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| SAS VOLCOM | Master Test Report Eyewear | No. of Document: SV-200615-01 |
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Test report sunglasses acc. to ISO 12312-1:2013/A1:2015 and to ISO 12312-3:2022

Manufacturer: Zhangzhou TONY Optical CO., LTD. Model: SWING
 SAP number: VE02301201 Manufacturer's number: G4100 US11346 AS11
 Lens material: PC Frame material: POLYAMIDE(PA)
 Lens colour: GRAY

| Item | Requirement | Relevant clause of ISO 12312-1:2013 | Result | Pass/Fail | |
|--|---|-------------------------------------|-----------------------------------|-----------|------------|
| Construction | smooth material without sharp projections | 4.1 | OK | Pass | |
| Filter material and surface quality | no material or machining defects | 4.2 | OK | Pass | |
| Physiological compatibility | nonhazardous materials | 4.3 | OK | Pass | |
| Luminous Transmittance T_{vis} [%] | according to claimed filter category | 5.2, according to table 1 | T_{vis} : L:12.42% cat: 3 | Pass | |
| UV-absorption | according to claimed filter category | 5.2, according to table 1 | 400 | Pass | |
| UV 400 | solar UV up to 400 nm below 0,5 % | 5.3.5.2 | 0.00% | Pass | |
| Homogeneity T_{vis} left to right lens | < 15 % rel. | 5.3.1 | 1% | Pass | |
| Homogeneity T_{vis} within the lens | Cat. 0,1,2,3 < 10 % Cat. 4 < 20 % | 5.3.1 | L:4.1% R: 4.6% | Pass | |
| Requirements for road use | $T_{spectral}$ detection of signal lights (Q values) | 5.3.2.2 5.3.2.3 | OK R:1.32 Y:1.17 G:0.93 B:0.71 | Pass | |
| Driving in twilight or at night | $T_{vis} > 75 \%$ | 5.3.2.4 | NOT SUITABLE | | |
| Wide angle scattering [%] | < 3 % | 5.3.3 | 0.36% | Pass | |
| Photochromic effect | $T_{v0}/T_{v1} \geq 1,25$ | 5.3.4.1 | NONE | | |
| Polarizing effect | Cat. 2,3,4 > 8:1 Cat. 1 > 4:1 | 5.3.4.2 | NONE | | |
| Spherical power [dpt.] | sph $\pm 0,12$ | 6.1 | L:0.01 R:0.03 | Pass | |
| Astigmatic power [dpt.] | astigm. $\leq 0,12$ | | L:0.01 R:0.04 | | |
| Prism imbalance [cm/m] | horizontal base out $\leq 1,0$ base in $\leq 0,25$ vertical $\leq 0,25$ | 6.3 | 0.13 NONE 0.00 | Pass | |
| Minimum robustness | no filter fracture or filter deformation | | 7.1 | | OK |
| Frame deformation | no fracture or permanent deformation, filter not detached | | 7.2 | | OK |
| Resistance to solar radiation | change in luminous transmittance according to table 4 scattering < 3 % $T_{v0}/T_{v1} \geq 1,25$ all UV requirements still fulfilled | 8 | OK OK NONE OK | Pass | |
| Resistance to ignition | no ignition or glowing | | 9 | | OK |
| Protective requirements | two ellipses covered temporal protection for cat.4 glasses | | 11.1 11.2 | | OK NONE |
| Information and labelling | all required information added | | 12.1 | | OK |

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| Confirmation: | Manufacturer: Zhangzhou TONY Optical CO., LTD. | SAS VOLCOM |
| | Date 2022-01-17 | Signature: 苏志慧 |

