

TEST REPORT

Applicant: MID OCEAN BRANDS B.V.
UNIT 711-716 7/F TOWER A
83 KING LAM STREET
CHEUNG SHA WAN KOWLOON
HONG KONG

Attn: DEREK HUI

Number: HKGH03284609

Date: Sep 02, 2025

Sample and Information provided by customer :

Item Name : **Sunglasses**
Item No. : **MO2808**
Quantity : 5 pairs
Vendor : 115663
Country of Origin : China

For and on behalf of :
Intertek Testing Services HK Ltd.



Dorothy M.Y. Lau
Vice President



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Conclusion:

The submitted sample was tested under the following requirements requested by the applicant, subject to the information stated in the remark and attached page(s) for details :

| | <u>Requirement</u> | <u>Result</u> |
|-----|--|---------------|
| (1) | UV-400 | Pass |
| (2) | 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 12.2 - Additional Information | Pass |

Decision Rule(s):

When a statement of conformity to a specification or standard is provided on test report, the decision rule shall be applied. For details, please refer to Intertek's "Decision Rule Document" and is available on Intertek's website. <https://intertekhk.qrd.by/decision-rule-doc>.

If decision rule already inhereed in the requested specification or standard, Intertek's "Decision Rule Document" is not applicable and indication of "∞" was shown as above table.



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(1) UV-400

Test Method : Assessment was made against a level of 100% UV protection, in which the spectral transmittance was examined within a range of 280nm - 400nm to ensure that a transmittance value of 0.5% was not exceeded.

Number of sample tested : One (1) pair.

Result :

| Wavelength (nm) | Transmittance (%) | |
|-----------------|-------------------|--------------|
| | Left ocular | Right ocular |
| 280 | <0.10 | <0.10 |
| 285 | <0.10 | <0.10 |
| 290 | <0.10 | <0.10 |
| 295 | <0.10 | <0.10 |
| 300 | <0.10 | <0.10 |
| 305 | <0.10 | <0.10 |
| 310 | <0.10 | <0.10 |
| 315 | 0.14 | <0.10 |
| 320 | <0.10 | <0.10 |
| 325 | <0.10 | <0.10 |
| 330 | <0.10 | <0.10 |
| 335 | <0.10 | <0.10 |
| 340 | <0.10 | <0.10 |
| 345 | <0.10 | <0.10 |
| 350 | 0.23 | 0.17 |
| 355 | <0.10 | <0.10 |
| 360 | 0.12 | <0.10 |
| 365 | <0.10 | <0.10 |
| 370 | <0.10 | <0.10 |
| 375 | <0.10 | <0.10 |
| 380 | <0.10 | <0.10 |
| 385 | <0.10 | <0.10 |
| 390 | <0.10 | <0.10 |
| 395 | <0.10 | <0.10 |
| 400 | 0.10 | <0.10 |

Comment : The submitted sample was considered acceptable to make a claim of "UV 400" protection, the criteria of which was mentioned above.

Date sample received : Aug 25, 2025
Testing period : Aug 25, 2025 to Aug 29, 2025



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(2) Requirements for Sunglasses (Uniformly Tinted Lenses)

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

Test method refers ISO 12311:2013 Personal protective equipment - Test methods for sunglasses and related eyewear.

Number of samples tested: Four (4) pairs

Note :

(1) The submitted sunglasses were declared by applicant for adult use.

(2) 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.

(3) CE marking or UKCA marking is not specified in BS EN ISO 12312-1:2013+A1:2015. However, per Regulation (EU) 2016/425 or UK2019 SI696 Schedule 35 Regulation 38, the CE marking or UKCA marking shall be affixed visibly, legibly and indelibly to the sunglasses frame respectively.

It was found that only CE marking was provided on the sunglasses frame.

| 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 |
| 5.3.2.1a | Spectral transmittance | P |
| 5.3.2.1b | Detection of signal lights | P |
| 5.3.2.2 | Driving in twilight or at night | P |
| 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 |
| 5.3.5 | Claimed transmittance properties | NA (No claim) |
| 6 | Refractive power | |



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| Clause | Requirement | Result |
|--------|---|---------------|
| 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 labeling | |
| 12.1 | Information to be supplied with each pair of sunglasses | P (Note 3) |
| 12.2 | Additional information | #1 |

Abbreviation: P = Pass; NA = Not Applicable



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Test data:

5.2 Transmittance and filter categories

| Range | Left ocular (%) | Right ocular (%) | Filter category |
|------------------|-----------------|------------------|-----------------|
| 380 - 780nm (Tv) | 14.87 | 14.72 | 3 |

| Range | Maximum transmittance (%) | | Limit (%) | |
|----------------------------------|---------------------------|--------------|-------------------|-------------------|
| | Left ocular | Right ocular | Left | Right |
| 280 - 315nm (T _{SUVB}) | < 0.10 | < 0.10 | ≤ 1.0 | ≤ 1.0 |
| 315 - 380nm (T _{SUVA}) | < 0.10 | < 0.10 | ≤ 0.5Tv (7.44) | ≤ 0.5Tv (7.36) |

Requirement:

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

5.3.1 Uniformity of luminous transmittance

| Uniformity | Left ocular | Right ocular | Limit (%) |
|---|-------------|--------------|-----------|
| % variation within filter [relative to higher value] | 2.53 | 1.42 | ≤ 10 |
| % difference between filters [relative to lighter filter] | 1.03 | | ≤ 15 |

5.3.2.1a Spectral transmittance

| Range | Minimum transmittance (%) | | Limit (%) | |
|-------------|---------------------------|--------------|--------------------|--------------------|
| | Left ocular | Right ocular | Left ocular | Right ocular |
| 475 - 650nm | 12.72 | 12.57 | ≥ 0.2 Tv (2.97) | ≥ 0.2 Tv (2.94) |

5.3.2.1b Detection of signal lights

| Signal light | Relative visual attenuation quotient, Q | | Limit |
|--------------|---|--------------|-------|
| | Left ocular | Right ocular | |



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| | | | |
|--------|------|------|-------------|
| Red | 1.07 | 1.07 | ≥ 0.80 |
| Yellow | 0.99 | 0.99 | ≥ 0.60 |
| Blue | 1.07 | 1.07 | ≥ 0.60 |
| Green | 1.01 | 1.01 | ≥ 0.60 |

5.3.3 Wide angle scattering

| Wide angle scattering (%) | Left ocular | Right ocular | Requirement |
|---------------------------|-------------|--------------|-------------|
| | 1.4 | 1.4 | ≤ 3 |

6.1 Optical power of oculars mounted in spectacles

| Optical power | Left ocular | Right ocular | Limit |
|---|-------------|--------------|-------------|
| Spherical power (m^{-1}) | -0.05 | -0.04 | ± 0.12 |
| Astigmatic power (m^{-1}) | 0 | 0.03 | ≤ 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 | 0.075 | ≤ 1.00 |
| | Base in | -- | ≤ 0.25 |
| Vertical | | 0.025 | ≤ 0.25 |



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8 Resistance to radiation

(a) Relative change in the luminous transmittance after irradiation

| | | |
|------------------|-------|--|
| Left ocular (%) | -0.47 | Requirement ± 3% for category 0 ± 5% for category 1 ± 8% for category 2 ± 10% for categories 3 & 4 |
| Right ocular (%) | -1.03 | |

(b) Wide angle scattering after solar radiation

| Left ocular (%) | Right ocular (%) | Requirement (%) |
|-----------------|------------------|-----------------|
| 1.5 | 1.4 | ≤ 3 |

(c) After the solar radiation process, the submitted sample also met the requirement for the ultraviolet spectral range for T_v as given by table 1 of the standard.

Remark:

#1 - 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.

∞ - Decision rule required by the standard

If the measurement result plus or minus the uncertainty of measurement overlap the limit value of the test, the result shall be deemed to be a failure.

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HKGH03284609-001*****
End of report

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