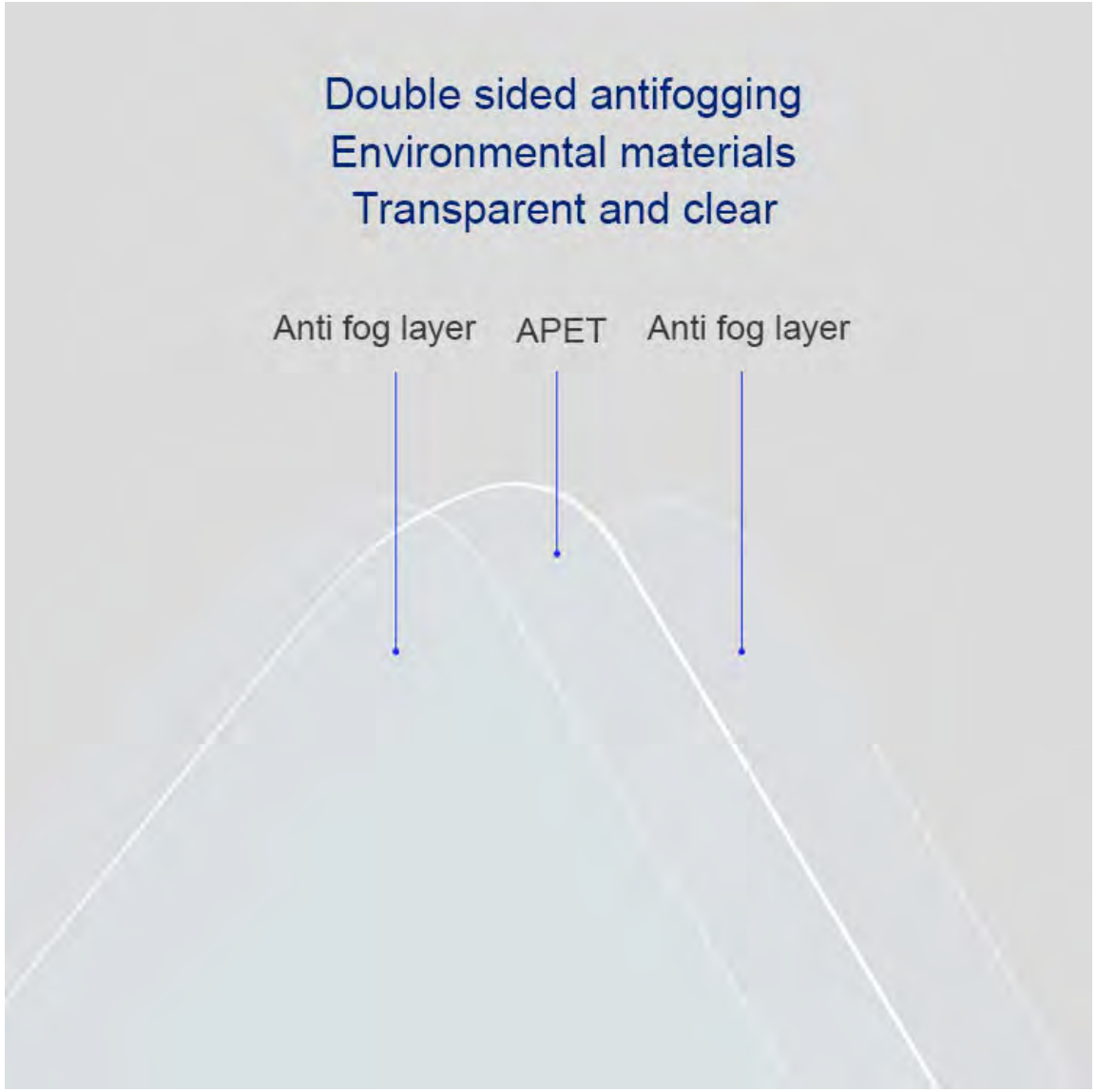
ZHONGSHAN HIGHYES ELECTRONICS Co. LTD

MODEL FS-100

Twins&Martin

Faceshield Model FS-100

Twins&Martin



Faceshield Model FS-100

CE Testing Report
EN1731

TEST REPORT
EN 1731
Eye and Face Protection

Report reference No.....	:	A20032129SR-01
Tested by (+signature).....	:	Steven ……see cover page……
Approved by (+ signature).	:	Liuze ……see cover page……
Date of issue.....	:	Mar.,21, 2020

Testing laboratory

Name……	:	United Testing Technology (Hong Kong) Limited
Address……	:	Unit 04,7/F,Bright Way Tower,No.33 Mong Kok Road, Kowloon, HK.
Test location.....	:	(Same as above)

Client

Name……	:	Zhongshan Highyes Electronics Co. Ltd
Address……	:	Industry Road 150#, Shaxi town, Zhongshan, Guangdong, China

Test specification

Standard.....	:	EN 1731:2006
Test procedure.....	:	CE-PPE
Procedure deviation.....	:	N.A.
Non-standard test method..	:	N.A.

Test Report Form No…..	:	EN_1731

Test item

Description.....	:	Face Shield direct splash protection
Model No.	:	FS-100, FS-101
Trade Mark.....	:	N.A.
Manufacturer.....	:	Zhongshan Highyes Electronics Co. Ltd
Address.....	:	Industry Road 150#, Shaxi town, Zhongshan, Guangdong, China
Classification.....	:	FFP2

Test case verdicts

Test case does not apply to the test object..... : N(.A.)

Test item does meet the requirement.....: P(ass)

Test item does not meet the requirement..... : F(ail)

Testing

Date of receipt of test item ……..: Feb., 15, 2020

Date(s) of performance of test ……...: Feb., 15, 2020 - Mar., 19, 2020

General remarks

This test report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item tested.

"(see remark #)" refers to a remark appended to the report.

"(see appended table)" refers to a table appended to the report.

Throughout this report a comma is used as the decimal separator.

Remark :

The EUT complies with the standard EN 1731 requirement.

Copy of marking plate:

Face Shield direct splash protection
Model： **FS-100, FS-101**
EN 1731:2006
CE
Zhongshan Highyes Electronics Co. Ltd
Made In China

EN 1731			
Clause	Requirement + Test	Requirement + Test	Verdict
4	**Requirements**		
4.1	**Materials**		
4.1.1	**Resistance to corrosion**		
	No metal parts of a eye and face protector, including the mesh if made from metal, shall show a significant sign of corrosion when examined by a trained observer after having undergone the test for resistance to corrosion specified in 5.1.		N
4.1.2	**Resistance to ignition**		
	When tested according to 5.2 no part of a eye and face protector shall ignite or continue to glow after removal of the heated rod.		P
4.1.3	**Cleaning and disinfection**		
	All parts of eye and face protector shall withstand cleaning and disinfection in accordance with the agents and procedures recommended by the manufacturer.		P
4.1.4	**Innocuousness of materials**		
	Materials that come into contact with the wearer's skin shall not be known to be likely to cause irritation or any other adverse effect to health		P
4.1.5	**Number of apertures in a mesh**		
	The minimum number of apertures in the mesh shall be 15 per cm^2.	Where Applicable	N
4.2	**Design and manufacture**		
4.2.1	**General construction**		
	eye and face protectors shall be free from projections, sharp edges or other defects which are likely to cause discomfort or injury to the wearer during use.		P
4.2.2	**Headbands**		
	Headbands 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, and shall be adjustable or self-adjusting	Headbands used 15 mm wide	P
4.2.3	**Adjustability and/or replacement of components**		

	Adjustable parts or components incorporated in mesh eye and face protectors shall be easily adjustable and where intended to shall be easily replaceable without the use of special tools.		P
4.2.4	**Minimum area of coverage and field of vision of a mesh face screen**		
	In the in-use position, the mesh face screen shall cover at least the facial region rectangle EFGH of the appropriate head form, defined in Figure 11 of EN 168:2001, when assessed in accordance with EN 168:2001,10.2		P
4.2.5	**Minimum area of coverage and field of vision of a mesh eye protector**		
	In the in-use position, the eye protector shall cover at least the facial region rectangle ABCD of the appropriate head form, defined in Figure 11 of EN 168:2001, when assessed in accordance with EN 168:2001,10.2.		P
4.2.6	**Comfort and retention in use**		
	When subjected to the test procedure in 5.8, the eye/face protector shall remain in its in-use position and shall not cause significant discomfort.		P
4.2.7	**Contact with metal parts**		
	When subjected to the test procedure in 5.8, metal parts of the mesh eye protector shall not come into direct contact with the head/face of the wearer.		N
4.3	**Performance**		
4.3.1	**Luminous transmittance**		P
4.3.2	**Variations in luminous transmittance**		
	The variations in luminous transmittance shall be in accordance with 7.1.2.2.3 of EN 166:2001.		P
4.3.3	**Additional or alternative oculars**		N
4.3.4	**Robustness**		
	The complete mesh eye and face protector shall be submitted to the impact of a steel ball striking the ocular area and the lateral protection at a specified speed. If the use of any cover and/or backing lens is recommended by the manufacturer the test shall be performed with a mesh face screen conforming to this recommendation.		N
4.4	**Protection against high speed particles (optional)**	Symbol A	N

	The protector shall fulfil the requirements for protection against high speed particles in accordance with 7.2.2 of EN 166:2001. Defects noted at 4.3.4 a), b) and c) shall not occur.	High energy impact	N
5	**Test methods**		
5.1	**Resistance to corrosion of metal parts**		
	Testing shall be done in accordance with Clause 8 of EN 168:2001.		P
5.2	**Resistance to ignition**		
	Testing shall be done in accordance with Clause 7 of EN 168:2001.		P
5.3	**Luminous transmittance**		
	Testing shall be done in accordance with Clause 6 of EN 167:2001.		P
5.4	**Robustness**		
	Testing shall be done in accordance with 3.2 of EN 168:2001.		P
5.5	**Protection against high speed particles (optional)**		
	Testing shall be done in accordance with Clause 9 of EN 168:2001.		P
5.6	**Allocation of test requirements and examination test schedule for eye and face protectors**		
	The allocation of test requirements and examination test schedule for eye and face protectors shall be as given in Table 1.		P
5.7	**Visual inspection**		P
5.8	**Test for comfort and security of fit**		
	One device shall be adjusted appropriately and donned by two different test subjects. With the eye/face protector in the in-use position, the following actions shall be undertaken, starting from a standing position.		P
6	**Designation of the field of use of eye and face protectors**		
	The symbols given in Table 2 shall be used for the designation of the field of use of eye and face protectors.		P

Table 2 — Symbols of the field of use of mesh eye and face protectors

Symbol	Field of use	Mechanical strength	Requirements in accordance with clause
S	basic use	robustness	4.3.4
F	high speed particles[a]	low energy impact	4.4
B		medium energy impact	4.4
A		high energy impact	4.4

[a] If the symbols F, B and A are not common to both the mesh, the additional or alternative ocular and the frame then it is the lower level which shall be assigned to the complete mesh eye and face protector.

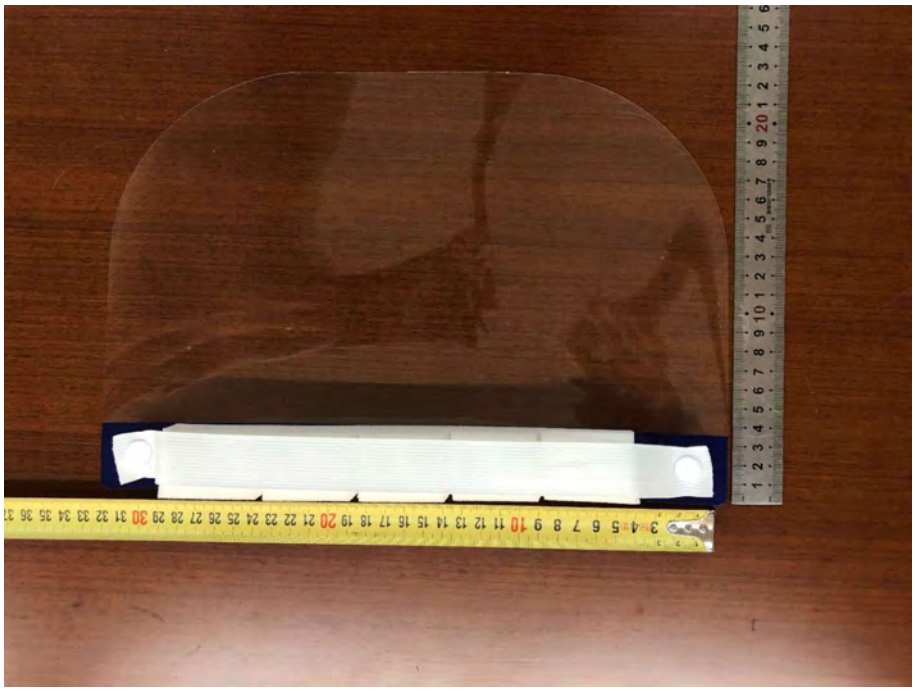
P

7	**Marking**		
	In order to be able to identify and use a mesh eye and face protector as intended, it shall be permanently marked to indicate its possible field of use.		P
	The marking shall be visible when the complete mesh eye and face protector is assembled and shall not encroach into the minimum visible aperture (ocular area) defined in 4.2.5 of this standard		P
	For examples of typical marking refer to 9.2 of EN 166:2001.		P
	The marking of eye and face protectors shall contain the following information:		P
	a) identification of the manufacturer;	See marking	P
	b) number of this standard;	EN 1731 :2006	P
	c) symbol of mechanical strength according to Table 2 of this standard.	S	P
8	**Information supplied by the manufacturer**		
	The manufacturer shall provide with each mesh eye and face protector at least the following information at least in the official language(s) of the country of destination:		P
	a) name and address of manufacturer;		P
	b) the number and year of this standard;		P
	c) mesh eye and face protector model identification;		P
	d) instructions for storage, use and maintenance;		P
	e) specific instructions for cleaning and disinfection;		P
	f) recommendations for fields of use, protection capabilities and performance characteristics;		P

	g) the obsolescence deadline or period of obsolescence, if applicable for the complete mesh eye and face protector and/or component parts;		P
	h) details of suitable accessories and spare parts with instructions for fitting;		P
	i) for face screens with additional or alternative protective ocular(s) a recommendation for the specific ocular for specific applications;		P
	j) the meaning of the different marking on the specific mesh eye and face protector;		P
	k) a warning that the mesh eye and face protector does not protect against liquid splash (including molten metal), hot solids, electrical hazards, infrared and ultra violet radiation;		N
	l) a warning, in case that the markings on the components of the eye and face protector do not correspond (see footnote of Table 2);		P
	m) a warning that the oculars and visors marked S should not be used when there is a foreseeable risk of any hard or sharp flying particles.		P

Appendix A

Photo documentation



******** End of this report ********

China Standard Face Shield
Testing Report
GB 14866:2006

Test Report

Report No.: PL 2004360 Page 1 of 9

Applicant: Zhongshan Highyes Electronics Co., LTD

Address of Applicant: Industry Road 150#, Shaxi Town, Zhongshan, Guangdong, China

Date of Receiving Samples: Apr 14, 2020

Testing Period: Apr 14, 2020 to Apr 14, 2020

Description of Samples

The submitted sample and sample information was/were submitted and identified by/on behalf of client;

Sample Name:	Face Shield
Type:	☐ Spectacles ☐ Goggles ☒ Face Shields
Ocular Type:	☒ Organic Ocular ☐ Inorganic lenses
Model No.:	FS-100
Quantity:	10 Pairs
Material:	Plastic
Color:	Blue/White
Supplier:	Not provided
P.O. No.:	Not provided
Brand:	Not provided
Buyer:	Not provided
Goods exported to:	Not provided
Country of Origin:	China

Results/Remarks: Please refer to the following page(s).

****

To be continued

Issued by stamp

TESTING SERVICE

Date of Issued: Apr 14, 2020

For and on behalf of:

Shenzhen Precision Eyewear

Testing & Inspection Services Co., Ltd.

Manager: WenHua Li

Test Report

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Tests Conducted: As requested by the applicant, refer to attached pages for details.

Conclusion:

Tested Samples	Requested Standard	Result
Submitted Samples	GB 14866-2006 The specification for personal eye-protector	Pass

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Test Report

Tests Conducted Summary

Test Items		Clause	Results
Material		5.1	See remark #2
Construction		5.2	P
Headbands		5.3	P
Ocular specifications		5.4	P
Quality of ocular Material and surface		5.5	P
Refractive powers	Spherical powers	5.6.1	P
	Astigmatic powers		P
	Prismatic powers	5.6.2	P
Luminous transmittance		5.6.3	P
Impact resistance	Oculars	5.7.1, 6.2.1	P
	Eye-Protector	5.7.2, 6.2.2	P
Thermal endurance properties		5.8, 6.3	P
Resistance to corrosion (apply for all metal parts only)		5.9, 6.4	NA (No metal parts)
Protection against high-speed particles		5.11, 6.6	P
Protection against chemical droplets		5.13, 6.8	P
Packaging, label, storage and transportation		7	NR

Remarks: 1. P = Pass; F = Fail; NA = Not Applicable; NR=Not require, X=Checked.

2. The applicant's attention was drawn that the manufacturer should not use the frame materials which are known to cause irritation, allergic or toxic reaction during wear in a normal state of health against significant proportion of users.

Test Result

Construction — Clause 5.2/ Headbands— Clause 5.3

Sample No.	Defects of construction		Headbands				Comment	Result(s)
			Width		Adjustable			
	Observed	Absent	Pass	Fail	Yes	No		
2004360-01		X	X		X		--	P

Requirements:
1. Construction: Eye-Protectors shall be free of projections, sharp edges or other defects which are likely to cause discomfort during use.
2. Headbands: shall be at least 10mm wide over any portion which may come into contact with the wearer's head, and shall be adjustable or self-adjusting;

Ocular specifications — Clause 5.4

Sample No.	Specifications	Size	Comment	Result(s)
2004360-01	Monocular	Meet	--	P

Requirements:
1. Monocular: Length×Width shall be not less than 105mm×50mm;
2. Single ocular of both eyes:
   a. For round ocular: diameter shall be not less than 40mm;
   b. For mounted ocular: shall be not less than 30mm in the optical horizontal reference length and 25mm in the vertical height in front of each eye.

Quality of material and surface — Clause 5.5

Sample No	Defects		Comment	Result(s)
	Observed	Absent		
2004360-01		X	--	P

Requirements:
The oculars shall be smooth, free from any significant defects likely to impair vision in use, such as scratches, corrugation, bubbles and inclusions.

Test Result

Refractive powers— Clause 5.6.1

Thermal endurance properties — 5.8, 6.3

Sample No.	Items		Measured Value			Max. difference	Result(s)
			C*	A1*	A2*		
1. Initial condition							
2004360-01	Spherical Power (D)	Left Ocular	0.00	0.00	0.00	0.00	P
		Right Ocular	0.00	0.00	0.00	0.00	P
	Astigmatic Power (D)	Left Ocular	0.00	0.00	0.00	0.00	P
		Right Ocular	0.00	0.00	0.00	0.00	P
2. After heat test							
2004360-01	Spherical Power (D)	Left Ocular	0.00	0.00	0.00	0.00	P
		Right Ocular	0.00	0.00	0.00	0.00	P
	Astigmatic Power (D)	Left Ocular	0.00	0.00	0.00	0.00	P
		Right Ocular	0.00	0.00	0.00	0.00	P
Requirements: The Refractive powers difference of the lens is $^{+0.05D}_{-0.07D.}$							

Measurement Uncertainty (if necessary):

Remark: *C= Optical central point, A1~A2*= any points in the optical central scope, the same as below.

Test Report

Test Result

Prismatic powers — Clause 5.6.2

Thermal endurance properties — 5.8, 6.3

☐ Plane oculars ☒ Curved oculars			Measured Value, Δ	Max. difference	Result(s)
Sample No.	**Items**		**C***	**For both oculars**	
1. Initial condition					
2004360-01	Prismatic powers in horizontal	Left Ocular	0.00	0.00	P
		Right Ocular	0.00		
	Prismatic powers in vertical	Left Ocular	0.00	0.00	P
		Right Ocular	0.00		
2. After heat test					
2004360-01	Prismatic powers in horizontal	Left Ocular	0.00	0.00	P
		Right Ocular	0.00		
	Prismatic powers in vertical	Left Ocular	0.00	0.00	P
		Right Ocular	0.00		
Requirements: For both oculars: shall be less than 0.18Δ.					

Measurement Uncertainty (if necessary):

Test Result

Luminous transmittance— Clause 5.6.3

Thermal endurance properties — 5.8, 6.3

Sample No.	Items		Measured Value			Max. difference	Result(s)
			C*	A1*	A2*		
1. Initial condition							
2004360-01	Luminous transmittance	Left Ocular	89.0	89.6	89.0	+0.7	P
		Right Ocular	89.5	89.6	89.0	−0.6	P
2. After heat test							
2004360-01	Luminous transmittance	Left Ocular	89.5	89.5	89.3	−0.2	P
		Right Ocular	89.5	89.5	89.5	0.0	P

Requirements:

1. The luminous transmittance of clear ocular shall be not less than 89%
2. Difference in luminous transmittance:

Luminous transmittance		Permissible difference (%)
Less than (%)	Up to (%)	
100	17.9	±5
17.9	8.5	±10
8.5	0.44	±10

Measurement Uncertainty (if necessary):

Test Result

Impact resistance— Clause 5.7, 6.2.1, 6.2.2

Sample No.	Test Temp. (℃)	Location		Defects		Comment	Result(s)
				Observed	Absent		
2004360-(02~03)	55±2	Left	Central point		X	--	P
		Right	Central point		X	--	P
		Bridge			X	--	P
2004360-(04~05)	-5±2	Left	Central point		X	--	P
		Right	Central point		X	--	P
		Bridge			X	--	P

Requirements:
The following defects shall not occur:
1. Ocular fracture
2. Ocular deformation
3. Frame fracture

Test Result

Protection against high-speed particles —Clause 5.11, 6.6

Impact speed of ball: $45_{0}^{+1.5}$ m/s					
Sample No.	**Impact Position**	**Defects**		**Comment**	**Result(s)**
		Observed	**Absent**		
2004360-06	Left ocular central point		X	--	P
2004360-07	Right ocular central point		X	--	P
2004360-08	Left ocular central point		X	--	P
2004360-09	Right ocular central point		X	--	P
Requirements: The filter shall not fracture.					

Protection against chemical droplets — Clause 5.13, 6.8

Sample No.	**Shows a Crimson**		**Comment**	**Result(s)**
	Observed	**Absent**		
2004360-10		X	--	P
Requirements: Ski goggles shall be considered to be satisfactory if no spray solution penetrate ski goggles.				

------ End of Test Report ----

Elastic Strap
Testing Report

GUANGDONG GUOXING LATEX THREAD CO.,LTD
SOUTH OF NO.7 STREET, EAST OF NO.3 ROAD, GAOXIN DISTRICT,JIEYANG CITY,GUANGDONG PROVINCE

The following sample(s) was/were submitted and identified on behalf of the client as:

Sample Description	:	LATEX THREAD
Manufacturer	:	GUANGDONG GUOXING LATEX THREAD CO.,LTD
Country of Origin	:	CHINA
Test Performed	:	Selected test(s) as requested by applicant
Sample Receiving Date	:	Mar 05, 2019
Test Performing Date	:	Mar 05, 2019 to Mar 11, 2019
Test Result(s)	:	For further details, please refer to the following page(s)

Signed for and on behalf of
Guangzhou Branch
SGS-CSTC Ltd.

Arthur Mak
Approved Signatory

198 Kezhu Road,Scientech Park Guangzhou Economic & Technology Development District,Guangzhou,China 510663 t (86-20) 82155555 f (86-20) 82075191 www.sgsgroup.com.cn
中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075191 e sgs.china@sgs.com

Ⅰ. SGS Ref No.: CAN19-032459

Test Requested	Result
To determine the Heavy metal content(s) in the submitted sample(s).	See Results
GB 18401-2010 - Free & Hydrolyzed Formaldehyde Content	PASS
GB 18401-2010 - pH Value	PASS
GB 18401-2010 - Azodyes Content	PASS

Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN19-032459.001	Light purple elastic band

Remarks :

(1) 1 mg/kg = 0.0001%
(2) MDL = Method Detection Limit
(3) ND = Not Detected (< MDL)
(4) "-" = Not Regulated

Extractable Heavy metal

Test Method : With reference to ISO 105-E04:2013, analysis was performed by ICP-MS and UV-VIS.

Test Item(s)	Unit	MDL	*001*
Chromium (Cr)	mg/kg	1.0	ND
Chromium VI (Cr VI)	mg/kg	0.5	ND
Cobalt (Co)	mg/kg	1.0	ND
Nickel (Ni)	mg/kg	0.5	ND
Copper (Cu)	mg/kg	5.0	ND
Arsenic (As)	mg/kg	0.2	ND
Cadmium (Cd)	mg/kg	0.1	ND
Antimony (Sb)	mg/kg	1.0	ND
Mercury (Hg)	mg/kg	0.02	ND
Lead (Pb)	mg/kg	0.2	ND

GB 18401-2010 —National general safety technical code for textile products

Formaldehyde

Test Method : With reference to GB/T 2912.1-2009, analysis was performed by UV-Vis.

Test Item(s)	Limit	Unit	MDL	*001*
Free & Hydrolyzed Formaldehyde Content	75	mg/kg	20	ND

pH value

Test Method : With reference to GB/T 7573-2009, analysis was performed by pH meter.

Test Item(s)	Limit	Unit	MDL	*001*
pH value	4.0-8.5	-	-	6.6

Azo Dyes

Test Method : With reference to GB/T 17592-2011 .Analysis was performed by Gas Chromatographic Mass Spectrometry (GC-MS) & HPLC.

Test Item(s)	CAS NO.	Limit	Unit	MDL	001
4-Aminobiphenyl / Biphenyl-4-ylamine	92-67-1	20	mg/kg	5	ND
Benzidine	92-87-5	20	mg/kg	5	ND
4-chloro-o-toluidine	95-69-2	20	mg/kg	5	ND
2-naphtylamine	91-59-8	20	mg/kg	5	ND
o-aminoazotoluene/4-o-tolylazo-o-toluidine/ 4-amino-2',3-dimethylazobenzene	97-56-3	20	mg/kg	5	ND
5-nitro-o-toluidine / 2-Amino-4-nitrotoluene	99-55-8	20	mg/kg	5	ND
p-chloranilin/ 4-chloroaniline	106-47-8	20	mg/kg	5	ND
4-methoxy-m-phenylenediamine / 2,4-Diaminoanisole	615-05-4	20	mg/kg	5	ND
4,4’-diaminodiphenylmethane/ 4,4-methylenedianiline	101-77-9	20	mg/kg	5	ND
3,3’-dichlorobenzidine/ 3,3'dichlorobiphenyl-4,4'-ylenediamine	91-94-1	20	mg/kg	5	ND
3,3’-dimethoxybenzidine/ o-dianisidine	119-90-4	20	mg/kg	5	ND
3,3’-dimethylbenzidine/ 4,4'-bi-o-Tolyidine	119-93-7	20	mg/kg	5	ND
3,3'-Dimethyl-4,4'-diaminodiphenylmethane /	838-88-0	20	mg/kg	5	ND

4,4'-methylenedi-o-toluidine					
p-cresidine/ 6-methoxy-m-toluidine	120-71-8	20	mg/kg	5	ND
4.4’-methylene-bis-(2-chloroaniline) / 2,2'-dichloro-4,4'methylene-dianiline	101-14-4	20	mg/kg	5	ND
4,4’-oxydianiline	101-80-4	20	mg/kg	5	ND
4,4’-thiodianiline	139-65-1	20	mg/kg	5	ND
o-toluidine/ 2-aminotoluene	95-53-4	20	mg/kg	5	ND
4-methyl-m-phenylenediamine / 2,4-Toluylendiamine	95-80-7	20	mg/kg	5	ND
2,4,5-trimethylaniline	137-17-7	20	mg/kg	5	ND
4-aminoazobenzene	60-09-3	20	mg/kg	5	ND
O-Anisidine/ 2-methoxyaniline	90-04-0	20	mg/kg	5	ND
2,4-Xylidine	95-68-1	20	mg/kg	5	ND
2,6-Xylidine	87-62-7	20	mg/kg	5	ND

Notes :

(1). Test specimen was taken randomly from the sample submitted by client/applicant.

(2) Whenever 4-aminodiphenyl (CAS number 92-67-1), 2-naphylamine (CAS number 91-59-8) and 4-methoxy-m-phenylene-diamine (CAS number 615-05-4) is found, the use of banned azo colorants cannot be reliably ascertained without additional information, e.g. the chemical structure of the colorants used.

(3) In case polyurethane materials are used, e.g. PU foams and coatings and in prints, it cannot be ruled out that certain amines, e.g. 4,4’-methylene-dianiline (MDA, CAS number 101-77-9) and 2,4-toluylen-diamine (TDA, CAS number 95-80-7) are released from the PU component and not from a banned azo colorant.

(4) In case of pigment prints care has to be taken that 4,4’-methylene-dianiline (MDA, CAS number 101-77-9) is not released from a source of banned azo colorants but from e.g. a chemical fixing agent.

Sample photo:

Ⅱ. SGS Ref No.: SL919092212622TX

Testing Results

Test Item and test method	Test Result		
Color Fastness To Water/ Grade (GB/T 5713-2013)	Color Change	4-5	
	Color Staining		
	Acetate	4-5	
	Cotton	4-5	
	Nylon	4-5	
	Polyester	4-5	
	Acrylic	4-5	
	Wool	4-5	
Color Fastness To Rubbing/ Grade (GB/T 3920-2008)	Dry staining	4-5	
Color Fastness To Perspiration/ Grade (GB/T 3922-2013)		Acid	Alkaline
	Color Change	4-5	4-5
	Color Staining		
	Acetate	4-5	4-5
	Cotton	4-5	4-5
	Nylon	4-5	4-5
	Polyester	4-5	4-5
	Acrylic	4-5	4-5
	Wool	4-5	4-5

Color Fastness to Saliva/Grade (GB/T 18886-2002)	Color Change Color Staining Acetate Cotton Nylon Polyester Acrylic Wool	4-5 4-5 4-5 4-5 4-5 4-5 4-5
Determination Of Odour (GB 18401-2010, 6.7)		Odourless

Sample Photo:

Remark: The report is the English version of Chinese test report GZHL1903007027OT. In case of any discrepancy between Chinese version and English version, the Chinese version shall prevail for the test with reference to the standard of People’s Republic of china, and English version shall prevail for the test with reference to other standards.

End of Report

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RoHS Materials
Report and Certificate

United testing

Certificate of Compliance

Certificate Number: UNIB20033101HC-01

Product	Face Shield direct splash protection
Applicant	Zhongshan Highyes Electronics Co. LTD Industry road 150#, shaxi town, zhongshan, guangdong
Manufacturer	Zhongshan Highyes Electronics Co. LTD Industry road 150#, shaxi town, zhongshan, guangdong
Model NO.	FS-100,FS-101
Trade Name	NA
Directive to which the product conforms	RoHS Directive ---2011/65/EU and Amendment (EU)2015/863
Product Test Report	UNIB20033101HR-01
Test Methods	IEC 62321-2:2013, IEC 62321-3-1:2013, IEC 62321-8:2017

CE RoHS

SHENZHEN UNITED TESTING TECHNOLOGY CO., LTD.

2020-04-02

Date of issue

Hoffer Lau

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Test Report

Report No. : UNIB20033101HR-01

Applicant	:	Zhongshan Highyes Electronics Co. LTD
Address	:	Industry road 150#, shaxi town, zhongshan, guangdong

Name of sample	:	Face Shield direct splash protection
Receiving Date	:	2020.03.31
Test Date	:	2020.03.31-2020.04.01
Test Location	:	Guangzhou Chemistry Laboratory
Test Method	:	Please refer to“Test Results”
Testing Item	:	Pb, Cd, Hg, Cr (VI), PBBs, PBDEs, DEHP, DBP, BBP, DIBP
Decision Rule	:	RoHS Directive 2011/65/EU and Amendment (EU)2015/863
Conclusion	:	Pass

Signed for and on behalf of
Shenzhen United Testing Technology Co.,Ltd

Huang Yong
Huang Yong
Approved Signatory

2020.04.02
Issue Date

深圳市优耐检测技术有限公司
Shenzhen United Testing Technology Co.Ltd.

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1、Sample information(s)

The following information of sample(s) was/were submitted and identified by applicant:

Product Model ： FS-100,FS-101

Manufacturer ： Zhongshan Highyes Electronics Co. LTD

2、Conclusion

The sample(s) was/were detected and according to the results, the conclusion are as follows:

Test Item(s)	Decision Rule	Conclusion
Pb, Cd, Hg, Cr (VI), PBBs, PBDEs, DEHP, DBP, BBP, DIBP	RoHS Directive 2011/65/EU and Amendment (EU)2015/863	Pass

3、Test Part Description

The sample(s) was/were disassembled according to IEC 62321-2:2013.

No.	Description	Material
M001	Blue sheet	Polymer
M002	Transparent sheet	Polymer
M003	White plastic	Polymer
M004	Red elastic rope	Polymer
M005	White double-sided sticker	Polymer

Note: This table is used to identify each test part of the Sample. Different descriptions in the "Description" column are only used to distinguish each test part. "Material" column are only gives a simple Description of the material of each test part, which does not mean that this is the result of a material identification.

4、Test Results

4.1 Element screening and Phthalates testing

The total amount of lead, cadmium, mercury and chromium was screened by X-ray fluorescence spectrometer (XRF).

XRF screening technical requirements:

Lead, Mercury: Pass≤700 mg/kg -3δ＜C＜1300 mg/kg +3δ≤Fail,

Cadmium :Pass≤70 mg/kg -3δ＜C＜130 mg/kg +3δ≤Fail,

Chromium :Pass≤700 mg/kg -3δ＜C, Bromine :Pass≤250 mg/kg -3δ＜C.

“C”=Indicates that a chemical test is required.When Chromium(Cr) element Verdict is "Pass", it means that the content of hexavalent chromium meets the requirements of RoHS directive. When Bromine(Br) element Verdict is "Pass", it means that the content of polybrominated biphenyl and polybrominated diphenyl ether meets the requirements of RoHS directive.

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DEHP, DBP, BBP and DIBP are analyzed by GC-MS. According to the requirements of the RoHS Directive, The content of DEHP, DBP, BBP and DIBP≤1000mg/kg (0.1%).

4.1.1 M001

Test Item(s)	CAS No.	Test Method	MDL	Result	Unit	Verdict
Lead (Pb)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Cadmium (Cd)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Mercury (Hg)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Chromium (Cr)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Bromine (Br)	--	IEC 62321-3-1:2013	20	ND	mg/kg	Pass
DEHP	117-81-7	IEC 62321-8:2017	50	ND	mg/kg	Pass
DBP	84-74-2	IEC 62321-8:2017	50	ND	mg/kg	Pass
BBP	85-68-7	IEC 62321-8:2017	50	ND	mg/kg	Pass
DIBP	84-69-5	IEC 62321-8:2017	50	ND	mg/kg	Pass

4.1.2 M002

Test Item(s)	CAS No.	Test Method	MDL	Result	Unit	Verdict
Lead (Pb)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Cadmium (Cd)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Mercury (Hg)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Chromium (Cr)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Bromine (Br)	--	IEC 62321-3-1:2013	20	ND	mg/kg	Pass
DEHP	117-81-7	IEC 62321-8:2017	50	ND	mg/kg	Pass
DBP	84-74-2	IEC 62321-8:2017	50	ND	mg/kg	Pass
BBP	85-68-7	IEC 62321-8:2017	50	ND	mg/kg	Pass
DIBP	84-69-5	IEC 62321-8:2017	50	ND	mg/kg	Pass

4.1.3 M003

Test Item(s)	CAS No.	Test Method	MDL	Result	Unit	Verdict
Lead (Pb)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Cadmium (Cd)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Mercury (Hg)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Chromium (Cr)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Bromine (Br)	--	IEC 62321-3-1:2013	20	ND	mg/kg	Pass
DEHP	117-81-7	IEC 62321-8:2017	50	ND	mg/kg	Pass
DBP	84-74-2	IEC 62321-8:2017	50	ND	mg/kg	Pass
BBP	85-68-7	IEC 62321-8:2017	50	ND	mg/kg	Pass
DIBP	84-69-5	IEC 62321-8:2017	50	ND	mg/kg	Pass

4.1.4 M004

Test Item(s)	CAS No.	Test Method	MDL	Result	Unit	Verdict
Lead (Pb)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Cadmium (Cd)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Mercury (Hg)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Chromium (Cr)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Bromine (Br)	--	IEC 62321-3-1:2013	20	ND	mg/kg	Pass
DEHP	117-81-7	IEC 62321-8:2017	50	ND	mg/kg	Pass
DBP	84-74-2	IEC 62321-8:2017	50	ND	mg/kg	Pass
BBP	85-68-7	IEC 62321-8:2017	50	ND	mg/kg	Pass
DIBP	84-69-5	IEC 62321-8:2017	50	ND	mg/kg	Pass

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4.1.5 M005

Test Item(s)	CAS No.	Test Method	MDL	Result	Unit	Verdict
Lead (Pb)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Cadmium (Cd)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Mercury (Hg)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Chromium (Cr)	--	IEC 62321-3-1:2013	10	ND	mg/kg	Pass
Bromine (Br)	--	IEC 62321-3-1:2013	20	ND	mg/kg	Pass
DEHP	117-81-7	IEC 62321-8:2017	50	ND	mg/kg	Pass
DBP	84-74-2	IEC 62321-8:2017	50	ND	mg/kg	Pass
BBP	85-68-7	IEC 62321-8:2017	50	ND	mg/kg	Pass
DIBP	84-69-5	IEC 62321-8:2017	50	ND	mg/kg	Pass

Notes:

1) 1mg/kg = 0.0001%

2) MDL=Method Detection Limit

3) ND= Not Detected(<MDL)

4) "--"=No Testing or Blank or Not applicable.

5) Polybrominated biphenyls (PBBs) included:
Monobromobiphenyl, Dibromobiphenyl, Tribromobiphenyl, Tetrabromobiphenyl, Pentabromobiphenyl, Hexabromobiphenyl, Heptabromobiphenyl, Octabromobiphenyl, Nonabromobiphenyl, Decabromobiphenyl.

6) Polybrominated diphenyl ethers (PBDEs) included:
Monobromodiphenyl ether, Dibromodiphenyl ether, Tribromodiphenyl ether, Tetrabromodiphenyl ether, Pentabromodiphenyl ether, Hexabromodiphenyl ether, Heptabromodiphenyl ether, Octabromodiphenyl ether, Nonabromodiphenyl ether, Decabromodiphenyl ether.

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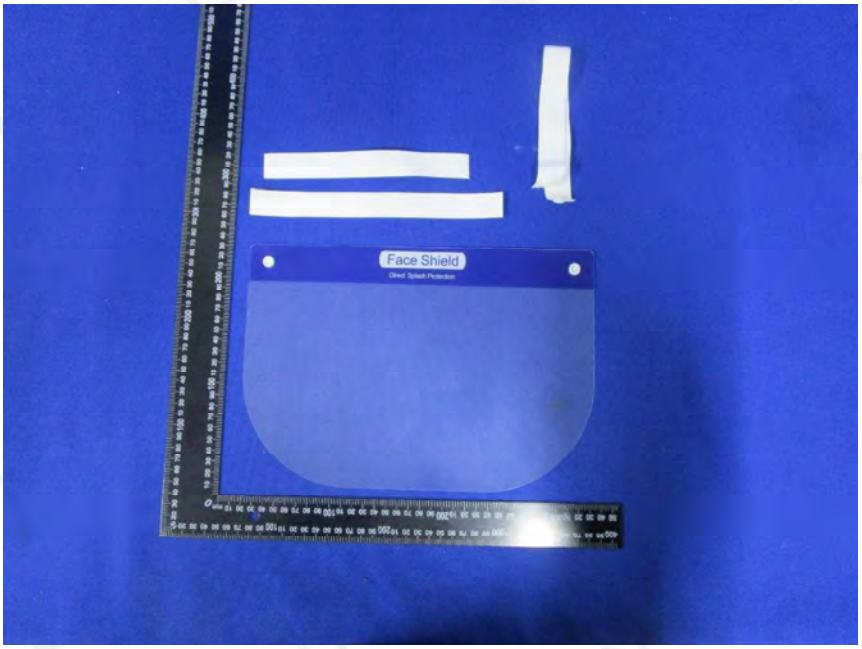
5、Sample Photo(s)



The sample photo(s) is /are only used to inform the applicant that the sample received by the laboratory is/are shown in the photo(s), which does not prove the appearance and quality of the applicant's products.

End of Report

Notes: This report must have the signature of the authorized signatory and the special seal of the report, otherwise it will be considered invalid.

This report shall not be modified, added or deleted without authorization. This report is valid only for samples presented in the “Sample Photo”.

If there is any objection to the test datas and conclusions of this report, please submit it in writing within 10 working days after the date of issuance of the report.

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The paper report issued by the company has the same effect as the electronic report. When there is a difference between the two contents, the paper report shall prevail.

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FDA Certificate

SHT-LAB

CERTIFICATION OF REGISTRATION

2020

SHT2003031FD

This certifies that:

ZHONGSHAN HIGHYES ELECTRONICS CO. LTD
industry road 150#,shaxi town, zhongshan,Guangdong, zhongshan, Guangdong, 528400, CHINA

Was registered with US Food and Drug Administration, Center for Devices and Radiological Health, pursuit to the Code of Federal Regulations 21 CFR 807, by Shenzhen SHT Testing Technology Co., Ltd.

Owner / Operator Number:	**10065082**
Device Listing #:	**See Annex**
Expiration Date:	**Dec. 31, 2020**

SHT will confirm that such registration remains effective upon request and presentation of this certificate until the end of the calendar year stated above, unless said registration is terminated after issuance of this certificate.

SHT makes no other representations or warranties, nor does this certificate make any representations or warranties to any person or entity other than the named certificate holder, for whose sole benefit it is issued. This certificate does not denote endorsement or approval of the certificate-holder's device or establishment by the U.S.

Pursuant to 21 CFR 807.39, "Registration of a device establishment or assignment of a registration number does not in any way denote approval of the establishment or its products. Any representation that creates an impression of official approval because of registration or possession of a registration number is misleading and constitutes misbranding." The U.S. Food and Drug Administration does not issue a certificate of registration, nor does the U.S. Food and Drug Administration recognize a certificate of registration, SHT is not affiliated with the U.S. Food and Drug Administration.

FDA

SHENZHEN SHT TESTING TECHNOLOGY CO., LTD. SHT

Apr. 03, 2020
.....
(Date)

.....
Ryan MA
Lab Supervisor

Shenzhen SHT Testing Technology Co., Ltd.
Tel: 0755-23318846 Fax: 0755-23318846 http://www.sht-lab.com

SHT-LAB

Annex to Device Listing #:

Proprietary Name	Product Codes	Device Class	Listing Number	Establishment Operations
face shield with direct splash protection	LYU	1	D380626	Manufacturer, Foreign Exporter

FDA

APR. 03, 2020
(Date)

Ryan MA
Lab Supervisor

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