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中国认可
国际互认
检测
TESTING
CNAS L0118

TEST REPORT



Report No: WLH0254-2020(E)
Product Name: Particle Filtering Half Mask
Product Model: SNN70370B
Client: Shandong Shengquan New Materials Co., Ltd.
Manufacturer: Shandong Shengquan New Materials Co., Ltd.

Test Unit: China Academy of Safety Science and Technology
Test Category: Type Test
Date of tests: 2020/04/21-2020/04/30



DECLARATION

1. The report is invalid if there is no test unit's "special seal for testing and inspection" or official Stamp; the multi-page test report without paging seal is invalid.
2. The report is invalid when there is no auditor's or authorized signatory's approval.
3. The report is invalid if there is any alteration.
4. Partial copy of the report is invalid. The copy of report with our permission shall be affixed with "special seal for testing and inspection" for confirmation.
5. The consigned Test Report is only responsible for received samples, and the test results are used by the client to understand delivered sample quality.
6. If there is any objection to the report, it should be submitted within 15 days from the date of receipt of the report, and it will not be accepted after the deadline.

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Test Report of Non-powered air-purifying particle respirator

No.: WLH0254-2020(E)

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Product Name	Particle Filtering Half Mask	Model	SNN70370B
Product Type	Disposable Respirator (Without Valve, KN95)		
Manufacturer	Shandong Shengquan New Materials Co., Ltd.	Trade Mark	圣泉
Mail Address	Industry Development Zones, Diaozhen Town, Zhangqiu, Shandong Province, China	Postcode	/
Contact Person	Li Xuewei	Telephone No.	15275417290
Sample Quantity	36 pcs of Respirators	Production Date	10 th Mar, 2020
Sample Status	Intact appearance and complete packaging	Sample Received	21 st Apr, 2020
Test Category	Type Test	Arrival Mode	Mailing
Consigned by	Shandong Shengquan New Materials Co., Ltd.	Identification No. of LA mark	/
Test Specification	GB 2626-2006 "Respiratory protective equipment—Non-powered air-purifying particle respirator"		
Test Items	General Requirements, Visual Inspection, Filter Efficiency, Total Inward Leakage, Inhalation Resistance, Exhalation Resistance, Dead Space, Visual Field, Head Harness, Flammability, Information supplied by the manufacturer, Mark		
Sample Photos			
Test Conclusion	<p>The samples were tested according to Chinese National standard GB 2626-2006 "Respiratory protective equipment—Non-powered air-purifying particle respirator", after inspection, all the test results pass the standard technical requirements.</p> <p style="text-align: right;">Issued date: 2020-04-30</p>		
Remarks	<p>① Sample No.: WLH0254-2020</p> <p>② Record number: WLH0254-2020</p> <p>③ Sample appearance: Willow leaf-shaped folding type facepiece, with built-in nose clip and white ear straps.</p>		
Approval:	Auditor:	Tester:	

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Test Result Summary					
No.	Test Items	Standard Requirements	Test Results	Assessment	Remark
1	General Requirements	Parts that may directly contact wearer's face shall not be harmful to skin; Filter material shall not be harmful to people;	Filter material and parts directly contact face are not harmful	Pass	/
		Materials used should have sufficient strength, and there shall be no damage or distortion in the normal life cycle.	Materials used have sufficient strength		
		Structural design should conform to: a) structural disaggregation shall not likely occur, and the design, components and assembly shall not be harmful to the user; b) The head harness should be adjustable, convenient for wearing and removal, be able to fix the facepiece on wearer's face securely without apparent pressure and hurt feeling; the head harness design of the replaceable half facepiece and full facepiece should be replaceable; c) There shall be relatively small dead space and bigger visual field as much as possible;	Meet the requirements		
		d) the visor of full facepiece shall not fog and affecting vision when in use; e) replaceable filter elements, valves and head harness shall be facilitating for replacement and facial seal check during use. f) breathing hose shall not limit head and body movement, shall not affect face seal or limit and block air flow.			
		g) Disposable facepiece shall provide proper face seal, shall not deform during normal use.	Provide proper face seal, and do not easy to deform		
2	Visual Inspection	The sample surface shall not be damaged, deformation, or with other obvious defects	No damage, deformation and other obvious defects	Pass	/
		the component materials and structure should be able to stand normal use conditions and possible temperature, humidity and mechanical impact that may encounter	Meet the requirements		

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Test Result Summary					
No.	Test Items	Standard Requirements		Test Results	Assessment
2	Visual Inspection	the head harness should be adjustable; the head harness design of the replaceable facepiece should be replaceable.		Head harness is adjustable	Pass
		the eyeglass of full facepiece shall not be foggy that affect the vision when wearing.		/	
		After temperature and humidity pretreatment and mechanical strength pretreatment, the components shall not fall off, be damaged or deformation.		After pretreatment, no fall off, damage and deformation	
3	Filter Efficiency	KN	≥90.0% (KN90)	/	Pass
			≥95.0% (KN95)	As Received	
				98.9% 96.6%	
				98.9% 98.5%	
				97.7% 99.0%	
				98.7% 98.3%	
				98.4% 98.7%	
				Temperature and Humidity Conditioning Mechanical Strength Conditioning	
				98.0% /	
				96.5% /	
				98.3% /	
				97.9% /	
				95.8% /	
			≥99.97% (KN100)	/	
			Ambient temperature: (25±5)°C; Relative humidity: (30±10)%	26°C 35%	
		KP	≥90.0% (KP90)	/	
			≥95.0% (KP95)	/	
			≥99.97% (KP100)	/	
			Ambient temperature: (25±5)°C;	/	

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Test Result Summary						
No.	Test Items	Standard Requirements		Test Results		Assessment Remark
4-1	Total Inward Leakage (TIL) (Disposable Respirator)	When TIL of each action is taken as basis of evaluation (10 people x 5 actions), TIL of at least 46 actions of the 50	<13% (KN90/KP90)	/	Pass	KN95
			<11% (KN95/KP95)	TIL values for all 50 actions are less than 8.8%		
			<5% (KN100/KP100)	/		
		When the overall TIL of a person is taken as basis for evaluation, the total TIL of at least 8 people of the 10 subjects	<10% (KN90/KP90)	/		
			<8% (KN95/KP95)	Overall TIL values for all 10 subjects are less than 6.1%		
			<2% (KN100/KP100)	/		
4-2	Inward Leakage (IL) (Replaceable Half facepiece Respirator)	When the IL of each action is taken as basis of evaluation (that is, 10 people x 5 actions), the IL of at least 46 actions of the 50 actions <5%.		/	/	/
		when the overall IL of a person is taken as basis for evaluation, the total IL of at least 8 people of the 10 subjects <2%		/		
4-3	Inward Leakage (IL) (Replaceable Full facepiece Respirator)	When the IL of each action is taken as basis of evaluation (that is, 10 people x 5 actions), the IL of each action < 0.05%		/	/	/
5	Inhalation Resistance	the total inhalation resistance of each sample ≤350 Pa	As Received	Temperature and Humidity Conditioning	Pass	/
			60 Pa	56 Pa		
			61 Pa	57 Pa		
6	Exhalation Resistance	the total exhalation resistance ≤250 Pa	As Received	Temperature and Humidity Conditioning	Pass	/
			58 Pa	54 Pa		
			61 Pa	56 Pa		
7	Exhalation Valve Air-Tightness	a) When the air extracting velocity of flow reaches 500 mL/min, the system negative pressure cannot reach 1180 Pa;	/		/	/
		b) The time for restoration of the exhalation valve to normal pressure is less than 20s.	As Received	Temperature and Humidity Conditioning		
			/	/		
			/	/		
		Normal temperature, normal pressure relative humidity < 75%		/		

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Test Result Summary					
No.	Test Items	Standard Requirements		Test Results	Assessment
8	Exhalation Valve Cap	The exhalation valve cap of the disposable facepiece is subjected to an axial tensile force of 10N for 10 seconds, and should not slide, break and distort.		/	/
		The exhalation valve cap of the replaceable facepiece is subjected to an axial tensile force of 50N for 10 seconds, and should not slide, break and distort.		/	
9	Dead Space	When expressed as the volume fraction of carbon dioxide in the inhaled air, the average value of the results should be $\leq 1\%$		0.38%	Pass
		Ambient temperature: (16~32)°C;		25°C	
10	Visual Field	Disposable or half facepiece	Down direction visual field $\geq 60^\circ$	60°	Pass
		Full face-piece	Single visor	Total visual field $\geq 70\%$	
				Overlapped visual field $\geq 80\%$	
			Twin visor	Total visual field $\geq 70\%$	
11	Head Harness	Each head harness, buckling and other adjustable components of the disposable facepiece should not slip or break when it is subjected to a tensile force of 10N for 10s.		10N tensile force pulling for 10s without slippage or break	Pass
		Each head harness, buckling and other adjustable components of the replaceable half facepiece should not slip or break when it is subjected to a tensile force of 50N for 10s.		/	
		Each head harness, buckling and other adjustable components of the full facepiece should not slip or break when it is subjected to a tensile force of 150N for 10s.		/	
12	Connection and connector	All the connections and connecting parts between the replaceable filter element and the half facepiece should not be no slide, break or distortion when subjected to an axial tensile force of 50N for 10s.		/	/
		All connections and connection parts between the replaceable filter element and the full facepiece, and between the breathing hose and the filter element and the full facepiece should not be no slide, break or distortion when subjected to an axial tensile force of 250N for 10s.		/	

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Test Result Summary						
No.	Test Items	Standard Requirements	Test Results		Assessment	Remark
13	visor (Full facepiece)	After each sample is impacted by a steel ball, No eyeglass of the sample shall be broken or in crack;	/		/	/
		Tested by the air tightness of the sample after the impact of the steel ball, the negative pressure drop in each sample within 60s should not be greater than 100Pa	/			
14	Air Tightness (Full facepiece)	The negative pressure drop in each sample within 60s should not be greater than 100Pa	/		/	/
15	Flammability	After being removed from the flame, Various parts exposed to the flame should not burn; if burned, the after burning time should not exceed 5s.	As Received	Temperature and Humidity Conditioning	Pass	/
			0.5s	0.6s		
			0.7s	0.5s		
16	Information supplied by the manufacturer	Such information should be supplied along with the minimum package for sales; There shall be Chinese explanation. The information should be clear, and help explanations such as explanations, part numbers, and labels can be added.	Information provided in Chinese, explained clearly, and supplied with the minimum package; The information contained in the specification is comprehensive and sufficient for users		Pass	/
		Include the following information that users must know: a) Scope of application and restriction; b) For replaceable filter elements, there should be explanations on the method for use together with full or half facepiece, and if multiple filter materials, there should be indications; c) Method of assemblage of the replaceable facepiece; d) Method of inspection before use; e) Method of wearing and method of inspection of the wearing air tightness; f) Suggestions as to when to replace the filter elements; g) If applicable, the method of maintenance (for instance, method of cleaning and sterilization); h) Methods of storage; i) Meaning of any of the symbols and icons used;				
		Provide warnings about problems that may be encountered during use, such as: a) Adaptability b) Hair under the close frame can cause the mask to leak c) Air quality (pollutants, hypoxia, etc.)	Some required warnings information provided			

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Test Result Summary						
No.	Test Items	Standard Requirements		Test Results	Assessment	Remark
17	Mark	The product body should have the product name, trademark or other manufacturer's identification, type or model (if applicable), implementation standard and year number, filter element filter grade		Mark and related information meet the requirements	Pass	/
		Product packaging should have the product name, trademark, or other manufacturer-identifiable label, type or model number (if applicable), implementation standard and year number, filter element filter grade, product license number, production date, or production batch number , Storage life, “see information provided by manufacturer”, manufacturer's recommended storage conditions.		Product packaging meet the requirements		
Main Test Equipment		Equipment No.	Equipment Name		Verification Period	
		2010072S	High and Low Temperature Humidity Test Chamber SH-641		2020.04.18~2021.04.17	
		GJ-SB353	TSI8130 Filtration Efficiency Tester		/	
		GJ-SB413	Inward leakage test cabin		/	
		GJ-SB369	TSI9306A Aerosol Generator		/	
		GJ-SB371	TSI8587A Aerosol Photometer		/	
		GJ-SB372	TSI8587A Aerosol Photometer		/	
		GJ-SB415	Breathing Resistance Test Device		2020.02.14~2021.02.13	
		GJ-SB505	Microcomputer Controlled Universal Testing Machine		2020.04.18~2021.04.17	
		GJ-SB380	INSPEC Apertometer		/	
		GJ-SB417	Dead Space Test Device		2020.02.17~2021.02.16	
		GJ-SB381	Face Mask Flammability Rig		2020.02.03~2021.02.02	

Test Period: Apr 21 2020 ~ Apr 30, 2020

End of Test Report.

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