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国际互认
检测
TESTING
CNAS L5772

TEST REPORT



Commissioned by: Sanctuary Systems LLC

Factory: Sanctuary Systems LLC

Name of Sample: Non-Medical Disposable Respirator K

Type, Specification: KN95K1

Testing Purpose: Commission

Testing Lab: Precise Testing & Certification
(Guangdong) Co., Ltd. (PTC)

Address: Building 1, No. 6, Tongxin Road,
Dongcheng Street, Dongguan, Guangdong





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Name of sample	Non-Medical Disposable Respirator K	Type,Specification	KN95K1
		Trade Mark	Breatheze
Grade of sample	/	Sample No.	/
Testing purpose	Commission	Batch No.	/
Quantity of sample	125pcs	Package	Sealed
Sample Received Date	Nov. 25, 2022	Completed Date	Dec. 06, 2022
Testing Environment	As requirement of testing standard		
Commissioned by& Address	Sanctuary Systems LLC 701 S Wilson St, Box# 692, Fremont, NC USA		
Name & Address of Factory	Sanctuary Systems LLC 701 S Wilson St, Box# 692, Fremont, NC USA		
Testing Reference	GB 2626-2019 Respiratory protection - Non-powered air-purifying particle respirator.		
Testing Item	General requirements, Visual inspection, Filter efficiency, Inhalation resistance, Exhalation resistance, Dead Space, Vision, Headband, Strength of the connection , Flammability, Practical performance, Leakage property, Air tightness		
Remark	Test results are attached as below		
Note	None		
Prepared by: Anne <i>Anne</i>	Checked by: May Chan <i>May Chan</i>	Approved by: Miya <i>Miya</i>	

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No.	Test Item/unit	Test Method	Requirement	Test Result	Conclusion
1	General requirements ☆	GB 2626-2019 Clause 6.1 & 6.16	<p>Check in accordance with 6.1 and evaluate in 6.16. The material and structural design of the respirator shall meet the following requirements:</p> <p>a) The material shall meet the following requirements:</p> <p>1) Materials that are in direct contact with the face shall be harmless to the skin;</p> <p>2) The filter material shall be harmless to the human body;</p> <p>3) The material used shall have sufficient strength; in normal use, it shall not be damaged and deformed that affects the use effect;</p> <p>4) No obvious tenderness or tingling sensation when wearing it.</p>	Comply	Pass
			<p>b) The structural design shall meet the following requirements:</p> <p>1) It shall not be easy to cause structural damage; the design, composition, installation of components shall not pose any danger to the user;</p> <p>2) The design of the head harness shall be elastic material or adjustable,</p>	Comply	Pass



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		<p>for easy wearing and removal. It shall be able to firmly fit the facepiece on the face; there shall be no obvious compression or tenderness when wearing. The head harness of replaceable half facepiece and full facepiece shall be designed to be replaceable;</p> <p>3) If the facepieces of the same size and the same style have different wearing methods, they shall be tested as different products; Note 1: Different wearing methods of the same style facepiece will affect the tightness of the facepiece.</p> <p>4) It shall not significantly affect the visual field;</p> <p>5) When wearing, the lenses of the full facepiece shall not affect the vision, such as fogging;</p> <p>6) Respirators which use replaceable filter elements, inhalation valves, exhalation valves, head harness shall be designed for easy replacement; meanwhile it allows the wearer to check the airtightness of the facepiece and face at any time and conveniently, to make user</p>		
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			<p>face-seal check;</p> <p>Note 2: See Appendix G of GB/T 18664-2002 for user face-seal check method.</p> <p>7) The breathing hose shall not restrict the movement of the head or the wearer; it shall not affect the tightness of the facepiece; it shall not restrict or block the airflow;</p> <p>8) The front side of the exhalation valve shall be protected. The exhalation valve protection device can be a dedicated component, or it can be protected by other components on the facepiece;</p> <p>9) The structure of the disposable facepiece shall ensure close fit with the face; meanwhile it shall not deform during normal use;</p> <p>10) The parts of the replaceable facepiece (except the filter element) shall be washable.</p>		
2	Visual inspection	GB 2626-2019 Clause 6.1 & 6.2	<p>The surface of the sample shall neither be damaged, deformed, nor have other obvious defects. The material and structure of the component shall be able to withstand normal use conditions and the temperature, humidity and mechanical shock that may be encountered. After the temperature and humidity</p>	Comply	Pass



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			pretreatment and mechanical strength pretreatment according to the method of 6.2, the components shall not fall off, be damaged or deformed.			
3	Filter efficiency (%)	GB 2626-2019 Clause 6.3	KN90: ≥90.0% KN95: ≥95.0% KN100: ≥99.97%	As received (NaCl)	100.00	KN95 Pass
					100.00	
					100.00	
					100.00	
					100.00	
					99.81	
					100.00	
					99.71	
					98.32	
					98.41	
					96.40	
					99.24	
					99.43	
					99.33	
99.52						
4	Inhalation resistance (Pa)	GB 2626-2019 Clause 6.5	See Annex 1	Temperature & humidity Treatment (NaCl)	100.00	KN95 Pass
					100.00	
					99.90	
					100.00	
					100.00	
4	Inhalation resistance (Pa)	GB 2626-2019 Clause 6.5	See Annex 1	As received Treatment	198.64	KN95 Pass
					198.32	
					182.64	
					185.51	



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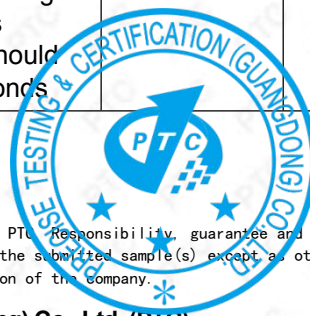
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5	Exhalation resistance (Pa)	GB 2626-2019 Clause 6.6	See Annex 1	As received	180.45	KN95 Pass
					187.65	
				Treatment	171.80	
					165.19	
6	Dead Space (%)	GB 2626-2019 Clause 6.9	≤ 1%	0.47%		Pass
7	Vision	GB 2890-2009 Clause 6.8	Below view field :≥35°	48°		Pass
			Double-eye view field:≥65%	64%		
8	Headband [*]	GB 2626-2019 Clause 6.11	Disposable facepiece: 10Ncontinuous10s No slippage or breakage	As received	Comply	Pass
				Treatment	Comply	
9	Strength of the connection	GB 2626-2019 Clause 6.12	Each head harness, buckle and other adjustment parts of the respirator shall not slip or break when it is subjected to the tensile force: Disposable facepiece: 10 N for 10 s Replaceable half facepiece: 50 N for 10 s	Not Applicable		Not Applicable
10	Flammability	GB 2626-2019 Clause 6.15	If the product is not flame-retardant,there should be a textual description of" This product is not suitable for the open flam operation(such as welding,casting,etc) If the product is not flame-retardant, it should be tested according to the requirements of flammability After removed from the flame,the continued burning time of the components exposed to the flame should be no more than 5 seconds	As received	No Burn	Pass
					No Burn	
				Treatment	No Burn	
					No Burn	



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11	Practical performance [☆]	GB 2626-2019 Clause 6.16	Perform test in accordance with the method of 6.16. Under the conditions of simulated use, the performance which is hard to be evaluated by the use of other testing methods, such as the performance specified in 5.1b) and 5.11, the subject will provide subjective evaluation. If the respirator fails the test, the laboratory shall describe the test method in detail, so that other laboratories can repeat the test process.	Comply	Pass
12	Leakage property (%)	GB 2626-2019 Clause 6.4	See annex 2	See annex 2-A	KN95 Pass
13	Air tightness	GB 2626-2019 Clause 6.14	Under the specified testing conditions, the pressure change in each full facepiece within 60 s shall not be greater than 100 Pa.	Not Applicable	Not Applicable

Note: ☆=The standard for this test item is not covered by CNAS accredited testing scope of PTC.



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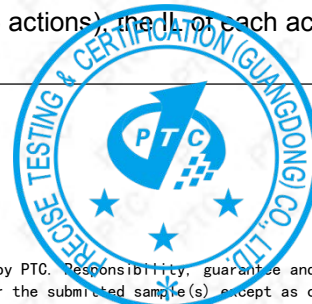
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Annex 1: limits of Inhalation/Exhalation Resistance

Type of facepiece	KN90 and KP90	KN95 and KP95	KN100 and KP100	Exhalation resistance / Pa
Disposable facepiece, without exhalation valve	≤170	≤210	≤250	Same as inhalation resistance
Disposable facepiece, with exhalation valve	≤210	≤250	≤300	
Replaceable half facepiece and full facepiece including filter element	≤250	≤300	≤350	≤150

Annex 2: limits of Leakage

TIL of disposable facepieces	Grade of filter material	When using the TIL of each action (i.e. 10 people x 5 actions) as the basis for evaluation, the TIL of at least 46 of the 50 actions	When using the overall TIL as the basis for evaluation, the overall TIL of at least 8 persons of the 10 persons under test
	KN90 or KP90	< 13%	< 10%
	KN95 or KP95	< 11%	< 8%
	KN100 or KP100	< 5%	< 2%
IL of replaceable half facepiece	Perform test in accordance with the method of 6.4. When using the IL of each action (i.e. 10 people x 5 actions) as the basis for evaluation, the IL of at least 46 of the 50 shall be less than 5%. When using the overall IL of person as the basis for evaluation, the overall IL of at least 8 persons of the 10 persons under test shall be less than 2%.		
IL of full facepiece	Perform test in accordance with the method of 6.4. When the IL of each action is used as the basis for evaluation (i.e. 10 persons x 5 actions), the IL of each action shall be less than 0.05%.		



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Annex 2-A: Inward Leakage Test Data

Subject	Sample No.	Condition	Walk (%)	Head left/right (%)	Head up/down (%)	Talk (%)	Walk (%)	Mean (%)
Lv	1	A.R	2.78	8.68	5.47	9.28	3.01	5.84
Li	2	A.R	3.54	7.23	6.21	7.45	2.98	5.48
Zhong	3	A.R	3.65	8.77	5.76	8.69	4.05	6.18
Xu	4	A.R	3.44	9.05	6.98	6.55	3.55	5.91
Ma	5	A.R	3.55	6.49	6.95	9.03	5.29	6.26
Chen	6	T.C	3.26	5.89	7.89	8.53	4.21	5.96
Chen	7	T.C	4.84	6.05	8.55	7.66	3.65	6.15
Zhuo	8	T.C	3.93	7.33	9.33	8.05	4.85	6.70
Chen	9	T.C	4.93	5.89	7.58	6.58	5.43	6.08
Zhang	10	T.C	4.06	6.57	6.45	6.69	4.54	5.67

Annex 2-B: Facial dimension

Subject	Face Length	Face Width	Face Depth	Mouth Width
Lv	113	139	104	53
Li	120	135	112	55
Zhong	108	135	106	56
Xu	120	150	120	70
Ma	130	170	130	80
Chen	110	160	90	40
Chen	115	145	110	50
Zhuo	103	146	100	50
Chen	110	145	95	40
Zhang	144	141	101	54



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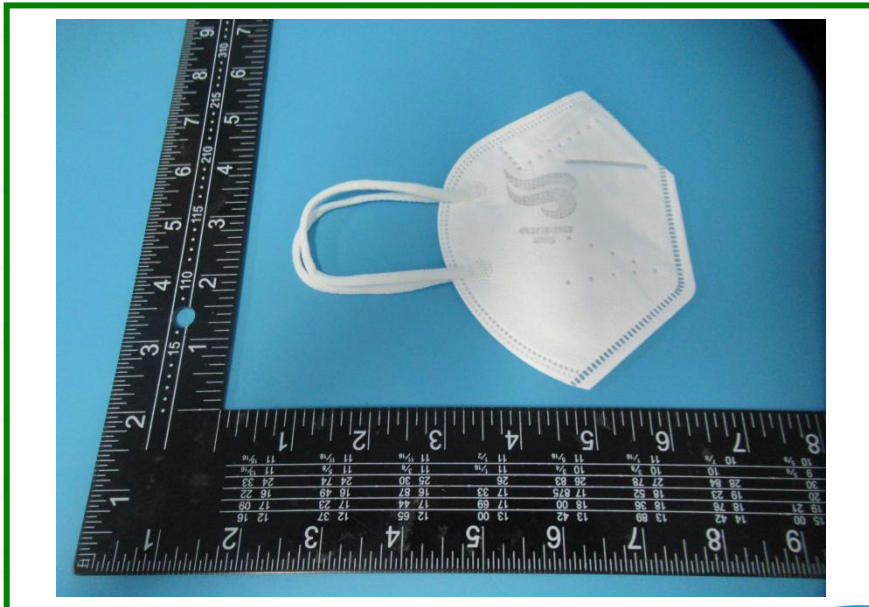
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Photo(s) of sample:



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