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# Mascherina FFP2 import BIZAN



Mascherina filtrante con certificazione CE che protegge dall'inalazione di polveri, fumi e virus presenti nell'aria. Sono costituite da diversi strati di polipropilene e si adattano anatomicamente alla forma del viso grazie ad una banda metallica che può essere piegata a piacere. Dotata di elastici auricolari. È un dispositivo di protezione individuale certificato CE secondo la norma EN 149-2001.

Codice prodotto HJ-PM9505

Materiali Non-wov

Non-woven / Melt Blown / Cotone / Non-woven.

Giorni di consegna

4

<u>Confezionamento</u> Confezionamento singolo. Certificazioni

( (







中国认可 国际互认 检测 TESTING CNAS L0599

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**Test Report** SL52025269548501TX Date:July 01,2020 SHENZHEN CATHAY CLEAN SCIENCE AND TECHNOLOGY CO.,LTD R603,BUILDING1,JIA'AN SCIENCE PARK,NO.2 LONGCHANG ROAD,ZONE67,XINGDONG COMMUNITY, XIN'AN STREE, BAOAN DISTRICT, SHENZHEN P.R.CHINA

The following sample(s) was/were submitted and identified on behalf of the client as:

Sample Description (A)Protective Mask

Style No. HJ-PM9505

(A)Non-woven fabric (inner and outer layers), melt-blown fabric, comfortable Composition

Sample Color (A)WHITE

SHENZHEN CATHAY CLEAN SCIENCE AND TECHNOLOGY CO.,LTD Manufacturer

Country of Destination **European Union** 

Test Performed Selected test(s) as requested by applicant

Sample Receiving Date Jun 04, 2020

**Testing Period** Jun 04, 2020 - Jul 01, 2020

Test Result(s) Unless otherwise stated the results shown in this test report refer only to the

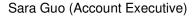
sample(s) tested, for further details, please refer to the following page(s).

#### Conclusion:

Sample No.	Recommendation Level
(A)	FFP2 NR

Signed for and on behalf of

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd Testing Center





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Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or, email: CN.Doccheck@cgs.com

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Test Result

## Personal Protective Equipment - Respiratory Protective Devices- Filtering Half Masks to Protect against Particles- Requirements, Testing, Marking

EN 149:2001+A1:2009

# Clause 7.4 Packaging

(EN 149:2001+A1:2009 Clause 8.2)

Test Requirement	Results	Comment
Particle filtering half masks shall be offered for sale packaged in such a way	Comply	
that they are protected against mechanical damage and contamination		Pass
before use.		

# Clause 7.5 Material

(EN 149:2001+A1:2009, Clause 8.2 & 8.3.1 & 8.3.2)

Test Requirement	Results	Comment
Materials used shall be suitable to withstand handling and wear over the period for which the particle filtering half mask is designed to be used.	Comply	
After undergoing the conditioning described in 8.3.1 none of the particle filtering half masks shall have suffered mechanical failure of the facepiece or straps.	Comply	Pass
When conditioned in accordance with 8.3.1 and 8.3.2 the particle filtering half mask shall not collapse.	Comply	
Any material from the filter media released by the air flow through the filter shall not constitute a hazard or nuisance for the wearer.	Comply	

# Clause 7.6 Cleaning and Disinfecting

(EN 149:2001+A1:2009, Clause 8.4 & 8.5 & 8.11)

Test Requirement	Results	Comment
If the particle filtering half mask is designed to be re-usable, the materials used shall withstand the cleaning and disinfecting agents and procedures to be specified by the manufacturer.  With reference to 7.9.2, after cleaning and disinfecting the re-usable particle filtering half mask shall satisfy the penetration requirement of the relevant class.	Not applicable (Not designed to be re-usable)	N.A.

## Clause 7.7 Practical Performance

(EN 149:2001+A1:2009, Clause 8.4)

Test Requirement	Results	Comment
The particle filtering half mask shall undergo practical performance tests under realistic conditions. These general tests serve the purpose of checking the equipment for imperfections that cannot be determined by the tests described elsewhere in this standard.	No imperfections	Pass



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## **Clause 7.8 Finish of Parts**

(EN 149:2001+A1:2009, Clause 8.2)

Test Requirement	Results	Comment
Parts of the device likely to come into contact with the wearer shall have no sharp edges or burrs.	No sharp edges or burrs	Pass

## Clause 7.9.1 Total Inward Leakage

(EN 149:2001+A1:2009, Clause 8.5)

Test Requirement	Results	Comment
The total inward leakage consists of three components: face seal leakage, exhalation value leakage(if exhalation value fitted) and filter penetration. For particle filtering half masks fitted in accordance with the manufacturer's information, at least 46 out of the 50 individual exercise results (i.e. 10 subjects x 5 exercises) for total inward leakage shall be not greater than: 25% for FFP1, 11% for FFP2, 5% for FFP3  and, in addition, at least 8 out of the 10 individual wearer arithmetic means for the total inward leakage shall be not greater than: 22% for FFP1, 8% for FFP2, 2% for FFP3	Detail refer to Appendix 1	Meet FFP1, Meet FFP2

#### **Appendix 1: Summarization of Test Data**

Inward Leakage Test Data

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Subject	Sample	Condition	Walk(%)	Head	Head	Talk(%)	Walk(%)	Mean(%)
	No.			Side/side(%)	up/down(%)			
Zhou	1	A.R.	5.33	4.58	4.12	6.61	4.85	5.10
Luo	2	A.R.	5.91	6.34	6.27	5.66	6.65	6.17
Lu	3	A.R.	7.05	5.03	4.80	4.36	5.06	5.26
Wang	4	A.R.	3.64	4.23	4.65	4.45	4.99	4.39
Bao	5	A.R.	6.57	5.59	4.52	7.24	7.08	6.20
Ding	6	T.C.	4.63	5.09	4.01	5.52	4.17	4.68
Li	7	T.C.	5.85	7.13	6.57	7.51	5.14	6.44
Chen	8	T.C.	5.53	5.37	4.00	4.86	5.20	4.99
Song	9	T.C.	5.20	6.51	5.72	5.17	5.37	5.59
Ye	10	T.C.	5.45	7.80	7.07	6.28	6.82	6.68

# Facial Dimension(mm)

Subject	Face length	Face Width	Face Depth	Mouth Width
Chen	125	150	120	58
Lu	115	132	107	48
Zhou	115	135	106	52
Li	125	130	107	46
Luo	125	136	100	43
Zheng	128	140	112	55
Wang	120	147	103	48
Song	120	140	100	50
Bao	130	134	104	50
Ding	134	150	110	52



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Liu	120	135	117	50
Ye	126	137	105	52

# Clause 7.9.2 Penetration of Filter Material

(EN 149:2001+A1:2009, Clause 8.11 & EN 13274-7:2019)

		Test Requirement		Results	Comment	
		of the filter of the particle filte	the			
requ	uirements of t	the following table.				
	Classifica	Maximum penetration	n of test aerosol			
	tion	Sodium chloride test 95	Paraffin oil test 95 l/min			
		l/min			Detail refer to	Meet FFP1,
		%	%		Appendix 2	Meet FFP2
		max.	max.			
	FFP1	20	20			
	FFP2	6	6			
	FFP3	1	1			

## **Appendix 2: Summarization of Test Data**

## Penetration of filter material

Aerosol	Condition	Sample No.	Penetration (%)
		1	0.849
	As received	2	0.921
		3	0.836
		4	0.858
Sodium chloride test	Simulated wearing treatment	5	0.881
		6	0.872
	Mechanical strength +Temperature conditioned	7	1.279
		8	1.370
	Conditioned	9	1.167
		10	0.926
	As received	11	0.948
		12	0.839
		13	0.928
Paraffin oil test	Simulated wearing treatment	14	0.944
		15	0.358
	Machanical atranath - Tomparatura	16	1.298
	Mechanical strength +Temperature conditioned	17	1.368
	Conditioned	18	1.457
	Flow conditioning: Single fil	ter: 95.0 L/min	



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# Clause 7.10 Compatibility with Skin

(EN 149:2001+A1:2009, Clause 8.4 & 8.5)

Test Requirement	Results	Comment
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.	No irritation or any other adverse effect to health	Pass

# Clause 7.11 Flammability

(EN 149:2001+A1:2009, Clause 8.6)

Test Requirement	Results	Comment
The material used shall not present a danger for the wearer and shall not be of highly flammable nature	Detail refer to	Pass
When tested, the particle filtering half mask shall not burn or not to continue to burn for more than 5 s after removal from the flame.	Appendix 3	Pass

#### **Appendix 3: Summarization of Test Data**

# **Flammability**

Condition	Sample No.	Result
	1	NIL
As received	2	NIL
	3	NIL
Temperature conditioned	4	NIL

## Clause 7.12 Carbon Dioxide Content of The Inhalation Air

(EN 149:2001+A1:2009, Clause 8.7)

Test Requirement	Results	Comment
The carbon dioxide content of the inhalation air (dead space) shall not exceed an average of 1,0 % (by volume)	Detail refer to Appendix 4	Pass

## **Appendix 4: Summarization of Test Data**

Carbon Dioxide Content of The Inhalation Air

Condition	Sample No.	Resul	Result(%)				
		0.4476					
	1						
As received		0.4471	Maan yaluar0 45				
As received	2		Mean value:0.45				
		0.4483					
	3						



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# Clause 7.13 Head Harness

(EN 149:2001+A1:2009, Clause 8.4 & 8.5)

Test Requirement	Results	Comment
The head harness shall be designed so that the particle filtering half mask can be donned and removed easily.	Comply	
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.	Comply	Pass

## Clause 7.14 Field of Vision

(EN 149:2001+A1:2009, Clause 8.4)

Test Requirement	Results	Comment
The field of vision is acceptable if determined so in practical performance tests.	Comply	Pass

# Clause 7.15 Exhalation Valve(s)

(EN 149:2001+A1:2009, Clause 8.2 & 8.9.1 & 8.3.4 & 8.8)

Test Requirement	Results	Comment
(a) A particle filtering half mask may have one or more exhalation valve(s), which shall function correctly in all orientations.	Not applicable due to No exhalation valve	
(b) 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.	Not applicable due to No exhalation valve	N.A.
(c) 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.	Not applicable due to No exhalation valve	
(d) When the exhalation valve housing is attached to the faceblank, it shall withstand axially a tensile force of 10N applied for 10 s.	Not applicable due to No exhalation valve	



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# Clause 7.16 Breathing Resistance

(EN 149:2001+A1:2009, Clause 8.9)

	Test	Results	Comment			
The penetration of the filter of the particle filtering half mask shall meet the requirements of the following table.						
Classification	Maximu	Maximum permitted resistance (mbar)				Meet FFP1,
	Inh	nalation	Exhalation	Detail refer to	Meet FFP2,	
	30 l/min	95 l/min	160 l/min		Appendix 5	Meet FFP3
FFP1	0.6	2.1	3.0			
FFP2	0.7	2.4	3.0			
FFP3	1.0	3.0	3.0			

# **Appendix 5: Summarization of Test Data**

## Breathing resistance (mbar)

	Flow rate(I/min)			1				2				3					
	Flow rate(I	min)	Α	В	C	D	Е	Α	В	O	D	Е	Α	В	C	D	Е
As received	Inhalation	30	0.2	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.3	0.2
	IIIIaialioii	95	0.7	0.9	8.0	0.8	0.7	0.7	0.8	0.7	0.7	0.8	0.7	0.9	0.9	0.8	0.7
	Exhalation	160	1.7	1.8	1.8	1.7	1.9	1.8	1.8	1.7	1.9	1.8	1.7	1.9	1.8	1.8	1.9
			4						5					6			
Simulated	Flow rate(l	min)	Α	В	С	D	Е	Α	В	C	D	Е	Α	В	С	D	Е
wearing	Inhalation	30	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2
treatment	IIIIaiatioii	95	8.0	1.0	0.9	0.9	1.0	0.8	0.8	0.9	1.0	0.8	0.8	1.0	0.9	1.0	0.9
	Exhalation	160	2.0	2.2	2.1	2.1	2.0	2.0	2.1	2.0	2.1	2.0	2.1	2.2	2.0	2.0	2.1
7					8					9							
	Flow rate(I	min)	Α	В	С	D	Е	Α	В	С	D	Е	Α	В	С	D	Ε
Temperature conditioned	Inhalation 30	30	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2
	IIIIaialiOII	95	0.6	0.8	0.7	0.7	0.6	0.7	0.7	0.8	0.7	0.6	0.6	0.7	0.7	0.8	0.6
	Exhalation	160	1.6	1.8	1.7	1.7	1.8	1.6	1.6	1.7	1.7	1.8	1.7	1.6	1.8	1.7	1.8

A: facing directly ahead; B: facing vertically upwards; C: facing vertically downwards; D: lying on the left side; E: lying on the right side



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# Clause 7.17 Clogging

(EN 149:2001+A1:2009, Clause 8.9 & 8.10)

Clause 7.17.2 Breathing resistance  Valved particle filtering half masks:  After clogging the inhalation resistances shall not exceed: FFP1: 4 mbar, FFP2: 5 mbar, FFP3: 7 mbar at 95L/min continuous flow The exhalation resistance shall not exceed 3 mbar at 160 L/min continuous flow.  Valveless particle filtering half masks: After clogging the inhalation and exhalation resistances shall not exceed: FFP1: 3 mbar, FFP2: 4 mbar, FFP3: 5 mbar at 95L/min continuous flow  Clause 7.17.3 Penetration of filter material All types (valved and valveless) of particle filtering half masks claimed to meet the clogging requirement shall also meet the requirements.  Classificatio  Maximum penetration of test aerosol Sodium chloride test 95 l/min Paraffin oil test 95 l/min % % max. max. FFP1 20 20 20  N.A.		Test Requirement	Results	Comment	
All types (valved and valveless) of particle filtering half masks claimed to meet the clogging requirement shall also meet the requirements.  Classificatio  n  Maximum penetration of test aerosol Sodium chloride test 95 l/min Paraffin oil test 95 l/min Shift device only  N.A.  FFP1  20  20	Valved particle fill After clogging the FFP1: 4 mbar, FF The exhalation re flow.  Valveless particle After clogging the	tering half masks: e inhalation resistances shall not FP2: 5 mbar, FFP3: 7 mbar at 95 esistance shall not exceed 3 mb e filtering half masks: e inhalation and exhalation resis	-   -   -   -   -   -   -   -   -   -	N.A.	
FFP2 6 6 6 FFP3 1 1	All types (valved meet the clogging Classificatio n	and valveless) of particle filter requirement shall also meet th  Maximum penetration Sodium chloride test 95 l/min %  max.	e requirements.  n of test aerosol Paraffin oil test 95 l/min % max.	Optional for single	N.A.

# Clause 7.18 Demountable Parts

(EN 149:2001+A1:2009, Clause 8.2)

Test Requirement	Results	Comment
All demountable parts (if fitted) shall be readily connected and secured, where possible by hand	No demountable parts	N.A.

Test	Uncertainty
Total inward leakage	3.4%
Penetration of filter material	4.8%
Carbon dioxide content of the inhalation air	3.9%
Breathing resistance (30L/min)	5.9%
Breathing resistance (95L/min)	4.9%
Breathing resistance (160L/min)	4.3%



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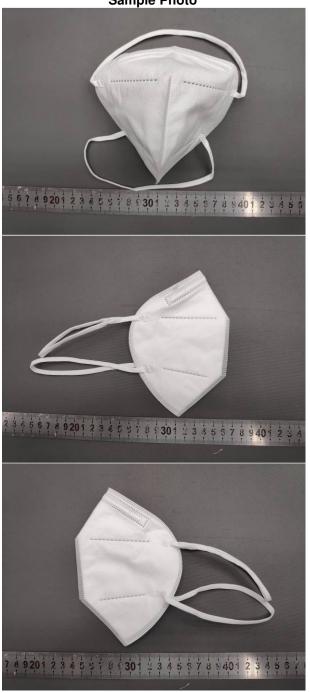


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Sample Photo



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