

TEST REPORT

Hardline Laboratory

Report No. : YA30063A/2024

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Date : MAY 22, 2024

CORTINA NV

Meersbloem-Melden 42, 9700 Oudenaarde, Belgium

The following merchandise was submitted and identified by the applicant as:

Product Description: Personal Eye Protection-Goggles

Style/Item No: TSAVO/TSAVO SUN

Additional Information: Brand Name: Safety Jogger

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

Test Requested: ANSI/ISEA Z87.1-2020 American National Standard for Occupational and Educational Personal Eye and Face Protection Devices

Optional Requirements: TSAVO:

7.1 Impact Protector Requirements (+)

7.2 Optical Radiation Protector Requirements Table 8 (U6)

TSAVO SUN:

7.2 Optical Radiation Protector Requirements Table 8 (U6)

7.2 Optical Radiation Protector Requirements Table 11 (S)

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


Date of Receipt: MAR. 13, 2024 & MAY 09, 2024

Testing Period: MAR. 13, ~ 22, 2024 & MAY 09 ~ 22, 2024

Testing site:

7F., No. 6, Central 4th Road, Qianzhen Dist., Kaohsiung City, Taiwan

Signed for and on behalf of
SGS Taiwan Ltd.


Justin Yang
Asst. Supervisor



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Test Method & Result

ANSI/ISEA Z87.1-2020 American National Standard for Occupational and Educational Personal Eye and Face Protection Devices

Section

5. General Requirements

5.1 Optical Requirements

5.1.1 Optical Quality

Result

Pass

5.1.2 Luminous Transmittance

Pass

Finding

Lens Type	Luminous Transmittance Requirement	Test Value (%)	
		Left Ocular	Right Ocular
Clear Lenses	85% min.	91.91	92.19

5.1.3 Haze

Pass

Finding

Lens Type	Haze Requirement	Test Value (%)	
		Left Ocular	Right Ocular
Clear Lenses	3% max. – Clear Lenses Only	1.0	0.7

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Test Result

Section

Result

Sample: TSAVO

5.1.4 Refractive Power, Astigmatism, Resolving Power, Prism and Prism Imbalance for Plano Protectors

Pass

Finding

Test/Property	Requirement	Test Value	
		Left Ocular	Right Ocular
Refractive Power	See Table 1	-0.02	-0.03
Astigmatism		0.05	0.06
Resolving Power		Pattern 20	Pattern 20
Prism	See Table 2	< 0.50 Δ	< 0.50 Δ
Vertical Prism Imbalance		0.05 Δ	
Horizontal Prism Imbalance		0.05 Δ (Base In)	

Table 1. Tolerance on Refractive Power, Astigmatism and Resolving Power - Standard Optics

Protector	Refractive Power	Astigmatism	Resolving Power
Spectacle, Reader	±0.06 D	≤ 0.06 D	Pattern 20
Goggle, Full-facepiece respirator	±0.06 D	≤ 0.06 D	Pattern 20
Faceshield windows, Loose-fitting respirator	No requirement	No requirement	Pattern 20
Welding helmet lenses	±0.06 D	≤ 0.06 D	Pattern 20

Table 2. Tolerance on Prism and Prism Imbalance

Protector	Prism	Vertical Imbalance	Base In Imbalance	Base Out Imbalance
Spectacle, Reader	≤ 0.50 Δ	≤ 0.25 Δ	≤ 0.25 Δ	≤ 0.50 Δ
Goggle, Full-facepiece respirator	≤ 0.25 Δ	≤ 0.125 Δ	≤ 0.125 Δ	≤ 0.50 Δ
Faceshield windows, Loose-fitting respirator	≤ 0.37 Δ	≤ 0.37 Δ	≤ 0.125 Δ	≤ 0.75 Δ
Welding helmet lenses	≤ 0.50 Δ	≤ 0.25 Δ	≤ 0.25 Δ	≤ 0.75 Δ

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Test Result

Section

Result

Sample: TSAVO SUN

5.1.4 Refractive Power, Astigmatism, Resolving Power, Prism and Prism Imbalance for Plano Protectors

Pass

Finding

Test/Property	Requirement	Test Value	
		Left Ocular	Right Ocular
Refractive Power	See Table 1	0.01	0.01
Astigmatism		0.05	0.04
Resolving Power		Pattern 20	Pattern 20
Prism	See Table 2	< 0.50 Δ	< 0.50 Δ
Vertical Prism Imbalance		0.05 Δ	
Horizontal Prism Imbalance		0.00 Δ (Base In)	

Table 1. Tolerance on Refractive Power, Astigmatism and Resolving Power - Standard Optics

Protector	Refractive Power	Astigmatism	Resolving Power
Spectacle, Reader	±0.06 D	≤ 0.06 D	Pattern 20
Goggle, Full-facepiece respirator	±0.06 D	≤ 0.06 D	Pattern 20
Faceshield windows, Loose-fitting respirator	No requirement	No requirement	Pattern 20
Welding helmet lenses	±0.06 D	≤ 0.06 D	Pattern 20

Table 2. Tolerance on Prism and Prism Imbalance

Protector	Prism	Vertical Imbalance	Base In Imbalance	Base Out Imbalance
Spectacle, Reader	≤ 0.50 Δ	≤ 0.25 Δ	≤ 0.25 Δ	≤ 0.50 Δ
Goggle, Full-facepiece respirator	≤ 0.25 Δ	≤ 0.125 Δ	≤ 0.125 Δ	≤ 0.50 Δ
Faceshield windows, Loose-fitting respirator	≤ 0.37 Δ	≤ 0.37 Δ	≤ 0.125 Δ	≤ 0.75 Δ
Welding helmet lenses	≤ 0.50 Δ	≤ 0.25 Δ	≤ 0.25 Δ	≤ 0.75 Δ

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Section

5.1.5 Refractive Power, Astigmatism, Prism and Prism Imbalance for Prescription Protectors and Magnifiers Result
N/A

5.2 Physical Requirements Pass

5.2.1 Drop Ball Impact Resistance N/A

Note: Protectors first tested to and meeting the requirements of Section 7.1.4 are exempt from drop ball impact testing.

5.2.2 Ignition Pass

5.2.3 Corrosion Resistance of Metal Components Pass

5.2.4 Minimum Coverage Area Pass

5.3 Markings See Finding

Protector markings shall be placed in relatable proximity to each other on the product in the sequence specified below:

- Manufacturer's marks or logos
- Designation of standard (Z87 or Z87-2, for prescription devices)
- Coverage
- Optical level
- Optional Hazard-Specific Marks, as applicable:
 - Impact-rated marking (+)
 - Optical radiation marking
 - droplet and splash marking
 - dust marking
 - fine dust marking
- Optional Design Marks, as applicable:
 - Anti-fog treatment

Finding

	Manufacturer's marks or logo	Standard	Impact Mark	Relaxed Optical Level	Lens Type	Use
Lens	SJ	Z87	+	No Claim	U6	No Claim
Frame	No Claim					

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Section

7 Optional Hazard-Specific Protector Requirements

7.1 Impact Protector Requirements

7.1.2 Frames and Shells

Result

Pass

7.1.3 Lateral (Side) Coverage

Pass

7.1.4 Impact Requirements

7.1.4.1 Protector Acceptance Criteria

7.1.4.2 High Mass Impact

Pass

Finding

Determined	Remark
4 out of 4 Passed	The complete devices met the protector acceptance criteria listed in Section 9.11 after testing.

7.1.4.3 High Velocity Impact

Pass

Finding

Determined	Remark
6 out of 6 Passed	The complete devices met the protector acceptance criteria listed in Section 9.12 after testing.

Note. 1. Impact ball: 6.00 mm (0.24 in.) diameter steel ball

2. Impact speed: Spectacles: 50.9 m/s.

7.1.4.4 Penetration Test (lenses only)

Pass

Finding

Determined	Remark
4 out of 4 Passed	The complete devices met the protector acceptance criteria listed in Section 9.13 after testing.

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Section

7.2 Optical Radiation Protector Requirements

7.2.2.1 Filter Lenses

7.2.1.1.1 Transmission Requirements

Result

See Finding

Finding (TSAVO)

U6

Transmittance requirements for Ultraviolet Filter Lenses			Test Value (%)	
Scale	Transmittance Requirements (%)		Left Ocular	Right Ocular
U6	Maximum Effective Far-Ultra-Violet Average Transmittance %	0.01	0.000	0.000
	Maximum Near Ultra-Violet Average Transmittance %	0.1	0.00	0.00

Finding (TSAVO SUN)

U6S

Transmittance requirements for Ultraviolet Filter Lenses			Test Value (%)	
Scale	Transmittance Requirements (%)		Left Ocular	Right Ocular
U6	Maximum Effective Far-Ultra-Violet Average Transmittance %	0.01	0.000	0.000
	Maximum Near Ultra-Violet Average Transmittance %	0.1	0.00	0.00

Finding

Transmittance requirements for Special-Purpose Lenses			Test Value (%)	
Lens Type	Maximum %	Minimum %	Left Ocular	Right Ocular
Tinted	< 100	8	26.89 %	27.94 %
Ratio [R] of measured Luminous Transmittance		0.90 < R < 1.10	0.96	

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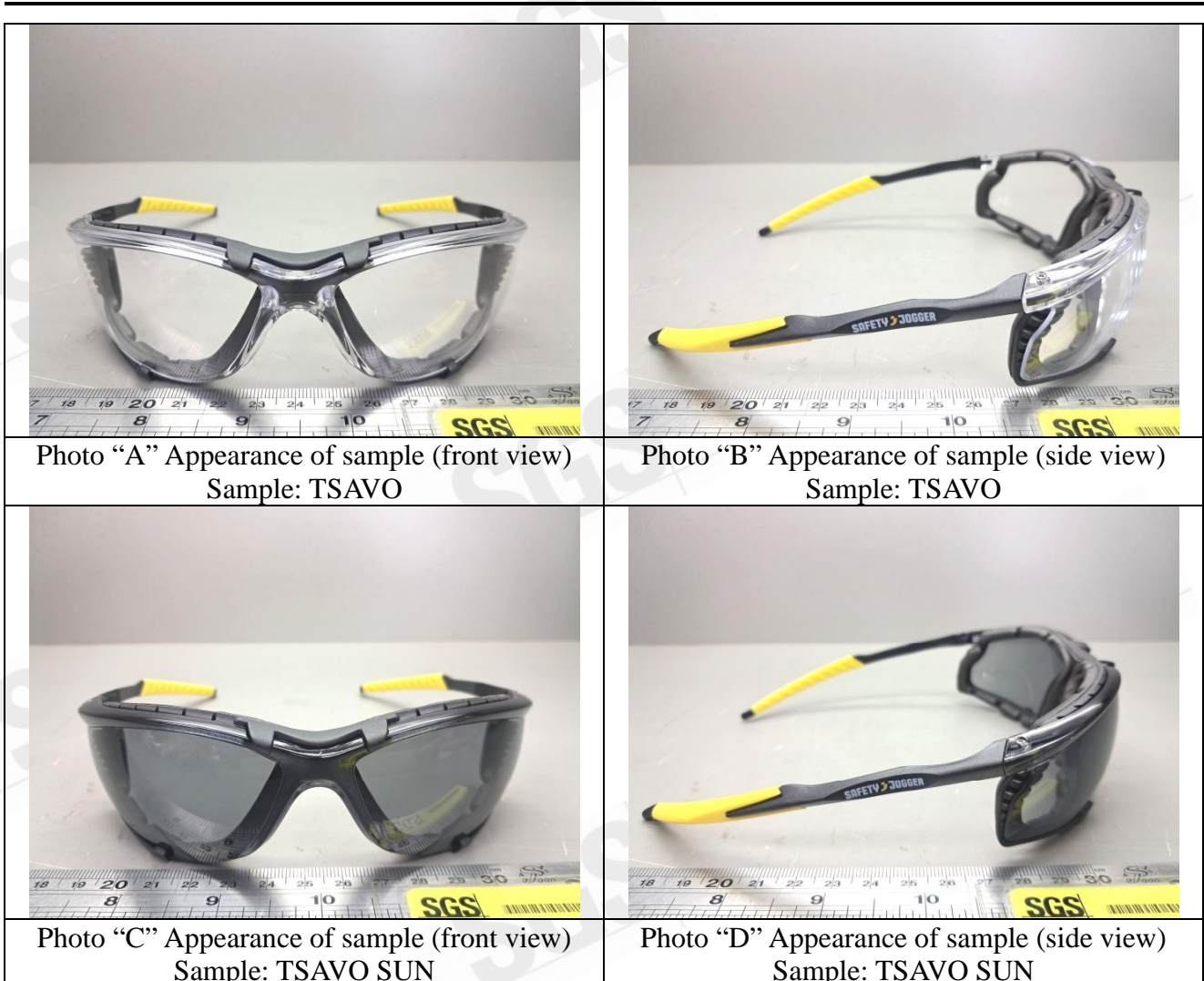
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- Remark:**
1. The samples are complete devices claimed by applicant.
 2. Samples were provided by applicant and samples were randomly selected to be assessed.
 3. N/A = Not Applicable
 4. Only applicable sections were shown.
 5. The content of this report is invalid if it is not presented as the entire report.
 6. The decision rule of the statements of conformity is following the ILAC G8:09/2019 by using the simple acceptance decision rule.

– Picture(s) –



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Photo "E" Appearance of sample (front view)
Sample: TSAVO, 2nd submission.
Receipt date: MAY 09, 2024



Photo "F" Appearance of sample (side view)
Sample: TSAVO, 2nd submission.
Receipt date: MAY 09, 2024

--- End of Report ---

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