.2	Cat.2		
τ_{SUVB} (280~315)nm (%)	<input type="checkbox"/> For Cat. 0,1: $\leq 0.05\tau_v$ <input checked="" type="checkbox"/> For Cat. 2: 1.0% absolute or 0.05 τ_v whichever is greater; <input type="checkbox"/> For Cat. 3, 4: 1.0% absolute	0.0	0.0	P	
τ_{SUVA} (315~380)nm (%)	<input type="checkbox"/> For Cat. 0, 1: $\leq \tau_v$; <input checked="" type="checkbox"/> For Cat. 2, 3: $\leq 0.5\tau_v$ <input type="checkbox"/> For Cat. 4: 1.0% absolute or 0.25 τ_v whichever is greater	0.0	0.0	P	
τ_{sb} (380~500)nm (%)	---	31.7	31.7	Only Ref.	

Measurement Uncertainty (if necessary):

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Uniformity of luminous transmittance — Clause 5.3.1

Sample No.: 1-6				
Test Items	Requirements	Left	Right	Result(s)
Difference within filter (%) (relative to higher value)	The relative difference in the luminous transmittance value: <input checked="" type="checkbox"/> For Cat. 0, 1, 2, 3: $\leq 10\%$ <input type="checkbox"/> For Cat. 4: $\leq 20\%$	5.4	6.8	P
Difference with mounted filters (relative to higher value)(%)	The relative difference between the luminous transmittance value of the visual center for right and left eye shall not exceed 15%	0.3		P

Measurement Uncertainty (if necessary):

Requirements for road use and driving — Clause 5.3.2

Sample No.: 1-6				
Test Items	Requirements	Left	Right	Result(s)
Categories	Filters suitable for road use and driving shall be of categories 0, 1, 2 or 3.	Cat.2	Cat.2	P
Spectral transmittance (475~650)nm (%)	$\geq 0.2\tau_v$	$0.79\tau_v$	$0.80\tau_v$	P
Red Signal	≥ 0.80	0.96	0.96	P
Yellow Signal	≥ 0.60	0.92	0.92	
Green Signal	≥ 0.60	1.06	1.06	
Blue Signal	≥ 0.60	1.18	1.17	
Driving in twilight or at night (%)	$\geq 75\%$	31.4	31.5	NA

Measurement Uncertainty (if necessary):

Wide angle scattering — Clause 5.3.3

Sample No.	Wide Angle Scattering (%)		Result(s)
	Left	Right	
1-6	0.7	0.5	P
Requirements: The wide angle scattering of the filters in the condition as supplied by the manufacturer shall not exceed the value of 3%.			

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Spherical and astigmatic power— Clause 6.1

Sample No.: 1-6				
Test Items	Requirements	Left	Right	Result(s)
Spherical Power (D)	$\pm 0.12D$	+0.02	+0.01	P
	The difference between the spherical powers shall not exceed 0.18 D;	0.01		P
Astigmatic Power (D)	$\leq 0.12D$	0.00	0.00	P

Measurement Uncertainty (if necessary):

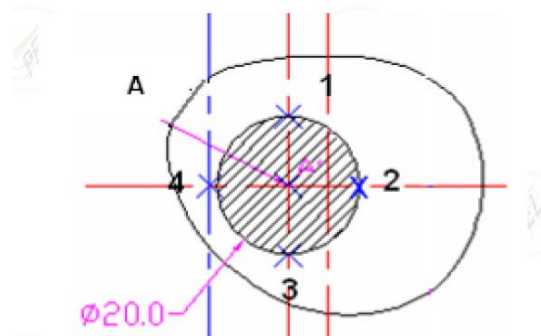
Local variations in refractive power — Clause 6.2

Sample No.: 1-6					
Test Items	Requirements	Location	Left	Right	Result
Spherical Power (D)	$\pm 0.12D$	1*	0.03	-0.03	P
		2*	0.09	-0.01	
		3*	0.06	0.01	
		4*	0.06	0.01	
Astigmatic Power (D)	$\leq 0.12D$	1*	0.06	0.04	P
		2*	0.03	0.03	
		3*	0.05	0.01	
		4*	0.05	0.02	

Measurement Uncertainty (if necessary):

Note: * See figure:

Key: A=Reference points
X=Measure point


Figure: Measuring location of refractive power

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Prism imbalance (Relative prism error) — Clause 6.3

Sample No.	Requirements		Prism imbalance(cm/m)	Result
1-6	Horizontal	Base Out: <1.00	0.37	P
		Base In: <0.25	--	
	Vertical	<0.25	0.02	

Measurement Uncertainty (if necessary):

Minimum robustness of filters — Clause 7.1

Sample No.	Defects		Comment	Result(s)
	Observed	Absent		
1-6		X	--	P

Requirements:

None of the following defects shall appear on filters :

1. Filter fracture;
2. Filter deformation;

Frame deformation and retention of filters — Clause 7.2

Sample No.	Boxed Center Distance C (mm)	Residual Deformation X (mm)	Deformation Percentage Φ (%)	Structure		Lens Retention		Result(s)
				Pass	Fail	Pass	Fail	
1-6	73.64	0.51	0.7	X		X		P

Requirements:

1. Be permanently deformed from its original configuration by not more than 2% of the distance C,.
Deformation percentage Φ ; Calculation: $\Phi(\%) = X/C*100$
2. No fracture or crack at any point;
3. No filter shall be displaced from the frame.

Measurement Uncertainty (if necessary):

Resistance to Radiation — Clause 8

Sample No.: 1-6						
Test Items		Requirements		Left	Right	Result(s)
The relative change of luminous transmittance(%)		<input type="checkbox"/> For Cat.0: $< \pm 3\%$	Before exposure	31.4	31.5	P
		<input type="checkbox"/> For Cat.1: $< \pm 5\%$	After exposure	31.5	31.5	
		<input checked="" type="checkbox"/> For Cat.2: $< \pm 8\%$	Difference	0.3	0.0	
		<input type="checkbox"/> For Cat.3&4: $< \pm 10\%$				
Wide angle scattering(%)		After exposure, the value of wide angle scattering shall not exceed the limit value of 3%;		0.7	0.6	P
Requirements for the ultraviolet spectral range (%)	τ_{SUVB} (280~315) nm(%)	<input type="checkbox"/> For Cat. 0,1: $\leq 0.05\tau$ <input checked="" type="checkbox"/> For Cat. 2: 1.0% absolute or 0.05 τ whichever is greater; <input type="checkbox"/> For Cat. 3, 4: 1.0% absolute		0.1	0.0	P
	τ_{SUVA} (315~380) nm(%)	<input type="checkbox"/> For Cat. 0, 1: $\leq \tau$; <input checked="" type="checkbox"/> For Cat. 2, 3: $\leq 0.5\tau$ <input type="checkbox"/> For Cat. 4: 1.0% absolute or 0.25 τ whichever is greater		0.1	0.1	P

Measurement Uncertainty (if necessary):

Ignition — Clause 9

Sample No.	Continued Combustion		Comment	Result(s)
	Yes	No		
1-6		X	--	P
Requirements: The filters and frame shall be no continued combustion after withdrawal of the test rod.				

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Coverage area — Clause 11.1

Sample No.	Type (Adults/Children)	Coverage Area		Comment	Result(s)
		Pass	Fail		
1-6	Adults	X		--	P
Requirements: 1. Adults' sunglasses shall cover two ellipses of horizontal diameter of 40mm and a vertical diameter of 28mm, the centres of which are separated 64mm and symmetrically placed on either side of the centre of the nose bridge of the frame. 2. Children's sunglasses shall cover two ellipses of horizontal diameter of 34mm and a vertical diameter of 24mm, the centres of which are separated 54mm and symmetrically placed on either side of the centre of the nose bridge of the frame.					

UV400 (In-house test, non- accredited test item)

Assessment was made against a level of 100% UV protection, in which the spectral transmittance was examined within a range of 280nm - 400nm.

Sample Number	Wavelength (nm)	Maximum Spectral transmittance (%)		Result
		Left	Right	
1-6	280-400	0.3	0.4	P
Requirements: Maximum spectral transmittance shall not exceed 0.5%.				

Measurement Uncertainty (if necessary):



Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Std & Tech Co., Ltd. (the “Company”) solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the “Clients”).
2. Any report issued by Company as a result of this application for testing services (the “Report”) shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
7. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

*** End of Report ***

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