ICS® INC. LABORATORIES

Test Report T19575-01-1 Issue 1
ISO 12312-2:2015(E)
Bresser GmbH
Eclipser/ECLICUMC Paper Eye Glasses with Eclipse Lenses
25 November 2024

ACCREDITED
Test Laboratory
Certificate: 1722.01

Approved by:

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Issued to: Bresser GmbH
Gutenbergstr, 2
46414 Rhede
Germany

Date: 25 November 2024
Report: T19575-01-1
Issue: 1

Objective:

Contract testing to ISO 12312-2:2015(E) “Eye and face protection — Sunglasses and related eyewear — Part 2: Filters for direct observation of the sun”.

Samples:

Eclipser/ECLICUMC Paper Eye Glasses

Description	Quantity	Sample ID
Silver/Black Eclipse Lenses, Custom Printed “Bresser”	6	5A

Date(s) submitted: 15 November 2024

Procedures:

All tests were conducted in a standard laboratory atmosphere unless otherwise specified.

Samples were randomly selected from the quantity provided and tested in the as-received condition unless otherwise stated.

Assessment Summary:

Date(s) tested: 21 November 2024

ISO 12312-2:2015(E) Requirements	Compliant	Non-Compliant
4 Requirements and associated test methods		
4.1 Transmittance		
4.1.1 General	X	
4.1.2 Uniformity of luminous transmittance	X	
4.2 Material and surface quality	X	
4.3 Mounting		
4.3.1 General	X	
4.3.2 Dimensions	X	
4.3.3 Material quality	X	
5 Labelling	X	

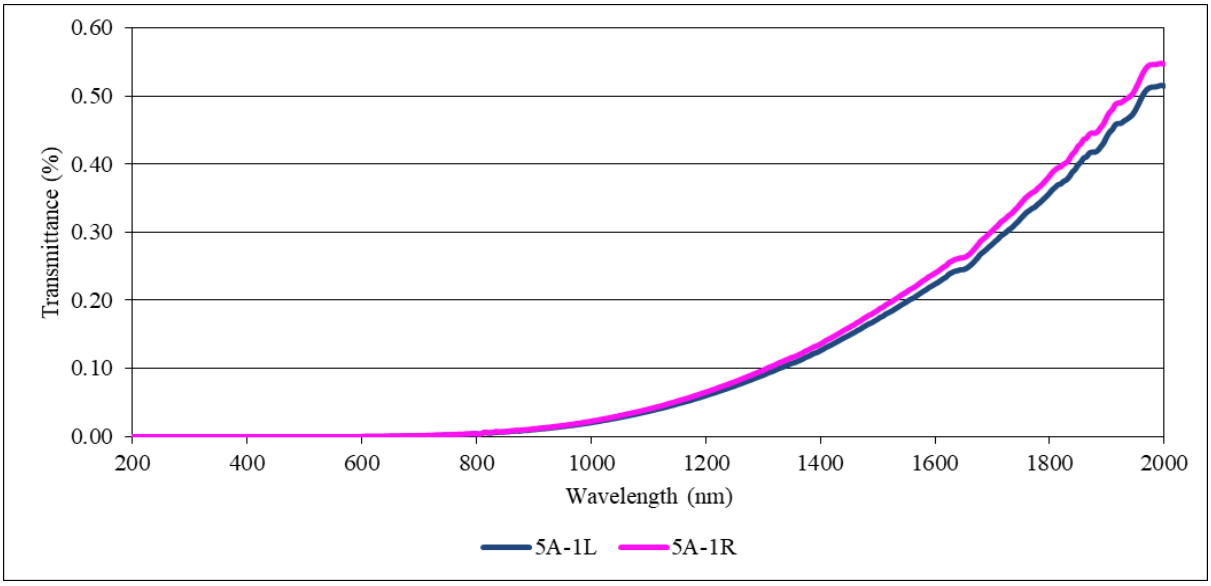
Samples as assessed meet the requirements of ISO 12312-2:2015(E).

Results:

4.1.1 Transmittance-General

Sample ID:	5A-1L	5A-1R	Requirement	Pass	Fail
Luminous-D65 (τ_V) (%)	0.00023	0.00025	0.000061 to 0.0032	X	
Solar UVB-280 to 315nm (τ_{SUVB}) (%)	<0.00001	<0.00001	$\leq \tau_V$	X	
Solar UVA-315 to 380nm (τ_{SUVA}) (%)	<0.00001	<0.00001	$\leq \tau_V$	X	
Solar Infrared-780 to 2000nm (τ_{SIR}) (%)	0.061	0.066	≤ 3	X	

Measured with a double beam, ratio recording, double monochromator spectrophotometer followed by the appropriate calculation as described in ISO 12311:2013, 7.1.1. 7.1.2, 7.3.2, 7.3.3 and 7.5.



4.1.2 Transmittance-Uniformity of luminous transmittance

Sample ID:	5A-1L	5A-1R	Requirement
Luminous-D65 (τ_V) (%)			
Maximum:	0.00031	0.00034	
Center:	0.00030	0.00033	
Minimum:	0.00028	0.00032	
Relative Difference (%):	10.0	5.64	$\leq 10\%$
Pass/Fail:	Pass		

Measured with a broadband collimated light source tuned for D65 and photodetector with the spectral response corresponding to CIE 2° standard observer.

4.2 Material and surface quality; Result: Pass

Requirement: Except in a marginal area 5 mm wide, filters shall be free from defects likely to impair vision in use, such as bubbles, scratches, inclusions, dull spots, pitting, scouring, pocking, scaling, and undulations. Metal coated filter materials shall not exhibit more than one pinhole defect not greater than 200 µm in average diameter within any 5 mm diameter circular zone.

4.3.1 Mounting-General; Result: Pass

Requirement: If mounted, a filter shall be held securely so that it cannot be dislodged by normal handling or by gusts of wind.

4.3.2 Mounting-Dimensions; Result: Pass

Requirement: The filter or filters and mounting assembly shall be of a size sufficient to cover both eyes of the user simultaneously and in no case shall have overall dimensions less than 115 mm in width and 35 mm in depth in the plane parallel to the facial plane. Spectacle shaped mountings may have a triangular cut-away area to accommodate the crest of the nose, not to exceed 15 mm in apical height and 35 mm width at the base and may have separate filters, one for each eye, provided that the overall dimensions are satisfied.
Note: Triangular cut-away only applies to cardboard spectacle shaped mountings.

4.3.3 Mounting-Material quality; Result: Pass

Requirement: The filter and mounting shall be free from roughness, sharp edges, projections, or other defects which could cause discomfort or injury during use. No part of the filter or mounting which is in contact with the wearer shall be made of materials which are known to cause any skin irritation.

5 Labelling; Result: Pass

The filter and/or its packaging shall show the following information in the language(s) of the country where the product is to be offered for sale:

a) name and address of manufacturer of the product;

b) instructions for use in looking at the sun or a solar eclipse;

c) warnings that viewing the sun without an appropriate filter can result in permanent eye injury;

d) warnings that filters that are damaged or separated from their mountings should be discarded;

e) advice on storage, cleaning, and maintenance, as appropriate;

f) obsolescence deadline or period of obsolescence, as appropriate.

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Sample Photograph(s):

Estimates of Uncertainties:

ISO 12311:2013(E) Test Method	Estimated Uncertainty
7.1.1 Measurement of spectral transmittance	10% Relative

Estimated uncertainties have been calculated in accordance with the principles of ISO/IEC Guide 98-3:2008, Uncertainty of measurement-Part 3: Guide to the expression of uncertainty in measurement (GUM:1995).
Estimated uncertainties have a 95% confidence level.
A coverage factor (k) of 2.0 was used.
Estimated Uncertainties were not taken into consideration for determination of pass/fail.

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9. For the safety of our personnel, Client must advise if samples are known or suspected to contain hazardous substances. Safety Data Sheets must be provided upon request.
10. ICS represents that Services shall be performed according to terms and specification agreed to by Client, and in a manner consistent with good laboratory practice. No other Representations to client, express or implied, and no warranty or guarantee is included or intended in this agreement, or in any other report or document related to the services. ICS does not guarantee product performance or compliance.
11. Schedules are confirmed upon acceptance of quotation. All reasonable efforts will be made to comply with provided timeline. Guarantees are neither implied nor promised.
12. Certain work may be subcontracted to ICS-approved laboratories as required or applicable. Client will be notified of this in advance.
13. Client agrees to pay any and all additional costs associated with unexpected or above-standard communications and/or consultations with Client or third parties as designated by Client.
14. Client agrees to pay all additional costs for work beyond the original scope of work, as directed and agreed to by Client.
15. Client understands and agrees that ICS, in entering into this Contract and by performing services hereunder, does not assume, abridge, abrogate or undertake to discharge any duty or responsibility of Client to any other party or parties. No one other than Client shall have any right to rely on any Report or other representation or conduct of ICS and ICS disclaims any obligations of any nature whatsoever with respect to such third parties.
16. For statements of conformity (pass/fail/"meets") regarding qualitative test results, ICS utilizes simple acceptance as its basis. For most statements of conformity relating to quantitative test results, the decision rule and associated uncertainty is inherent in the standard method. As such, simple acceptance is typically applied. Results on or near pass/fail thresholds or otherwise upon Client request or appeal will be evaluated with reference to the measurement uncertainty of relevant testing practices, equipment and other inputs/variables.
17. Client agrees, in consideration of ICS undertaking to perform the test(s) hereunder, to protect, defend and indemnify ICS from any and all claims, damages, expenses either direct or consequential for injuries to persons or property arising out of or in consequence of the performance of the testing, inspection and reporting hereunder and/or the performance of the products tested or inspected hereunder, unless caused by the negligence of ICS.
18. It is agreed that if ICS should be found liable for any losses or damages attributable to the services hereunder in any respect, its liability shall not exceed the amount of the fee paid by Client for services rendered and Client's sole remedy at law or in equity shall be the right to recover that sum.
19. Standard quotations are valid for 30 days from date of issue. Quotations for STAT services are valid for 5 days from date of issue.
20. Standard Payment Terms: 30% Laboratory/Testing fees invoiced and payable upon acceptance of quotation. 15 days net. Any change to these terms requires written approval by the President, Executive Vice President, Counsel or Accounting Manager. ICS retains the right to require prepayment in full at any time.
21. Cancelled jobs will be invoiced for work performed and/or set-up costs incurred. All jobs will be assessed a $35 sample handling fee. Shipping costs over $25 incurred by ICS for sample returns will be invoiced at cost +10%.
22. ICS hereby objects to any conflicting terms contained in any order, acceptance or other subsequent correspondence submitted by Client.
23. In the event that payment is not received within 15 days of invoice date, Client agrees to pay a late payment charge on the unpaid balance equal to 1-1/2% per month or the maximum charge allowed by law, whichever is less, and all costs and expenses, including attorney's fees where recovery of the same is not prohibited by law, incurred by ICS in collecting such invoices.
24. All costs associated with compliance with any subpoena (s) for documents, testimony in a court of law, or for any other purpose relating to work performed by ICS in connection with work performed for that Client, shall be paid by Client. Client shall also pay costs related to deposition and trial testimony.