

Test Report

Number: SHAH01203928

Applicant: NINGBO

Date: 17 Apr, 2020

Sample Description:

One (1) style of submitted sample said to be :

Item Name : Face Fhield.

Item No : #EQ1006.

Country Of Origin : China.

Tests Conducted:

As requested by the applicant, for details refer to attached page(s).

Conclusion:

Tested samples
Submitted samples

Standard
ANSI Z87.1 – 2015 Occupational and Educational
Personal Eye and Face Protection Devices
Excluding:
- Clause 5.3 – Marking

Result
Pass
See details enclosed

To be continued

Authorized By:

Intertek Testing Services Ltd, Shanghai, Wenzhou Branch



Peter Chen
General Manager



Test Report

Number: SHAH01203928

Tests Conducted

Requirements for Eye-protectors

Test standard: ANSI Z87.1 – 2015 American National Standard Occupational and Educational Personal Eye and Face Protection Devices

Number of samples tested: Six (6) pairs of faceshields.

Clause	Requirement	Assessment
5	General Requirements	
5.1	Optical Requirements	
5.1.1	Optical Quality	P
5.1.2	Luminous Transmission	P
5.1.3	Haze – Clear Lenses Only	P
5.1.4	Refractive Power, Astigmatism, Resolving Power, Prism and Prism Imbalance for Plano Protectors	P
5.1.5	Refractive Power, Astigmatism, Prism and Prism Imbalance for Prescription Protectors	NA
5.2	Physical Requirements	P
5.2.1	Drop Ball Impact Resistance	P
5.2.2	Ignition	P
5.2.3	Corrosion Resistance of Metal Components	NA
5.2.4	Minimum Coverage Area	P
5.3	Marking	
5.3.1	Required Protector Markings	#
5.3.2	Placement of Markings	#
5.3.3	Prescription Lens Carriers	#
5.4	Other Requirements	
5.4.1	Vented Goggles	
5.4.1.1	Direct Ventilation	NA
5.4.1.2	Indirect Ventilation	NA
5.4.2	Screen Windows and Screen Lenses	NA
5.4.3	Welding Protectors	
5.4.3.1	Transmittance of Non-Lens Area for Welding Helmets	NA
5.4.3.2	Light Tightness	NA
5.4.3.3	Cover Lenses	NA
5.4.3.4	Information Provided with Welding Protectors	NA
5.4.4	Frames for Removable Lenses	NA
5.4.5	Minimum Lens Thickness for Prescription Spectacles	NA



Test Report

Number: SHAH01203928

Tests Conducted

5.5	Replaceable lenses	
5.5.1	Goggles	NA
5.5.2	Welding Helmets and Handshields	NA
5.6	Aftermarket Components and Accessories	NA
6	Impact-Rated Protector Requirements	
6.1	General	
6.1.3	Lateral (Side) Coverage	NA
6.2	Impact Requirements	
6.2.2	High Mass Impact	NA
6.2.3	High Velocity Impact	NA
6.2.4	Penetration Test	NA
6.2.5	Prescription Lens Material Qualification	NA
6.2.6	Prescription Lens Mounting Qualification	NA
6.3	Additional Impact Requirements for Specific Protector Types	
6.3.1	Devices with Lift Fronts	NA
6.3.2	Welding Helmets and Welding Faceshields	NA
6.3.3	Prescription Lens Carriers Behind Plano Protectors	NA
7	Optical Radiation Protector Requirements	
7.1	Protectors with Clear Lenses	P
7.2	Protectors providing Filtration of Optical Radiation	
7.2.1	Filter Lenses	
7.2.1.1	Transmission Requirements	NA
7.2.1.2	Visible Light Filters	NA
7.2.1.3	Variations in Luminous Transmittance	NA
7.2.2	Transmittance of Non-Lens Components	NA
7.3	Automatic Darkening Welding Filter Lenses	
7.3.1	Luminous Transmittance	NA
7.3.2	UV/IR Transmittance	NA
7.3.3	Switching Index	NA
7.3.4	Occlusion	NA
7.3.5	Angular Dependence of Luminous Transmittance	NA
8	Droplet and Splash, Dust, and Fine Dust Protection Requirements	
8.1	Droplet and Splash Hazard	
8.1.1	Goggles	NA
8.1.2	Faceshields	NA
8.2	Dust Hazard	NA
8.3	Fine Dust Hazard	NA

Abbreviation : P = Pass

NA= Not Applicable

To be continued



Test Report

Number: SHAH01203928

Tests Conducted

#1 = All protectors shall bear the permanent markings in specified locations as shown below

Type of mark	Lenses & Replacement lenses		Frame	Marking for complete device (no replaceable parts)
	Spectacles	All other		
All protectors shall bear the markings below				
Manufacturer's mark or logo	Yes	Yes	Yes	Yes
Standard				
Plano		Z87	Z87	Z87
Rx		Z87	Z87-2	Z87-2
Coverage (small head size)	H		H	
The following shall be required only when claims of impact rating, a specific lens type and/or use made by the manufacturer.				
Impact mark				
Impact Rated Plano	+	Z87+	Z87+	Z87+
Impact Rated Rx	+	Z87+	Z87-2+	Z87-2+
Lens type				
Clear				
Welding	W shade	W shade		W shade
UV Filter	U scale number	U scale number		U scale number
Visible Light Filter	L scale number	L scale number		L scale number
IR Filter	R scale number	R scale number		R scale number
Variable Tint	V	V		V
Special Purpose	S	S		S
Use				
Splash / Droplet			D3	D3
Dust			D4	D4
Fine Dust			D5	D5

To be continued



Tests Conducted

Notes:

1. Frame components subject to marking vary by type of protector.
 - Spectacles: Front and at least one temple. Both detachable sideshields are marked Z87+, if impact rated
 - Goggles: Frame and lens housing or carrier
 - Faceshields: Headgear/adapter, crown and chin protector
 - Welding helmets and handshields: Headgear/adapter, shell and lens housing or carrier
 - Respirators: None
 - Prescription frames: Size marking on front and temples in accordance with ANSI Z80.5-2010
2. A complete device (no replaceable components) shall have at least one set of markings. The markings may be on the lens or the frames or both the lens and the frame.
3. For spectacle protectors, coverage marking "H" shall be on the lens for rimless or semi-rimless lens retention systems.
4. "Filter" include: UV, Visible and IR Light Filters. In case of multiple filter type compliance, designations shall be listed in the order given in this table: U, L, R.

Keys:

- * Assessment relates only to those specimens which were tested and are the subject of this report
- * Unless stated otherwise, specimens were tested in the condition as received by Intertek.

Result details:

5.1.2 Luminous transmission

Range	Left ocular (%)	Right ocular (%)	Requirement (%)
380 - 780nm (Tv)	89.67	88.77	≥ 85

5.1.3 Haze

Wide angle scattering (%)	Left ocular	Right ocular	Requirement
	1.5	2.1	≤ 3

To be continued



Test Report

Number: SHAH01203928

Tests Conducted

5.1.4 Refractive power, astigmatism, resolving power, prism and prism imbalance

Resolving Power

Specimen	Resolving power	
	Left	Right
01	Pattern 20	Pattern 20
Tolerance	Pattern 20	

Prism and Prism Imbalance

Specimen	Prism (Δ)	Prism Imbalance (Δ)	
		Vertical	Horizontal; Base out
01	0.06	0.00	0.08
Tolerance	≤ 0.37	≤ 0.37	≤ 0.75

Abbreviation:

\geq = More than or equal to

\leq = Less than or equal to

Date sample received : Apr.8, 2020

Testing period : Apr.8, 2020 To Apr.14, 2020

To be continued



Tests Conducted



End of report

This report is made solely on the basis of your instructions and/or information and materials supplied by you. It is not intended to be a recommendation for any particular course of action. Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client insofar as is expressly contained in the terms and conditions governing Intertek's provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the Review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or wilful misconduct.

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