



In enforcement of Regulation 2016/425 of the European Parliament and of the Council of 9<sup>th</sup> March 2016 on Personal Protective Equipment and repealing the Directive 89/686/EEC and in compliance with the Module B Certification Scheme of Apave 'M.MEPI.45' in force, En exécution du Règlement 2016/425 du Parlement Européen et du Conseil du 9 mars 2016 relatif aux Equipements de Protection Individuelle et abrogeant la Directive 89/686/CEE et en respect du Programme de Certification Module B de l'Apave 'M.MEPI.45' en vigueur,

APAVE Sudeurope SAS, notified body identified under number 0082, awards the APAVE Sudeurope SAS, organisme notifié identifié sous le numéro 0082, attribue l'

### EU TYPE-EXAMINATION CERTIFICATE Attestation d'examen UE de type N° 0082/3234/079/08/19/0958

The following PPE type complies with the applicable essential health and safety requirements Le type de l'EPI suivant est conforme aux exigences essentielles de santé et de sécurité applicables

PPE: PPE category III - Filtering half mask to protect against particles

EPI: EPI de catégorie III - Demi-masque filtrant contre les particules

FFP2 NR Type:

Type

Trademark: SHENGJIE Marque commerciale

This certificate is awarded to the 2 following references La présente attestation est attribuée aux 2 références suivantes :

- SJ2278

- SJ2278V - Specificity: With exhalation valve

Spécificité : Avec soupape expiratoire

Manufacturer: JINHUA CITY SHENGJIE LABOR PRODUCTS FACTORY - Shankoufeng - Chisong

Fabricant Town - JINHUA CITY - Zhejiang Province - CHINA

Description: Filtering half mask to protect against particles FFP2 NR without or with silicone exhalation

> valve, limited to single shift use only. Shell shape half mask, designed with a nose slide in aluminium, one internal foam nose pad and two self-adjusting head harnesses in elastic strap, assembled by ultrasonic welding. Filtering media made of one layer of polypropylene, covered by an inner layer of polyester and an outer layer of non-woven

polypropylene (detailed description in EU type examination report 19.0200).

Demi-masque filtrant contre les particules FFP2 NR sans ou avec soupape expiratoire en silicone, limité à une Description:

utilisation sur un seul poste de travail. Demi-masque filtrant à forme coque, équipé d'une barrette nasale en aluminium, d'une mousse nasale interne, et de deux brides auto-réglables en sangle élastique, assemblées par soudure à ultrason. Média filtrant composé d'une couche de polypropylène, recouvert par une couche interne en polyester et d'une couche externe en polypropylène intissé (description détaillée dans le rapport d'examen UE

de type 19.0200).

Technical referential in use: EN 149:2001 + A1:2009

Référentiel technique utilisé

Date of signature (day/month/year): 22/08/2019

Date de signature (jour/mois/année)

22/08/2019 Date of issue (day/month/year):

Date de délivrance (jour/mois/année)

Date of renewal (day/month/year): first edition 1<sup>ère</sup> édition Date de renouvellement (jour/mois/année)

Date of expiry (day/month/year): 22/08/2024

Date d'expiration (jour/mois/année)

**PPE Certification Manager** Le Responsable de la Certification EPI Immaterial original





Scope available on Portée disponible sur www.cofrac.fr

Apave Sudeurope SAS Centre d'Essais et de Certification EPI 17. Boulevard Paul Langevin 38600 FONTAINE - France

For category III PPE, the certificate shall only be used in conjunction with one of the conformity assessment procedures referred in point c) of Article 19 Pour les EPI de catégorie III, l'attestation ne doit être utilisée qu'en liaison avec l'une des procédures d'évaluation de la conformité visées à l'article 19, point c).

The manufacturer shall inform the notified body of all modifications to the approved type and of all modifications of the technical documentation that may affect the conformity of the PPE with the applicable essential health and safety requirements or the conditions for validity of that certificate (article 7.2 – annex V)

Le fabricant informe l'organisme notifié de toutes les modifications du type approuvé et de toutes les modifications de la documentation technique qui peuvent remettre en cause la conformité de l'EPI aux exigences essentielles de santé et de sécurité applicables ou les conditions de validité de cette attestation (article 7.2 – annexe V)



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### **APAVE SUDEUROPE SAS**

PPE Testing and Certification Center 17 boulevard Paul Langevin 38600 Fontaine France

Tél.: 04 76 53 52 22

Contact:

Anaïs JAVET VIALA

anais.javetviala@apave.com

End of test: 18/04/2019

### TEST REPORT n°19.0200.001.1

EN 149:2001 + A1:2009

Respiratory protective device - Filtering half masks to protect against particles

FFP2 NR: SJ2278 / SJ2278V FFP1 NR: SJ2268 / SJ2268V

### Applicant:

SHANGAI MAGIC DEVELOPMENT CO. LTD.

Room 905 West Building, BHC Centre No. 2218 Hunan Road PUDONG SHANGHAI 201204 P.R. China

Report sent for the attention of Maggie ZHONG to the email address info@shmagic-safe.com.

The PPE Technical Manager:

Anaïs JAVET VIALA

Signature:

Immaterial original

ANAIS JAVET VIALA

Validation électronique



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# Respiratory protective device – Filtering half masks to protect against particles

### **SUMMARY**

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Respiratory protective device – Filtering half masks to protect against particles

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### 1 PURPOSE AND IDENTIFICATION ON THE EQUIPMENT

#### 1.1 Purpose

Achievement of tests according to European standard EN 149:2001 + A1:2009.

#### 1.2 Identification

Type of equipment: Filtering half masks to protect against particles

Manufacturer: JINHUA CITY SHENGJIE LABOR PRODUCTS FACTORY
 Classes / Models: FFP2 NR: SJ2278 / SJ2278V – FFP1 NR: SJ2268 / SJ2268V

#### 2 TECHNICAL REFERENTIAL USED

Tests have been carried out taking into account the provisions of European standard EN 149:2001 + A1:2009 "Respiratory protective device – Filtering half masks to protect against particles", to the exception of articles 9 and 10.

This test report is not an EU type examination report according to Regulation 2016/425 of 9<sup>th</sup> march 2016 "Personal Protective Equipment".

#### 3 USE OF REPORT

The reproduction of this report is authorized only under its complete shape.

The results of the present report relate only to tested object.

The report recipient undertakes not to use it for equipment or material that is not strictly identical to the one subject of this report.

This report is exclusively broadcasted under dematerialized shape.

#### **4 CONDITIONS OF TEST**

The tests were carried out according to the test methods defined in Article 8 "Testing" of European standard EN 149:2001 + A1:2009.

The samples have been tested in compliance with conditioning defined in article 8.3.

Laboratory temperature: 22°C ± 5°C

Laboratory relative humidity: 55%HR ± 30%HR

The measurement uncertainties are not taken into account for the assessment of conformity.



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# Respiratory protective device – Filtering half masks to protect against particles

### **5 REQUIREMENTS AND TEST RESULTS**

Article of		Co	nform	ity*	
the standard EN 149+A1	Content	Yes	No	N-A	Comments
Art. 7	Requirements				
Art 7.3	Visual inspection The visual inspection shall also include the marking and the information supplied by the manufacturer	✓			Date of tests: 18/04/2019
Art 7.4	Packaging 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.	✓			
Art 7.5	Material 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 simulated wearing treatment none of the particle filtering half masks shall have suffered mechanical failure of the facepiece or straps.  Three particle filtering half masks shall be tested.  When conditioned, 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.  - Tests carried out on both filtering half masks with and without exhalation valve.	<b>✓</b>			Date of tests: 20/03/2019
Art 7.6	Cleaning and disinfecting 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."  After cleaning and disinfecting the re-usable particle filtering half mask shall satisfy the penetration requirement of the relevant class.			<b>√</b>	



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# Respiratory protective device – Filtering half masks to protect against particles

Article of the		Coi	nform	ity*	
standard EN 149+A1	Content	Yes	No	N-A	Comments
Art 7.7	Practical performance 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. Where practical performance tests show the apparatus has imperfections related to wearer's acceptance, the test houses hall provide full details of those parts of the practical performance tests which revealed these imperfections.  - Tests carried out on both filtering half masks with and without exhalation valve.	<b>√</b>			Date of tests: 18/04/2019 any imperfections determined
	Here are the comments of the test subjects: a) head harness comfort b) security of fastenings c) field of vision d) any other comments reported by the wearer on request	✓ ✓ ✓ ✓ ✓			No comment No comment No comment No comment
Art 7.8	Finish of parts Parts of the device likely to come into contact with the wearer shall have no sharp edges or burrs			✓	



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# Respiratory protective device – Filtering half masks to protect against particles

Article of the		Coi	nform	ity*	
standard EN 149+A1	Content	Yes	No	N-A	Comments
Art 7.9	Leakage				
Art 7.9.1	Total inward leakage The laboratory tests shall indicate that the particle filtering half mask can be used by the wearer to protect with high probability against the potential hazard to be expected. The total inward leakage consists of three components: face seal leakage, exhalation valve leakage (if exhalation valve 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:  11 % for FFP2 (also valid for FFP1 requirement: 25 %)  and, in addition, at least 8 out of the 10 individual wearer arithmetic means for the total inward leakage shall be not greater than:  8 % for FFP2 (also valid for FFP1 requirement: 22 %)	<b>✓</b>			Date of tests: 18/04/2019  - Ref. SJ2278: 50 results ≤ 11% - Ref. SJ2278V: 49 results ≤ 11%  - Ref. SJ2278: 10 averages ≤ 8% - Ref. SJ2278V: 9 averages ≤ 8%

		Half mask SJ2278 without valve								
Exercise				Te	st subje	ct refere	nce			
1 2 3 4 5 6 7 8 9							10			
Walk	1,195	0,563	1,222	0,598	2,388	1,499	7,710	0,445	0,688	1,583
Left-Right	1,603	0,909	1,700	1,184	4,031	1,849	7,845	0,648	1,081	2,183
Up-Down	1,596	1,347	2,230	1,095	3,865	1,638	6,203	2,148	3,606	1,397
Alphabet	1,369	2,402	1,205	1,433	2,985	4,931	3,177	1,515	2,807	1,750
Walk	1,732	0,944	1,684	0,793	4,780	2,177	4,845	3,068	1,717	2,180
average	1,499	1,233	1,608	1,021	3,610	2,419	5,956	1,565	1,980	1,819

<sup>\*</sup> Total inward leakage values in %

		Half mask SJ2278V with valve								
Exercise	Test subject reference									
	11	12	13	14	15	16	17	18	19	20
Walk	1,788	4,948	0,249	3,081	1,222	0,461	4,265	1,571	6,694	2,031
Left-Right	1,998	6,083	0,377	4,715	1,558	0,858	5,362	8,113	9,533	2,223
Up-Down	2,384	9,924	0,729	3,352	2,486	0,773	5,884	13,700	10,356	2,852
Alphabet	1,705	5,704	0,944	3,198	1,245	1,762	4,941	2,210	6,404	4,247
Walk	2,123	5,937	0,321	2,691	1,804	0,890	6,284	3,542	8,325	4,265
average	2,000	6,519	0,524	3,407	1,663	0,949	5,347	5,827	8,262	3,124

<sup>\*</sup> Total inward leakage values in %



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## Respiratory protective device – Filtering half masks to protect against particles

Article of the					nform	ity*		
standard EN 149+A1		Content				N-A	Comments	
Art 7.9.2	Penetration of filter material The penetration of the filter of the particle filtering half mask shall meet the requirements of Table1.						Date of tests: 19/03/2019  All tests were carried out on	
	Tableau 1  Classification  FFP1  FFP2  FFP3	- Penetration of filte  Maximum penetrat  Sodium chloride test 95 l/min % max. 20 6 1					half mask with exhalation valve SJ2278V  → Tests validating reference SJ2278, and also FFP1 masks references SJ2268 and SJ2268V	

### Paraffin oil penetration of filter material tests results (%)

Conditioning		AR			SWT	
Penetration (3min)	0,475	0,560	0,580	0,610	0,420	0,630

Conditioning		MS+TC	
Exposure (120mg)	1,450	0,980	0,880
Penetration (3min) after storage	N/A	N/A	N/A

### Sodium chloride penetration of filter material tests results (%)

Conditioning		AR			SWT	
Penetration (3min)	0,104	0,165	0,091	0,124	0,680	0,116

Conditioning		MS+TC	
Exposure (120mg)	0,159	0,264	0,342
Penetration (3min) after storage	N/A	N/A	N/A

 $As\ Received\ (AR),\ Simulated\ Wearing\ Treatment\ (SWT),\ Mechanical\ Strength\ (MS),\ Temperature\ Conditioning\ (TC)$ 



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# Respiratory protective device – Filtering half masks to protect against particles

Article of		Со	nform	ity*	
the standard EN 149+A1	Content	Yes	No	N-A	Comments
Art 7.10	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.	<b>√</b>			Manufacturer statement
Art 7.11	Flammability 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 5 s after removal from the flame. The particle filtering half mask does not have to be usable after the test.	<b>✓</b>			Date of test: 19/04/2019
	<ul> <li>Tests carried out on both filtering half masks with and without exhalation valve.</li> </ul>				The mask doesn't burn 5s after removal from the flame
Art 7.12	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)  - Tests carried out on both filtering half masks with and without exhalation valve.	<b>✓</b>			Date of tests:  22/03/2019  CO <sub>2</sub> (%)  Without valve  0,70  0,75  With valve
Art 7.13	Head harness 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.	<b>✓</b>			0,75 0,80  Self-Adjusting harnesses
Art 7.14	Field of vision The field of vision is acceptable if determined so in practical performance tests	✓			See Art 7.7
Art 7.15	Exhalation valve(s) A particle filtering half mask may have one or more exhalation valve(s), which shall function correctly in all orientations	<b>✓</b>			(Not applicable for filtering half mask without valve)
	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.	<b>√</b>			
	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.	✓			Date of test: 20/03/2019
	When the exhalation valve housing is attached to the face blank, it shall withstand axially a tensile force of 10 N applied for 10s.	✓			Date of test: 03/04/2019



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## Respiratory protective device – Filtering half masks to protect against particles

Article of the			Conformity*					
standard EN 149+A1		Conf	tent	Yes	No	N-A	Comments	
Art 7.16	Breathing resi The breathing reparticle filtering hof Table 2.	esistances ap aalf masks and	shall meet the	<b>√</b>			Date of tests: 20/03/2019	
	Classification  FFP1 FFP2 FFP3  - Tests ca SJ2278  → Test resu	leau 2 – Breathing resistance    Maximum permitted resistance (mbar)						

### Breathing resistance tests results

Conditioning	AR				SWT					
Half mask	Without valve	Without valve	With valve	With valve	Without valve	Without valve	With valve	With valve		
at 30l/min	0,46	0,49	0,58	0,48	0,43	0,47	0,55	0,59		
at 95l/min	1,26	1,25	1,34	1,32	1,20	1,23	1,36	1,38		
at 160l/min	2,10	2,02	1,67	1,80	1,90	1,88	1,67	1,74		

Values in mbar

Conditioning		Т	С	300l/min during 30s Art 7.15				
Half mask	Without valve	Without valve	With valve	With valve	With valve	With valve	With valve	
at 30l/min	0,40	0,43	0,51	0,42	0,43	0,46	0,50	
at 95l/min	1,12	1,15	1,17	1,13	1,10	1,16	1,17	
at 160l/min	1,80	1,91	1,88	1,92	1,82	1,86	1,90	

Values in mbar



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## Respiratory protective device – Filtering half masks to protect against particles

Article of	d		nform	ity*	
the standard EN 149+A1			No	N-A	Comments
Art 7.17	Clogging			✓	Not requested

### 6 CONCLUSION

The filtering half masks against particles SJ2278, SJ2278V, SJ2268, SJ2268V comply with the requirements of European standard EN 149:2001 + A1:2009, only for the tests described in § 2 and § 5 and the classes specified on §1.2.

Note: neither instructions for use nor marking were evaluated according to the European standard EN 149:2001 + A1:2009.

### EC DECLARATION OF CONFORMITY

- 1. Personal protectiv equipment the filtering half mask SJ2278.
- 2. Name and adress of the manufacturer:

JINHUA CITY SHENGJIE LABOR PRODUCTS FACTORY-SHANKOUFENG-CHISONG TOWN-JINHUA CITY-ZHEJIANG PROVINCE-CHINA

3. This declaration of conformity is issued under the sole responsibility of the manufucturer:

JINHUA CITY SHENGJIE LABOR PRODUCTS FACTORY-SHANKOUFENG-CHISONG TOWN-JINHUA CITY-ZHEJIANG PROVINCE-CHINA

- 4.Object of the declaration is the filtering half mask SJ2278 for respiratory protection against particles.
- 5.The object of the declaration described in point 4 is in conformity with the relevant Union harmonisation legislation: REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment.
- 6.The filtering half mask FS-920 A FFP2 NR D for respiratory protection against particles meets the requirements of the harmonised standard EN 149:2001+A1:2009 used in order to confirm the conformity with the relevant Union harmonisation legislation: REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment.
- 7.The notified body:APAVE SUDEUROPE SAS Centre d'Essais et de Certification EPI 17, Boulevard Paul Langevin 38600 FONTAINE- France. notified body identified under number 0082 performed the EU TYPE-EXAMINATION and issued the EU type-examination certificate No.0082/3234/079/08/19/0958

Signed for and on behalf of: JINHUA CITY SHENGJIE LABOR PRODUCTS FACTORY-SHANKOUFENG-CHISONG TOWN-JINHUA CITY-ZHEJIANG PROVINCE-CHINA

Place and date of issue: