

APPLICATION FOR PERSONAL PROTECTIVE EQUIPMENT

On Behalf of

Dongguan RuiZhuo Plastic Industrial Co., Ltd.

Face shield

Model: RZ-001,RZ-002

Prepared For : Dongguan RuiZhuo Plastic Industrial Co., Ltd.
LiJiang Wei Industrial Zone,Xiaohe Village,Daojiao
Town,Dongguan City ,Guandong Province

Prepared By : BEIDE (SHENZHEN) PRODUCT SERVICE LIMITED

China: 6F, Bldg E, Hourui 3rd Ind Zone, Xixiang,
Bao'an Dist, Shenzhen, China

Date of Test : Mar.17-25,2020
Date of Report : Mar.25,2020
Report Number : B-S200328239

Test Report EN 166 Personal eye-protection- specifications	
Testing laboratory	Beide (Shenzhen) Product Service Limited
Address	6F, Bldg E, Hourui 3rd Ind Zone, Xixiang, Bao'an Dist, Shenzhen, China
Report body.....	Beide (Shenzhen) Product Service Limited
Address (China)	6F, Bldg E, Hourui 3rd Ind Zone, Xixiang, Bao'an Dist, Shenzhen, China
Applicant	Dongguan RuiZhuo Plastic Industrial Co., Ltd.
Address	LiJiang Wei Industrial Zone,Xiaohu Village,Daojiao Town,Dongguan City ,Guandong Province
Client No.....	0769A072
Standard	EN 166: 2001,
Test Result	Compliance with EN 166: 2001,
Procedure deviation	N.A.
Non-standard test method	N.A.
Type of test object	Face shield
Trademark	/
Model/type reference	RZ-001
Manufacturer	Dongguan RuiZhuo Plastic Industrial Co., Ltd.
Address	LiJiang Wei Industrial Zone,Xiaohu Village,Daojiao Town,Dongguan City ,Guandong Province

General remarks

This 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(s) tested.

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

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

"(see Annex #)" refers to an annex appended to the report.

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

Photos view:

(See appendix 1)

Copy of marking plate:

(See appendix 2)



Possible test case verdicts :	
test case does not apply to the test object	: N (.A.)
test object does meet the requirement	: P(ass)
test object does not meet the requirement	: F(ail)
Name and address of the testing laboratory : <u>Beide (Shenzhen) Product Service Limited</u> <u>6F, Bldg E, Hourui 3rd Ind Zone, Xixiang, Bao'an Dist, Shenzhen, China</u>	
Reported by :	<u>Austin.Zhong</u> Signature / Austin.Zhong
	<u>Mar.25,2020</u> Date
Checked by :	<u>Anna Deng</u> Signature / Anna.Deng
	<u>Mar.25,2020</u> Date
Approved by :	<u>Martin Wang</u> Signature / Martin Wang
	<u>Mar.25,2020</u> Date



EN 166			
Clause	Requirement – Test	Result - Remark	Verdict

6.	Design and manufacturing requirements		P
6.1	General construction	The eye-protectors are free from projections, sharp edges or other defects.	P
6.2	Materials	The material can not cause any skin irritation	P
6.3	Headbands	At least 10 mm wide, and can be adjustable or self-adjusting	P

7.	Basic, particular and optional requirements		P
7.1	Basic requirements		P
7.1.1	Field of vision		P
7.1.2	Optical requirements		P
7.1.2.1	Spherical, astigmatic and prismatic refractive powers		P
7.1.2.1.1	Unmounted oculars covering one eye		N
7.1.2.1.2	Mounted oculars and unmounted oculars covering both eyes		P
7.1.2.1.3	Cover plates		P
7.1.2.2	Transmittance		N
7.1.2.2.1	Oculars without filtering action		P
7.1.2.2.2	Oculars with filtering action (filters) and housings for oculars with filtering action		N
7.1.2.2.3	Variations in transmittance		N
7.1.2.2.3.1	Oculars without corrective effect		N
7.1.2.2.3.2	Oculars with corrective effect		N
7.1.2.3	Diffusion of light		N
7.1.3	Quality of material and surface	Oculars are free from any significant defects likely to impair vision in use	P
7.1.4	Robustness		P

EN 166			
Clause	Requirement – Test	Result - Remark	Verdict
7.1.4.1	Minimum robustness	Withstands the application of a 22 mm nominal diameter steel ball with a force of (100±2) N. and no ocular fracture and deformation.	P
7.1.4.2	Increased robustness		P
7.1.4.2.1	Unmounted oculars		P
	The oculars shall withstand the impact of a 22 mm nominal diameter steel ball, of 43 g minimum mass, striking the ocular at a speed of approximately 5.1 m/s.		P
	On so testing the following defects all shall not occur:		-
	a) ocular fracture		P
	b) ocular deformation		P
7.1.4.2.2	Complete eye-protectors and frames		P
	The complete eye-protector or frame shall withstand the lateral and frontal impacts of a steel ball striking at a specified speed.		P
	On so testing the following defects shall not occur:		-
	a) ocular fracture		P
	b) ocular deformation		P
	c) ocular housing or frame fracture		P
	d) lateral protection failure		P
7.1.5	Resistance to ageing		P
7.1.5.1	Stability at an elevated temperature	No apparent deformation after testing	P
7.1.5.2	Resistance to ultraviolet radiation		P
	At the end of the test, oculars shall meet the following requirements:		-
	a) The relative change of luminous transmittance shall not be greater than the values		P
	b) The value of the reduced luminance factor shall not exceed the permissible limits		P

EN 166			
Clause	Requirement – Test	Result - Remark	Verdict
7.1.6	Resistance to corrosion	No metal parts	N
7.1.7	Resistance to ignition		N
7.2	Particular requirements		P
7.2.1	Protection against optical radiation		P
7.2.1.1	Welding filters		N
7.2.1.2	Ultraviolet filters		P
7.2.1.3	Infrared filters		N
7.2.1.4	Sunglare filters for industrial use		N
7.2.1.5	Welding Filters with switchable luminous transmittance		N
7.2.2	Protection against high-speed particles		N
	Eye-protectors intended to provide protection against high-speed particles shall withstand the impact of a 6 mm nominal diameter steel ball of 0,86 g minimum mass, striking the oculars and the lateral protection at one of the speeds		N
	On so testing the following defects shall not occur:		-
	a) ocular fracture		N
	b) ocular deformation		N
	c) ocular housing or frame failure		N
	d) lateral protection failure		N
7.2.3	Protection against molten metals and hot solids		N
	Eye-protectors intended to provide protection against molten metals and hot solids shall be considered to be satisfactory if:		-
	a) the eye-protector is either a goggle or a face-shield;		N
	b) the viewing area of oculars for face-shields has a minimum vertical centre-line depth of 150 mm when mounted in the appropriate housing		N
	c) face-shields cover the eye-region rectangle of the appropriate head-form		N
	d) the eye-protector satisfies the requirements for one of the three impact energy categories		N

EN 166			
Clause	Requirement – Test	Result - Remark	Verdict
	e) they prevent the adherence of molten metal to the portion of the eye-protector which affords protection to the eye-region rectangle		N
	f) complete penetration of oculars for goggles, and all types of frames, housings, browguards, etc. does not occur within 7 s		N
	g) complete penetration of oculars for face-shields does not occur within 5 s		N
7.2.4	Protection against droplets and splashes of liquids		P
	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		P
	b) face-shields cover the eye-region rectangle of the appropriate head-form		P
7.2.5	Protection against large dust particles		N
7.2.6	Protection against gases and fine dust particles		N
7.2.7	Protection against short circuit electric arc		N
7.2.8	Lateral Protection		N
7.3	Optional requirements		P
7.3.1	Resistance to surface damage by fine particles		P
7.3.2	Resistance to fogging of oculars		P
7.3.3	Oculars with enhanced reflectance in the infrared		N
7.3.4	Protection against high speed particles at extremes of temperature		N

8.	Allocation of requirements, test schedules and application		P
8.1	Requirements and test methods		P
8.2	Test schedules for type examination		P
8.3	Application of eye-protector types		P

9.	Marking		P
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EN 166			
Clause	Requirement – Test	Result - Remark	Verdict
9.1	General	All markings are clear, permanent and fully visible	P
9.2	Ocular marking		P
	The marking of oculars shall contain the relevant technical information presented as follows:		-
	- Scale number		N
	- Optical class		P
	- Identification of manufacturer		P
	- Symbol for mechanical strength		P
	- Symbol for resistance to short circuit electric arc		N
	- Symbol for non-adherence of molten metal and resistance to penetration of hot solids		N
	- Symbol for resistance to surface damage by fine particles		P
	- Symbol for resistance to fogging of oculars		P
	- Symbol for enhanced reflectance		N
	- Symbol for original or replacement ocular		N
9.2.1	Scale number		N
9.2.2	Identification of the manufacturer		P
9.2.3	Optical class		P
9.2.4	Mechanical strength		P
9.2.5	Resistance to short circuit electric arc		N
9.2.6	Non-adherence of molten metal and resistance to penetration of hot solids		N
9.2.7	Resistance to surface damage by fine particles		P
9.2.8	Resistance to fogging of oculars		N
9.2.9	Original/replacement oculars		P
9.2.10	Resistance to high speed particles at extremes of temperature		N
9.2.11	Marking of laminated oculars		P
9.2.12	Examples of ocular marking		N
9.3	Frame marking		N
9.3.1	Identification of the manufacturer		N
9.3.2	The number of this standard		N

EN 166			
Clause	Requirement – Test	Result - Remark	Verdict
9.3.3	Field of use		N
9.3.4	Increased robustness and resistance to high speed particles		N
9.3.5	Resistance to high speed particles at extremes of temperature		N
9.3.6	Frames designed to fit a small head		N
9.3.7	Highest ocular scale number		N
9.3.8	Examples of frame marking		N
9.4	Marking of eye-protectors where the frame and ocular form a single unit		N

10.	Information supplied by the manufacturer		P
	The manufacturer shall provide with each eye-protector, replacement ocular and replacement frame at least the following information:		-
	a) name and address of the manufacturer		P
	b) the number of this standard	EN 166	P
	c) the eye-protector model identification		P
	d) instructions for storage, use and maintenance		P
	e) specific instructions for cleaning and disinfection		P
	f) details of the field of use, protection capabilities and performance characteristics		N
	g) details of suitable accessories and spare parts, Instructions for fitting shall be included with the original eye-protector and/or with the spare part or accessory		N
	h) the obsolescence deadline or period of obsolescence		N
	i) the type of packaging suitable for transport		P

EN 166			
Clause	Requirement – Test	Result - Remark	Verdict
	j) the significance of the marking on the frame and the ocular		P
	k) a warning that optical class 3 oculars are not intended for long term use		N
	l) a warning concerning the compatibility of marking		N
	m) a warning that materials which may come into contact with the wearer's skin could cause allergic reactions to susceptible individuals		N
	n) a warning that scratched or damaged oculars should be replaced		P
	o) a warning that eye-protectors against high speed particles worn over standard ophthalmic spectacles may transmit impacts, thus creating a hazard to the wearer		N
	p) a note to instruct that if protection against high speed particles at extremes of temperature is required then the selected eye-protector should be marked with the letter T immediately after the impact letter.		N

Appendix 1

Photos of Face shield



Appendix 2

Product marking of Face shield

Face shield

Model No.: RZ-001



Dongguan RuiZhuo Plastic Industrial Co., Ltd LiJiang
Wei Industrial Zone, Xiaohe Village, Daojiao
Town, Dongguan City, Guangdong Province

