

No. YW20200778



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国际互认
检测
TESTING
CNAS L1071

TEST REPORT

Product: Goggle

Model: KR0876

Applicant: CCQS Certification Services Limited

Date of issue: 2020-05-23

GIMT

GUANGZHOU INSTITUTE OF MEASUREMENT AND TESTING TECHNOLOGY



TEST REPORTS

Information

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Report No.	YW20200778
Commission No.	4010127
Testing Laboratory	Guangzhou Institute of Measurement and Testing Technology
Address	No.19, Jiantashan Road, Kexuecheng, Guangzhou, Guangdong, China
Applicant	CCQS Certification Services Limited
Address	Block 1 Blanchardstown Corporate Park, Ballycoolin Road, Blanchardstown, Dublin15, D15 AKK1, Ireland
Information of samples	
Product	Goggle
Brand name	/
Model	KR0876
Manufacturer	Taizhou Baolai Glasses Manufacture Co., Ltd.
Address	1# Road 5 Nanyang, Duqiao Town, Linhai City, Zhejiang, China
Quantity submitted	25 pcs.
Environmental condition	
Temperature	20.8 °C
Relative humidity	60 %
Test requested	EN 166:2001
Test method	EN 167:2001, EN 168:2001
Results	Please refer to the following pages.
Conclusion	Based on the test results given in this report, the specimens meet the requirements of EN 166:2001.
Date	
Date of receipt	2020-05-07
Period of testing	2020-05-07 to 2020-05-21
Date of issue	2020-05-23

—see next page—

Approved by:

 李育豪

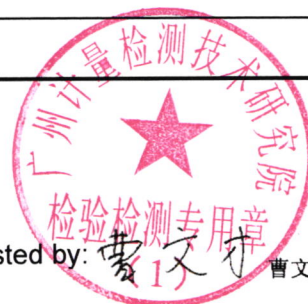
Reviewed by:



张洁

Tested by:

 曹文才

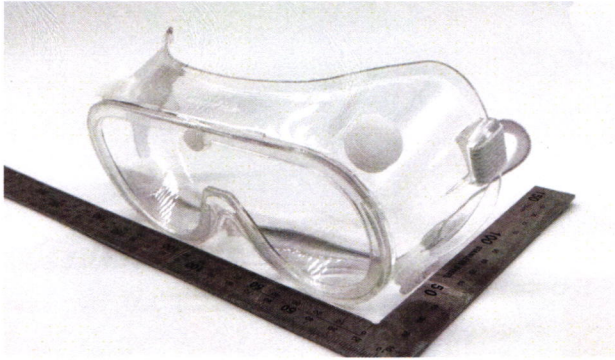


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Description of samples	Photo of samples
<p><u>Type:</u> Goggles</p> <p><u>Optical class:</u> 1</p> <p><u>Symbol:</u> S 3</p> <p><u>Quantity submitted:</u> 25 pcs.</p>	

Comment:

EN 166:2001
Personal eye-protection Specifications

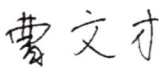
Clause	Requirement	Result
6	<u>Design and manufacturing requirements</u>	
6.1	General construction	Pass
6.3	Headbands	Pass
7.1	<u>Basic requirements</u>	
7.1.1	Field of vision	Pass
7.1.2.1	Spherical, astigmatic and prismatic refractive powers	Pass
7.1.2.2	Transmittance	Pass
7.1.2.3	Diffusion of light	Pass
7.1.3	Quality of material and surface	Pass
7.1.4	Robustness	Pass
7.1.5	Resistance to ageing	Pass
7.1.6	Resistance to corrosion	N/A
7.1.7	Resistance to ignition	Pass
7.2	<u>Particular requirements</u>	
7.2.4	Protection against droplets and splashes of liquids	Pass

#1: N/A means the test item does not apply to the test objects.

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6 Design and manufacturing requirements

6.1 General construction

Requirements:

Eye-protectors shall be free from projections, sharp edges or other defects which are likely to cause discomfort or injury during use.

Result: All the samples: Pass.

6.3 Headbands

Requirements:

Headbands, when used as the principal means of retention, shall be at least 10 mm wide over any portion which may come into contact with the wearer's head. Headbands shall be adjustable or self-adjusting.

Table 1. Test results of the width of Headbands

Performance parameter	Sample	Measurements	Result (Pass/Fail)
Width (mm)	1	15.46	Pass
	2	15.56	Pass
	3	15.48	Pass

Result: Sample 1~3: Pass.

7.1 Basic Requirements

7.1.1 Field of vision

Requirements:

Eye-protectors shall exhibit a minimum field of vision defined by the two ellipses in Figure 1 when placed and centered at a distance of 25 mm from the surface of the appropriate head-form.

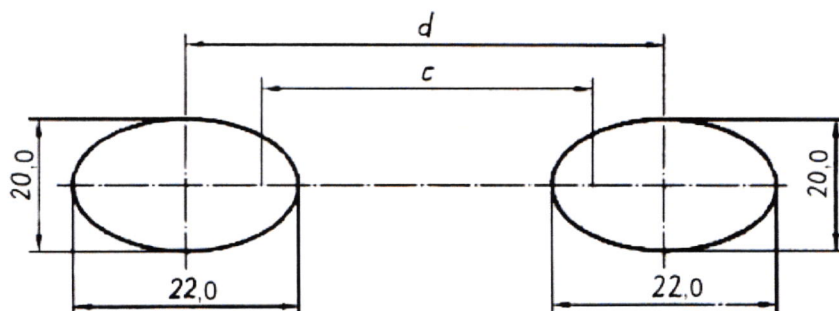
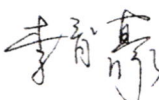



Figure 1 - Definition of the field of vision

Result: Sample 1~3: Pass.

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7.1.2 Optical requirements

7.1.2.1 Spherical, astigmatic and prismatic refractive powers

The requirements and test results are shown as Table 2.

Table 2. Requirements and test results of refractive powers

Performance parameter	Sample	Measurements		Requirements	Result (Pass/Fail)
		R	L		
Spherical refractive power (m ⁻¹)	1	0.00	0.00	±0.06	Pass
	2	0.01	0.01		Pass
	3	0.01	0.00		Pass
Astigmatic refractive power (m ⁻¹)	1	0.00	0.00	<0.06	Pass
	2	0.00	0.00		Pass
	3	0.00	0.00		Pass
Difference in prismatic refractive power (cm/m)	1	Horizontal: Base in ,0.02 Vertical: 0.00		Horizontal: Base out: <0.75 Base in: <0.25	Pass
	2	Horizontal: Base in ,0.02 Vertical: 0.00			Pass
	3	Horizontal: Base in ,0.01 Vertical: 0.01		Vertical: <0.25	Pass

Result: Sample 1~3: Pass.

7.1.2.2 Transmittance

7.1.2.2.1 Oculars without filtering ation

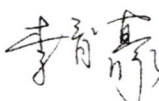
The requirements and test results are shown as Table 3.

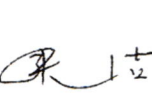
Table 3. Requirements and test results of luminous transmittance

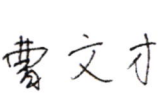
Performance parameter	Sample	Measurements		Requirements	Result (Pass/Fail)
		R	L		
Luminous transmittance (%)	4	93.7	93.5	>74.4	Pass
	5	93.6	93.5		Pass
	6	93.5	93.6		Pass

Result: Sample 4~6: Pass.

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7.1.2.3 Diffusion of light

The requirements and test results are showed as Table 4.

Table 4. Requirements and test results of diffusion of light

Performance parameter	Sample	Measurements		Requirements	Result (Pass/Fail)
		R	L		
Diffusion of light ($\text{cd}/(\text{m}^2 \cdot \text{lx})$)	4	0.10	0.07	≤ 0.50	Pass
	5	0.09	0.08		Pass
	6	0.10	0.10		Pass

Result: Sample 4~6: Pass.

7.1.3 Quality of material and surface

Requirement:

Except for a marginal area 5 mm wide, oculars shall be free from any significant defects likely to impair vision in use, such as bubbles, scratches, inclusions, dull spots, pitting, mould marks, scuring, grains, pocking, scaling and undulation.

Result: Sample 1~3: Pass.

7.1.4 Robustness

7.1.4.1 Minimum robustness

Requirement:

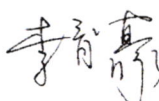
When tested in accordance with clause 4 of EN 168:2001, the following defects shall not occur:


- a) ocular fracture: an ocular shall be considered to have fractured if it has cracked through its entire thickness into two or more pieces, or if more than 5 mg of the ocular material becomes detached from the surface away from the one in contact with the ball, or if the ball passes through the ocular;
- b) ocular deformation : an ocular shall be considered to have been deformed if a mark appears on the white paper on the opposite side to the one on which the force is applied.


Result: N/A.

Notes: This requirement relates only to cover plates and oculars with filtering effect and need not be assessed if these items are intended to meet the requirements for increased robustness or resistance to high speed particles, in which case the requirements of 7.1.4.2 or 7.2.2 shall be met.

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7.1.4.2 Increased robustness (Complete eye-protectors and frames)

Requirement:

When tested in accordance with clause 3.2 of EN 168:2001, the following defects shall not occur:

- a) ocular fracture : an ocular shall be considered to have fractured if it cracks through its entire thickness into two or more pieces, or if more than 5 mg of the ocular material becomes detached from the surface away from the one struck by the ball, or if the ball passes through the ocular;
- b) ocular deformation : an ocular shall be considered to have been deformed if a mark appears on the white paper on the opposite side to that struck by the ball;
- c) ocular housing or frame fracture : an ocular housing or frame shall be considered to have failed if it separates into two or more pieces, or if it is no longer capable of holding an ocular in position, or if an unbroken ocular detaches from the frame, or if the ball passes through the housing or frame;
- d) lateral protection failure : the lateral protection shall be considered to have failed if it fractures through its entire thickness into two or more separate pieces, or if one or more particles become detached from the surface remote from the impact point, or if it allows the ball to penetrate completely, or if it partially or totally detaches from the eye-protector, or if its component parts become separated.

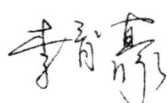
Result: Test results of the submitted samples are showed as Table 5.


Table 5. Test results of increased robustness

Sample	Impact point	Test temperature	Defects	Result (Pass/Fail)
7~8	Left eye frontal	+55 °C	Not occurred	Pass
11~12	Right eye frontal	+55 °C	Not occurred	Pass
9~10	Left eye frontal	-5 °C	Not occurred	Pass
13~14	Right eye frontal	-5 °C	Not occurred	Pass
15	Left eye side	+55 °C	Not occurred	Pass
17	Right eye side	+55 °C	Not occurred	Pass
16	Left eye side	-5 °C	Not occurred	Pass
18	Right eye side	-5 °C	Not occurred	Pass

Result: Pass.

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7.1.5 Resistance to ageing

7.1.5.1 Stability at an elevated temperature

Requirement:

Assembled eye-protectors shall show no apparent deformation when tested by the method specified in clause 5 of EN 168:2001.

Result: Sample 1~3: Pass.

7.1.5.2 Resistance to ultraviolet radiation (oculars only)

The requirements and test results are showed as Table 6.

Table 6. Requirements and test results of resistance to ultraviolet radiation

Performance parameter	Sample	Measurements		Requirements	Result (Pass/Fail)
		R	L		
Relative change of luminous transmittance (%)	4	-0.9	-1.0	± 5	Pass
	5	-1.2	-0.6		Pass
	6	-0.7	-1.1		Pass
Reduced luminance factor ($\text{cd}/(\text{m}^2 \cdot \text{lx})$)	4	0.26	0.22	≤ 0.50	Pass
	5	0.20	0.25		Pass
	6	0.21	0.24		Pass

Result: Sample 4~6: Pass.

7.1.6 Resistance to corrosion

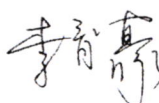
Requirement:

After having undergone the test for resistance to corrosion specified in clause 8 of EN 168:2001, all metal parts of the eye-protector shall display smooth surfaces, free from corrosion, when they are examined by a trained observer.

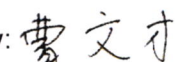
Result: N/A.

Notes: This requirement relates only to the eye-protector with metal parts.

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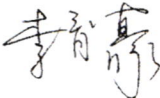

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**7.1.7 Resistance to ignition
Requirement:**

Eye-protectors shall be tested in accordance with the method specified in clause 7 of EN 168:2001 and shall be considered to be satisfactory if no part of the eye-protector ignites or continues to glow after removal of the steel rod.

Result: Sample 10~12: Pass.

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7.2 Particular requirements**7.2.4 Protection against droplets and splashes of liquids****Requirement:**

When tested in accordance with clause 12 of EN 168:2001, the results shall be considered to be satisfactory if:

- a) no pink or crimson colouration appears in the ocular regions defined by the two circles when assessing goggles for protection against droplets. No account shall be taken of any such colouration up to a distance of 6 mm inside the edges of the eye-protector;
- b) face-shields cover the eye-region rectangle of the appropriate head-form as described in 10.2.2.2 of EN 168:2001 as assessed in accordance with 10.2 of EN 168:2001.

Additionally, face-shields for protection against splashes of liquids shall have a viewing area with a minimum vertical centre-line depth of 150 mm when mounted in the appropriate housing.

Result: Sample 19~21: Pass.**7.3 Optional requirement****7.3.2 Resistance to fogging of oculars****Requirement:**

If oculars are described as resistant to fogging they shall remain free from fogging for a minimum of 8 s when tested in accordance with clause 16 of EN 168:2001.

Result: Sample 18~21: Pass.

——End of the report——

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