

Certificate FI20/966681

## Jiangsu Haitong Jiuzhuo Ecology Technology Co., Ltd.

No. 1530-1, 4th floor, Fuxing building, Zhongwu Avenue,  
Changzhou city, Tianning district, 213000, P.R.China

It is certified that the manufacturer's technical file and the PPE product detailed on  
page 2 have been assessed and found to be in accordance with

### Regulation (EU) 2016/425 Module B, EU type-examination

This certificate is valid from 25 September 2020 until 25 September 2025  
1. Certified since 25 September 2020

Authorised by

*Tom Tom*

**FINAS**  
Finnish Accreditation Service  
S003 (EN ISO/IEC 17065)

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**Jiangsu Haitong Jiuzhuo  
Ecology Technology Co., Ltd.**

**Regulation (EU) 2016/425**

Module B, EU type-examination

Issue 1

PPE Product

HT JIU ZHUO (logo) HTJZ/CE-02 particle filtering half mask, consisting of a white five layer (polypropylene/ polypropylene/ polypropylene / polypropylene / polypropylene) disposable face mask, with nose clip and nylon/spandex ear loop.

It is certified that the manufacturer's technical file and the above mentioned PPE have been assessed and found to meet the applicable Essential Health and Safety Requirements in Annex II of Regulation (EU) 2016/425 Personal Protective Equipment

The following have been applied:

EN 149:2001+A1:2009 (Respiratory protective devices - filtering half masks to protect against particles) device classification: FFP2 NR.

This certificate is issued on the strict condition that appropriate checks on manufactured PPE, as detailed in Article 19 (c) of the Regulation are implemented and maintained while the model is in production

Certification is based on technical file reference:

Filtering half mask / HTJZ/CE-02, version 2, dated: 2020-09-11.

SGS Reference Number UK/CRS 241926.

This certificate remains the property of SGS Fimko Oy to whom it must be returned on request



Certificate CN20/42341

The management system of

## Jiangsu Haitong Jiuzhuo Ecology Technology Co., Ltd.

No. 1530-1, 4th floor, Fuxing building, Zhongwu Avenue,  
Changzhou city, Tianning district, 213000, P.R. China

has been assessed and certified as meeting the requirements of

## Regulation (EU) 2016/425 Module C2

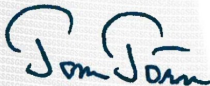
For the following activities

**Manufacture of HT JIU ZHUO (logo) HTJZ/CE-02 particle filtering half mask.**

**(Note: All products marked CE0598 must have a valid EU type-examination certificate issued under Module B or a valid EC type-examination certificate issued under Article 10 of Directive 89/686/EEC.)**

This certificate is valid from 30 September 2020  
and remains valid subject to satisfactory surveillance audits.  
Issue 1. Certified since 30 September 2020

Authorised by

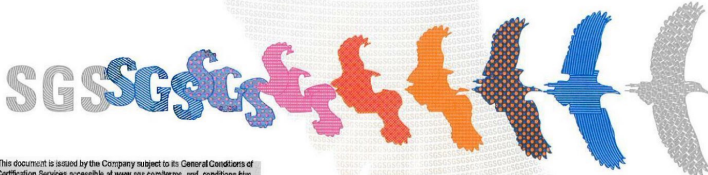


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**Test Report** SL52035272582301TX **Date:** July 10, 2020 **Page 1 of 9**  
JIANGSU HAITONG JIUZHUO ECOLOGY TECHNOLOGY CO., LTD.  
NO.1530-1, 4TH FLOOR, FUXING BUILDING, ZHONGWU AVENUE, TIANNING DISTRICT, CHANGZHOU  
CITY, 213000, CHINA

**THIS REPORT CANCELS AND SUPERSEDES THE TEST REPORT NO.SL52025269630901TX DATE: 2020-06-19 ISSUED BY SGS (SHANGHAI)**  
**UPDATED SAMPLE INFORMATION.**

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

Sample Description : (A)Filtering Half Mask  
Claimed : FFP2

Sample Color : (A)White  
Style No. : HTJZ/CE-02

Test Performed : Selected test(s) as requested by applicant

Sample Receiving Date : Jun 04, 2020  
Testing Period : Jun 04, 2020 - Jun 19, 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

*Sara Guo*

Sara Guo (Account Executive)

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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 that they are protected against mechanical damage and contamination before use.	Comply	Pass

**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	Pass
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	
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	Pass

## Appendix 1: Summarization of Test Data

### Inward Leakage Test Data

Subject	Sample No.	Condition	Walk(%)	Head Side/side(%)	Head up/down(%)	Talk(%)	Walk(%)	Mean(%)
Zhou	1	A.R.	5.63	6.88	5.72	5.19	7.28	6.14
Luo	2	A.R.	6.31	8.31	6.28	8.07	6.70	7.13
Lu	3	A.R.	5.79	6.13	7.01	6.98	5.51	6.28
Wang	4	A.R.	4.03	4.89	5.41	6.78	4.99	5.22
Bao	5	A.R.	6.82	8.11	7.34	7.12	7.25	7.33
Ding	6	T.C.	4.31	5.29	5.21	5.16	6.06	5.21
Li	7	T.C.	7.27	7.51	6.35	7.36	8.34	7.37
Chen	8	T.C.	5.43	5.53	5.29	4.50	5.61	5.27
Song	9	T.C.	6.14	6.26	6.73	6.02	6.53	6.34
Ye	10	T.C.	6.86	7.30	7.81	7.27	7.86	7.42

### 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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Test Report		SL52035272582301TX		Date: July 10, 2020		Page 4 of 9	
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
The penetration of the filter of the particle filtering half mask shall meet the requirements of the following table.					
Classification	Maximum penetration of test aerosol				
	Sodium chloride test 95 l/min		Paraffin oil test 95 l/min		
	%		%		
	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 (%)
Sodium chloride test	As received	1	0.023
		2	0.032
		3	0.028
		4	0.030
	Simulated wearing treatment	5	0.026
		6	0.032
		7	0.047
		8	0.062
	Mechanical strength + Temperature conditioned	9	0.057
		10	0.045
Paraffin oil test	As received	11	0.052
		12	0.070
		13	0.061
		14	0.075
	Simulated wearing treatment	15	0.042
		16	0.185
	Mechanical strength + Temperature conditioned	17	0.169
		18	0.174

Flow conditioning : Single filter: 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 Appendix 3	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: Summarization of Test Data

### Flammability

Condition	Sample No.	Result
As received	1	NIL
	2	NIL
Temperature conditioned	3	NIL
	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.	Result(%)
As received	1	0.4715
	2	0.4707
	3	0.4721
	Mean value:	0.47

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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	Pass
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	

## 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	N.A.
(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	
(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 Requirement				Results	Comment
The penetration of the filter of the particle filtering half mask shall meet the requirements of the following table.				Detail refer to Appendix 5	Pass
Classification	Maximum permitted resistance (mbar)				
	Inhalation		Exhalation		
	30 l/min	95 l/min	160 l/min		
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)

As received	Flow rate(l/min)		1					2					3				
			A	B	C	D	E	A	B	C	D	E	A	B	C	D	E
	Inhalation	30	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.5	0.5	0.3	0.4	0.5	0.5	0.5
Simulated wearing treatment	Exhalation	95	1.6	1.6	1.7	1.7	1.8	1.6	1.7	1.8	1.6	1.7	1.7	1.8	1.8	1.7	1.6
		160	2.6	2.6	2.7	2.6	2.7	2.7	2.7	2.6	2.6	2.7	2.5	2.7	2.6	2.7	2.5
	Flow rate(l/min)		4					5					6				
Temperature conditioned	Inhalation	30	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.3	0.4	0.5	0.4	0.4	0.4
		95	1.6	1.7	1.7	1.8	1.6	1.7	1.7	1.8	1.7	1.8	1.8	1.9	1.7	1.6	1.7
		160	2.7	2.8	2.7	2.6	2.7	2.7	2.6	2.8	2.7	2.8	2.6	2.7	2.7	2.8	2.6
Exhalation	Flow rate(l/min)		7					8					9				
		30	0.3	0.2	0.3	0.3	0.4	0.3	0.2	0.3	0.4	0.4	0.2	0.3	0.4	0.4	0.4
		95	1.4	1.5	1.6	1.5	1.6	1.7	1.4	1.4	1.3	1.6	1.6	1.4	1.5	1.5	1.6
Exhalation	Flow rate(l/min)																
		160	2.5	2.4	2.5	2.3	2.4	2.3	2.5	2.4	2.3	2.5	2.5	2.5	2.4	2.5	2.4

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)

Test Requirement		Results	Comment	
<u>Clause 7.17.2 Breathing resistance</u> <u>Valved particle filtering half masks:</u> 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.		Optional for single shift device only	N.A.	
<u>Valveless particle filtering half masks:</u> After clogging the inhalation and exhalation resistances shall not exceed: FFP1: 3 mbar, FFP2: 4 mbar, FFP3: 5 mbar at 95L/min continuous flow				
<u>Clause 7.17.3 Penetration of filter material</u> All types (valved and valveless) of particle filtering half masks claimed to meet the clogging requirement shall also meet the requirements.		Optional for single shift device only	N.A.	
Classification n	Maximum penetration of test aerosol			
	Sodium chloride test 95 l/min			Paraffin oil test 95 l/min
	%			%
	max.			max.
FFP1	20			20
FFP2	6			6
FFP3	1			1

## 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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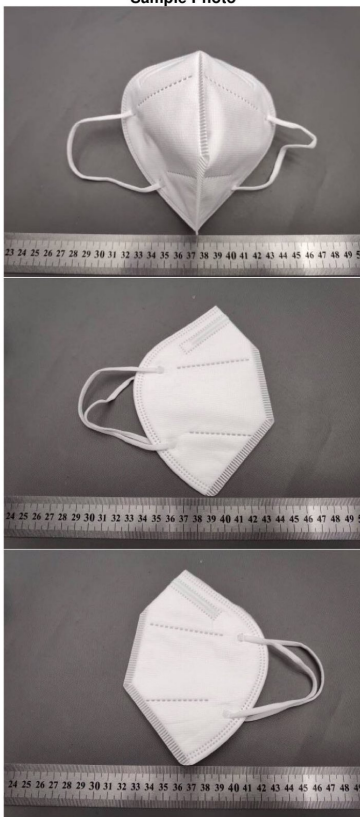
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Sample Photo



\*\*\*End of Report\*\*\*



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