



中国认可
国际互认
检测
TESTING
CNAS L0118



China academy of safety science and technology (CASST) is accredited for compliance with ISO/IEC 17025.
The results of tests, calibrations and/or measurements included in this document are traceable to Chinese/national standards.
CNAS is a signatory to the ILAC mutual recognition arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

TEST REPORT

EN 149:2001+A1:2009
Filtering half masks to protect against particles

Report No: WLH0379-2020
Product: Particle Filtering Half Mask
Model (s): SF-K01
Main components: Mask body, without exhalation valve
Date(s) of tests: 6th May ~ 11th May 2020

Client	Manufacturer
CCQS Certification Services Limited	Zhejiang Shunfa Safety Technology Co.,
Block 1 Blanchardstown Corporate Park, Ballycoolin Road, Blanchardstown, Dublin 15, D15 AKK1, Ireland Contact: Zhou Zimo Client order: / Order(s) received: May, 2020	No.13, Huancheng Road, Baiyangdu industry zone, Wuyi County, Jinhua City, Zhejiang Province, China Contact: Huilan Wu E-mail: Jessie@svest.com Phone: 13216246490

Conditions:

This report shall not be reproduced except in full, without the written approval of CASST.
The results described in this test report refer to the mentioned test samples, exclusively. A copy of the test report, complete or in extracts, is not allowed without any written permission of the CASST.
Any objection should be submitted within 2 weeks from the date of receipt of the report, and it will not be accepted after the deadline.
Specimens will be disposed of 4 weeks from the date of this report, unless otherwise instructed.

Signed: 
张明明/Zhang Mingming, Authorized Signatory

Issued: 2020-05-11

Page 1 of 10





Module B EU Type-Examination Certificate

For the requirements of PPE Regulation 2016/425

Certificate No.: CE-PC-200325-100-01-9B

Certificate holder:	Zhejiang Shunfa Safety Technology Co., Ltd. No.13 East Huancheng Road, Balyangdu Industry Zone, Wuyi County, Jinhua City, Zhejiang Province, China 321200
Product:	Particle Filtering Half Mask Detailed product description listed in the Annex
Model(s):	SF-K01
Standard(s):	EN 149:2001+A1:2009 Respiratory protective devices - Filtering half masks to protect against particles. Requirements, testing, marking
Issue date:	2020-04-27
Revision date:	2020-06-15
Expiry date:	2025-04-26

The product(s) on this certificate and the Technical File have been assessed and found to be in conformance with the applicable Essential Health and Safety Requirements in Annex II of the PPE regulation 2016/425.

Any changes to the design, manufacturing location or manufacture of the PPE product certified here must be advised to CCQS Certification Services Limited for review.

CE marking shall not be applied until the requirements of all the PPE Regulation 2016/425 and relevant EN Harmonised standards and/or Technical specifications have been met.

If the certified product is Category III then this certificate is only valid if used in conjunction with Conformity Assessment against Module C2 or Module D.

This certificate remains the property of CCQS and maybe withdrawn at any time if it is considered that the equipment is no longer in conformity with the requirements of the PPE Regulation 2016/425.



Approved by Ireland
Government
as a Notified Body
for CE Marking No.2834



CCQS Certification Services Limited

Block 1 Blanchardstown Corporate Park, Ballycoolin Road, Blanchardstown, Dublin 15,
D15 AKK1, Ireland

Tel: +00 353 1 588 6920 Website: www.ccqs.co.uk E-mail: info@ccqs.ie
If in any doubt about the integrity of this certificate, please contact CCQS by email to verify.

For more mask information please contact :jessie@sfvest.com



Module B EU Type-Examination Certificate

Annex

For the requirements of PPE Regulation 2016/425

Certificate No.: CE-PC-200325-100-01-9B

Applicable standards and specification:

EN 149:2001+A1:2009 Respiratory protective devices - Filtering half masks to protect against particles - Requirements, testing, marking

Model reference	Product description
SF-K01	Folding filtering half mask without valve fitted with ear loops with head harness clip, external metal nose clip Classification: FFP2 NR Test Report No.: WLH0379-2020, WLH0379-2020

Certificate Revision	Revision date	Revision details
A	2020-04-27	Initial issue
B	2020-06-15	Extension of expiry date to 5 years



CCQS Certification Services Limited

Block 1 Blanchardstown Corporate Park, Ballycoolin Road, Blanchardstown, Dublin 15,
D15 AKK1, Ireland

Tel: +00 353 1 588 6920 Website: www.ccqs.co.uk E-mail: info@ccqs.ie

If in any doubt about the integrity of this certificate, please contact CCQS by email to verify.

For more mask information please contact jessie@sfvest.com



Certificate of Module C2 production monitoring for equipment within the scope of Personal Protective Equipment Regulation (EU) 2016/425 Category III

FPC Certificate No.: CE-PC-200325-100-FPC-B

Certificate holder:	Zhejiang Shunfa Safety Technology Co., Ltd No.13 East Huancheng Road, Baiyangdu Industry Zone, Wuyi County, Jinhua City, Zhejiang Province, China 321200
The scope of the certification for:	The manufacture of respiratory protective device See annex for articles covered by this certificate
Validity from:	2020-04-27
To:	2021-04-26

CCQS Certification Services Limited in its role as a Notified Body for PPE Regulation, is monitoring that the manufacturer is producing PPE in conformity with the type described in the EU type-examination certificate and associated technical file and which satisfies the Essential Health and Safety Requirements of the Regulation. The equipment covered by this certificate is listed in the accompanying schedule. This certificate is not complete and has no validity without the accompanying schedule and revision index. The manufacturer is hereby authorized to affix our Notified Body number, 2834, to each item of PPE mentioned in the schedule which accompanies this certificate whilst this certificate remains valid. This certificate and the accompanying schedule remain the property of CCQS and maybe withdrawn or revised at any time if CCQS considers that the equipment is no longer in conformity with the requirements of the Regulation.



Approved by Ireland
Government
as a Notified Body
for CE Marking No.2834



Approved by:

Owen Bland - Director

CCQS Certification Services Limited

Block 1 Blanchardstown Corporate Park, Ballycoolin Road, Blanchardstown, Dublin15, D15 AKK1, Ireland

Tel: +00 353 1 588 6920 Website: www.ccqs.co.uk E-mail: info@ccqs.ie

If in any doubt about the integrity of this certificate, please contact CCQS by email to verify.

For more mask information please contact jessie@sffvest.com



Schedule of Module C2 production monitoring for equipment within the scope of Personal Protective Equipment Regulation (EU) 2016/425 Category III

Schedule to CCQS FPC Certificate No.: CE-PC-200325-100-FPC-B

Product reference and description		Reference standard
Particle Filtering Half Mask	Model: SF-K01	EN 149:2001+A1:2009

Certificate Revision.	Revision date	Revision details
A	2020-04-27	Initial issue
B	2020-06-15	Extension from 3 months to 1 year

This schedule has no validity without the accompanying certificate.
This schedule and the accompanying certificate remain the property of CCQS and maybe withdrawn or revised at any time if CCQS considers that the equipment is no longer in conformity with the requirements of the Regulation.



CCQS Certification Services Limited

Block 1 Blanchardstown Corporate Park, Ballycoolin Road, Blanchardstown, Dublin15, D15 AKK1, Ireland

Tel: +00 353 1 588 6920 Website: www.ccqs.co.uk E-mail: info@ccqs.ie

If in any doubt about the integrity of this certificate, please contact CCQS by email to verify.

For more mask information please contact jessie@sfvest.com

Summary of assessment*

Clause		Assessment
Model:		SF-K01
7.4	Packaging	NRq
7.5	Material	NRq
7.6	Cleaning and disinfecting	NAp
7.7	Practical performance	NRq
7.8	Finish of parts	NRq
7.9.1	Total inward leakage	Pass
7.9.2	Penetration of filter material: Sodium chloride	NRq
7.9.2	Penetration of filter material: Paraffin oil	NRq
7.10	Compatibility with skin	NRq
7.11	Flammability	NRq
7.12	Carbon dioxide content of the inhalation air	NRq
7.13	Head harness	NRq
7.14	Field of vision	NRq
7.15	Exhalation valve(s)	NAp
7.16	Breathing resistance	NRq
7.17	Clogging	NRq
7.18	Demountable parts	Pass
9	Marking	NRq
10	Information to be supplied by the manufacturer	NRq

Key

	Shading shows the clauses requested.
NRq	The clauses were not requested.
Pass	Requirement satisfied.
Ltd	Testing requested was insufficient completely to verify compliance with the clause. Refer to the "Result details" section for more information.
Fail	Requirement not satisfied. Refer to the "Result details" section for more information.
NAs	Assessment not carried out.
NAp	Requirement not applicable.
NT	Requested but not tested due to early termination following failure.

* Assessment relates only to those specimens which were tested and are the subject of this report.

Product characteristics

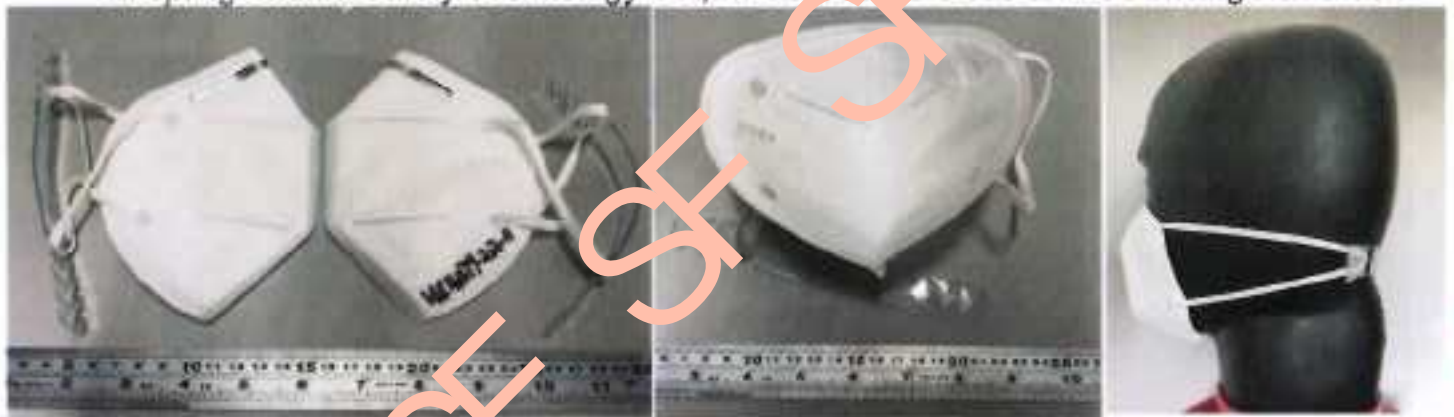
Property	Characteristic
Model	SF-K01
Classification claimed	FFP2 NR
Exhalation valve(s)	-

Submission details

Product	Quantity	Date received	Specimen No.
SF-K01 Particle filtering half mask	16	6 th May 2020	WLH0379-2020-01 to -16

Photographs of the products tested

Zhejiang Shunfa Safety Technology Co.,Ltd's model SF-K01 Particle Filtering Half Mask



CASST specimen number WLH0379-2020-11

Procedures

Specimens were selected at random from the submission(s) detailed above.

Testing was performed in accordance with EN 149:2001 incorporating Corrigendum No. 1 (January 2003) and amendment A1 (2009) unless otherwise specified below. Reference should be made to the standard when reading this report.

Unless stated otherwise, specimens were tested in the condition as received.

Result details**7.4 Packaging**

NRq

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.

7.5 Material

NRq

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.

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.

When conditioned in accordance with 8.3.1 and 8.3.2 the particle filtering half mask shall not collapse.

Any material from the filter media released by the air flow through the filter shall not constitute a hazard or nuisance for the wearer.

7.6 Cleaning and disinfectingNAP¹

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.

Note 1: Single shift use only.

7.7 Practical performance

NRq

The particle filtering half mask shall undergo practical performance tests under realistic conditions.

Specimen and subject details:

Specimen	Subject
-	-
-	-

7.8 Finish of parts

NRq

Parts of the device likely to come into contact with the wearer shall have no sharp edges or burrs.

7.9.1 Total inward leakage (%)

Pass²

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.

Note 2: All 50 individual exercise results were not greater than 10.4%; All 10 individual wearer arithmetic means were not greater than 7.8%. Detailed data are showed below.

Subject	Specimen	Cond	Walk	Head side/ side	Head up/down	Talk	Walk	Mean
ZMM	-01	AR	4.2	7.3	4.3	4.1	3.1	4.6
YZF	-02	AR	4.8	6.6	7.8	5.2	5.9	6.0
LCF	-03	AR	4.2	10.3	8.3	5.7	9.8	7.8
NXL	-04	AR	3.9	2.9	3.5	3.5	5.3	3.7
TJ	-05	AR	4.4	7.6	4.4	4.2	3.3	4.8
WCS	-06	TC	3.6	6.3	5.5	3.5	2.7	4.3
TS	-07	TC	6.5	8.8	6.4	6.7	6.5	7.8
SM	-08	TC	3.5	4.8	5.8	3.6	4.3	4.4
YB	-09	TC	2.3	5.7	4.6	3.6	2.7	3.8
GJB	-10	TC	7.2	5.4	9.7	5.7	6.4	6.9
Maximum permitted			11					8

Subject facial dimensions:

Subject	Face Length (mm)	Face Width (mm)	Face Depth (mm)	Mouth Width (mm)
SM	116	144	109	49
WCS	109	136	105	56
YZF	113	151	106	48
TS	97	146	102	51
TJ	105	151	110	52
LCF	119	165	121	56
ZMM	114	157	119	50
GJB	109	154	109	57
YB	112	150	119	66
NXL	113	147	108	53

7.9.2 Penetration of filter material

NRq

The penetration of the filter of the particle filtering half mask shall meet the requirements:

Classification	Maximum penetration of test aerosol	
	Sodium chloride test 95 l/min, %, Max	Paraffin oil test 95 l/min, %, Max
FFP1	20	20
FFP2	6	6
FFP3	1	1

Sodium chloride test results: (NRq)

Specimen	Condition	Penetration (%)	
		After 3 minutes	Max during exposure
-	A.R.	-	
-		-	
-		-	
-	S.W.	-	
-		-	
-		-	
-	M.S. + T.C.	-	-
-		-	-
-		-	-
Maximum permitted		6	

Paraffin oil test results: (NRq)

Specimen	Condition	Penetration (%)	
		After 3 minutes	Max. during exposure
-	A.R.	-	
-		-	
-		-	
-	S.W.	-	
-		-	
-		-	
-	M.S. + T.C.	-	-
-		-	-
-		-	-
Maximum permitted		6	

7.10 Compatibility with skin

NRq

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.

7.11 Flammability

NRq

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.

Specimen	Condition	Results
-	A.R.	-
-		-
-	T.C.	-
-		-

7.12 Carbon dioxide content of the inhalation air

NRq

The carbon dioxide content of the inhalation air (dead space) shall not exceed an average of 1.0 % (by volume).

Specimen	CO ₂ (%)
-	-
-	-
-	-
Maximum permitted	1.0

7.13 Head harness

NRq

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.

7.14 Field of vision

NRq

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

7.15 Exhalation valve

NAp

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

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.

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.

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

7.16 Breathing resistance

NRq

Classification	Maximum permitted resistance (mbar)		
	inhalation		exhalation
	30 l/min	95 l/min	160 l/min or (25 cycles/min×2.0 l/stroke)
FFP1	0.6	2.1	3.0
FFP2	0.7	2.4	3.0
FFP3	1.0	3.0	3.0

Specimen	Condition	Inhalation resistance (mbar)		Exhalation resistance (mbar)				
		At 30 l/min	At 95 l/min	Breathing machine (25 cycles/min × 2.0 l/stroke)				
				A	B	C	D	E
-	A.R.	-	-	-	-	-	-	-
-		-	-	-	-	-	-	
-		-	-	-	-	-	-	
-	T.C.	-	-	-	-	-	-	-
-		-	-	-	-	-	-	
-		-	-	-	-	-	-	
-	S.W.	-	-	-	-	-	-	-
-		-	-	-	-	-	-	
-		-	-	-	-	-	-	
	A.R. + F.C.							
	T.C. + F.C.							
	Maximum permitted	0.7	2.4	3.0				

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

7.17 Clogging

NAP¹

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 95 l/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 95 l/min continuous flow.

7.17.2 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 given in 7.9.2, for the Penetration test according to EN 13274-7, after the clogging treatment.

Note 3: Single shift use only.

7.18 Demountable parts

Pass'

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

Note 4: Head harness auxiliary hook were used, and in accordance with the requirement.

9 Marking

NRq

9.1 Packaging

The following information shall be clearly and durably marked on the smallest commercially available packaging or legible through it if the packaging is transparent.

9.1.1 The name, trademark or other means of identification of the manufacturer or supplier.

9.1.2 Type-identifying marking.

9.1.3 Classification

The appropriate class (FFP1, FFP2 or FFP3) followed by a single space and then:

"NR" if the particle filtering half mask is limited to single shift use only. Example: FFP3 NR, or

"R" if the particle filtering half mask is re-usable. Example: FFP2 R D."

9.1.4 The number and year of publication of this European Standard.

9.1.5 At least the year of end of shelf life. The end of shelf life may be informed by a pictogram as shown in Figure 12a, where yyyy/mm indicates the year and month.

9.1.6 The sentence 'see information supplied by the manufacturer', at least in the official language(s) of the country of destination or by using the pictogram as shown in Figure 12b.

9.1.7 The manufacturer's recommended conditions of storage (at least the temperature and humidity) or equivalent pictogram, as shown in Figures 12c and 12d.

9.1.8 The packaging of those particle filtering half masks passing the dolomite clogging test shall be additionally marked with the letter "D". This letter shall follow the classification marking preceded by a single space.

9.2 Particle filtering half mask

Particle filtering half masks complying with this European Standard shall be clearly and durably marked with the following:

9.2.1 The name, trademark or other means of identification of the manufacturer or supplier.

9.2.2 Type-identifying marking.

9.2.3 The number and year of publication of this European Standard.

9.2.4 Classification

The appropriate class (FFP1, FFP2 or FFP3) followed by a single space and then:

"NR" if the particle filtering half mask is limited to single shift use only. Example: FFP3 NR, or

"R" if the particle filtering half mask is re-usable. Example: FFP2 R D."

9.2.5 If appropriate the letter D (dolomite) in accordance with clogging performance. This letter shall follow the classification marking preceded by a single space (see 9.2.4).

Examples FFP3 NR D, FFP2 R D"

9.2.6 Sub-assemblies and components with considerable bearing on safety shall be marked so that they can be identified

10 Information to be supplied by the manufacturer

NRq

10.1 Information supplied by the manufacturer shall accompany every smallest commercial available package.

10.2 Information supplied by the manufacturer shall be at least in the official language(s) of the country of destination.

10.3 The information supplied by the manufacturer shall contain all information necessary for trained and qualified persons on:

application/limitations; the meaning of any colour coding; checks prior to use; donning, fitting, use; maintenance (e.g. cleaning, disinfecting), if applicable; storage; the meaning of any symbols/pictograms used of the equipment.

10.4 The information shall be clear and comprehensible. If helpful, illustrations, part numbers, marking shall be added.

10.5 Warning shall be given against problems likely to be encountered, for example:

- fit of particle filtering half mask (check prior to use);
- it is unlikely that the requirements for leakage will be achieved if facial hair passes under the face seal;
- air quality (contaminants, oxygen deficiency);
- use of equipment in explosive atmosphere.

10.6 The information shall provide recommendations as to when the particle filtering half mask shall be discarded.

10.7 For devices marked "NR", a warning shall be given that the particle filtering half mask shall not be used for more than one shift.

End of Test Report.
