讯科标准
XUNKE STANDARD

Test Report

Sample Name：Non medical mask

Client Name：Shantou Himiss Clothing Co., Ltd

Test sort：Commissioned test

Report date：2020.03.16

（stamp of laboratory）

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Test Report

No. XKS2020R03170060E

Detection Category	☑Commissioned test ☐Routine test ☐Evaluation test ☐Type test		
Sample Source	☑Client to send samples ☐Sampling		
Client	Shantou Himiss Clothing Co., Ltd		
Client Address	NO.737 of old Hehui Road, Heping Town, Chaoyang Distriet		
Manufacturer	/		
Manufacturer Address	/		
Sample Name	Non medical mask	Logo	/
Sample Model	KN95	Production serial number	/
Sample quantity	40pcs	Sample number	XKS2020R03170060E
Date of Sample Receivec	2020.03.09	Test date	2020.03.09~2020.03.16
environment condition	temperature：24.5℃ Relative humidity：60%		
Test Method	EN 149:2001+A1:2009		
Requested/item	Performance Test		
Test Results	See the next page		
Note	1. Sample information provided by the client, only responsible for the incominsample. 2. The test results are for reference only.		

Writed by: Jemy.Li Reviewed by: Huigang Cai Approved By: Shuimei Cao

Test Report

1.Test Method

According to EN 149:2001+A1:2009, perform performance tests on the samples submitted.

2. Test Results

Title	Requirement clause	Technical requirement		Test Result	Test conclusion
Visual inspection	7.3	Products need to have identification and manufacturing information		Meet the requirements	Qualified
Material	7.4	Particle filtering half masks shall be offered for sale packaged		Meet the requirements	Qualified
	7.5	1).Expose the particle filtering half masks to the following thermal cycle: a) .for 24 h to a dry atmosphere of(70±3)℃; b).for 24 h to a temperature of(-30±3)℃; 2).Mechanical strength		Meet the requirements	Qualified
Cleaning and disinfection	7.6	re-usable particle filtering half mask shall satisfy the penetration requirement of the relevant class		Meet the requirements	Qualified
Total inward leakage	7.9.1	based on til of each action< 11%; based on overall til of human< 8%		50 working TIL＜11% 9 subjects TIL＜8%	Qualified
Compatibility with skin	7.10	Testing shall be done in accordance with 8.4 and 8.5.		Healthy without stimulation	Qualified
Flammability	7.11	Each part exposed to the flame shall not burn after being removed from the flame; if burning, the continuous burning time shall not exceed 5S.	Untreated sample 1	4s	Qualified
			Untreated sample 2	3s	Qualified
			Pretreatment sample 1	4s	Qualified
			Pretreatment sample 1	3s	Qualified

Test Report

2.Test Results(Continued)

Title	Requirement clause	Technical requirement	Test Result	Test conclusion
Carbon dioxide content	7.12	≤1%	0.7%	Qualified
Head harness	7.13	The head harness shall be adjustable or self-adjusting and shall be sufficiently robust to hold the particle filtering half mask firmly in position and be capable of maintaining total inward leakage requirements for the device.	Meet the requirements	Qualified
Field of vision	7.14	The field of vision is acceptable≥60°	66°	Qualified
Exhalation valve	7.15	withstand axially a tensile force of 10N applied for 10s	Meet the requirements	Qualified
Breathing resistance	7.16	FFP1: ≦4mbar	FFP2	Qualified
		FFP2: ≦5 mbar		
		FFP3: ≦7 mbar		
Clogging test(optional for FFP1+FFP2+FFP3 single shift use devices only)	7.17	FFP1≥80% FFP2≥94% FFP3≥97%	94.9%	Qualified
Demountable parts	7.18	readily connected and secured	Meet the requirements	Qualified
Note: the tested items of the tested samples meet the requirements of FFP2 in NF EN 149+A1:2009-09				

-see next page-

3.Test method

3.1Visual inspection:

The visual inspection shall also include the marking and the information supplied by the manufacturer.

3.2Material:

1).The conditioning shall be carried out in a manner which ensures that no thermal shock occurs.

A breathing machine is adjusted to 25 cycles/min and 2,0 l/stroke. The particle filtering half mask is mounted on a Sheffield dummy head. For testing,a saturator is incorporated in the exhalation line between the breathing machine and the dummy head, the saturator being set at a temperature in excess of 37℃ to allow for the cooling of the air before it reaches the mouth of the dummy head. Theair shall be saturated at (37 ± 2)C at the mouth of the dummy head. In order to prevent excess water spilling out of the dummy's mouth and contaminating the particle filtering half mask the head shall be inclined so that the water runs away from the mouth and is collected in a trap.

The breathing machine is brought into operation, the saturator switched on and the apparatus allowed to stabilize. The particle filtering half mask under test shall then be mounted on the dummy head. Duringthe test time at approximately 20 min intervals the particle filtering half mask shall be completely removed from the dummy head and refitted such that during the test period it is fitted ten times to the dummy head.

2).Expose the particle filtering half masks to the following thermal cycle:

a)for 24h to a dry atmosphere of(70±3)℃;

b) for 24 h to a temperature of(-30±3)℃; and allow to return to room temperature for at least 4 h between exposures and prior to subsequent testing.

3).Mechanical strength

3.3Cleaning and disinfection:

Testing shall be done in accordance with 8.4 and 8.5.

With reference to 7.9.2, after cleaning and disinfecting the re-usable particle filering half mask shall satisfy the penetration requirement of the relevant class.

Testing shall be done in accordance with 8.11.1

3.4Total inward leakage test:

1) The total inward leakage shall be tested using sodium chloride aerosol.

2) A panel of ten clean-shaven persons(without beards or sideburns) shall be selected covering the spectrum of facial characteristics of typical users (excluding significant abnormalities).

3) Test equipment The test atmosphere shall preferably enter the top of the enclosure through a flow distributor, and be directed downwards over the head of the test subject at a minimum flow rate of 0,12 m/s. The concentration of the test agent inside the effective working volume shall be checked to be homogeneous.

The test sequence shall be as follows:

a) Ensure the test atmosphere is OFF.

b) Place the test subject in the enclosure. Connect up the facepiece sampling probe. Have the test subject walk at 6 km/h for 2 min. Measure the test agent concentration inside the particle filtering half mask to establish the background level.

c) Obtain a stable reading.

d) Turn the test atmosphere ON.

e) The subject shall continue to walk for a further 2 min or until the test atmosphere has stabilized.

f) Whilst still walking the subject shall perform the following exercises:

1) walking for 2 min without head movement or talking;

2) turning head from side to side(approx.15 times), as if inspecting the walls of a tunnel for 2min;

3) moving the head up and down(approx.15 times), as if inspecting the roof and floor for 2min;

4) reciting the alphabet or an agreed text out loud as if communicating with a colleague for 2min;

5) walking for 2 min without head movement or talking.

g) Record

1) enclosure concentration;

2) the leakage over each exercise period.

h) Turn off the test atmosphere and when the test agent has cleared from the enclosure remove the subject.

After each test, replace the particle filtering half mask by a new sample.

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3.Test method

3.4 Flammability test

The material used shall not present a danger for the wearer and shall not be of highly flammable nature.

When tested, the particle filtering half mask shall not burn or not to continue to burn for more than 5s after removal from the flame.

The particle filering half mask does not have to be usable after the test.

3.5 Compatibility with skin:

Materials that may 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.

Testing shall be done in accordance with 8.4 and 8.5.

3.6 Carbon dioxide content test:

at 95 I/min continuous flow; The exhalation resistance shall not exceed 3 mbar at 160 /min continuous flow.

Testing shall be done in accordance with 8.9.

3.7 Head harness test:

The head harness shall be designed so that the particle filtering half mask can be donned and removed easily.

The head harness shall be adjustable or self-adjusting and shall be sufficiently robust to hold the particle filtering half mask firmly in position and be capable of maintaining total inward leakage requirements for the device.

Testing shall be done in accordance with 8.4 and 8.5.

3.8 Field of vision test：

The field of vision is acceptable if determined so in practical performance tests.

Testing shall be done in accordance with 8.4.

3.9 Exhalation valve(s)：

A particle filtering half mask may have one or more exhalation valve(s), which shall function correctly in all orientations.

Testing shall be done in accordance with 8.2 and 8.9.1.

If an exhalation valve is provided it shall be protected against or be resistant to dirt and mechanical damage and may be shrouded or may include any other device that may be necessary for the particle filtering half mask to comply with 7.9.

Testing shall be done in accordance with 8.2.

Exhalation valve(s), if fitted, shall continue to operate correctly after a continuous exhalation flow of 300 l/min over a period of 30 s.

Testing shall be done in accordance with 8.3.4.

When the exhalation valve housing is attached to the faceblank, it shall withstand axially a tensile force of 10N applied for 10s.

Testing shall be done in accordance with 8.8.

3.10 Carbon dioxide content：

Carbon dioxide content of the inhalation air The carbon dioxide content of the inhalation air(dead space) shall not exceed an average of 1,0%(by volume).

Testing shall be done in accordance with 8.7.

3.11 Clogging test：

For single shift use devices, the clogging test is an optional test. For re-usable devices the test is mandatory.1

Devices designed to be resistant to clogging, shown by a slow increase of breathing resistance when loaded with dust, shall be subjected to the treatment described in 8.10.

The specified breathing resistances shall not be exceeded before the required dust load of 833 mg-h/m3 is reached.

3.12Demountable parts ：

Demountable parts All demountable parts(if fitted) shall be readily connected and secured, where possible by hand.

Testing shall be done in accordance with 8.2.

Test Report

4.Sample photos

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