

SERIX FFP2 MASK

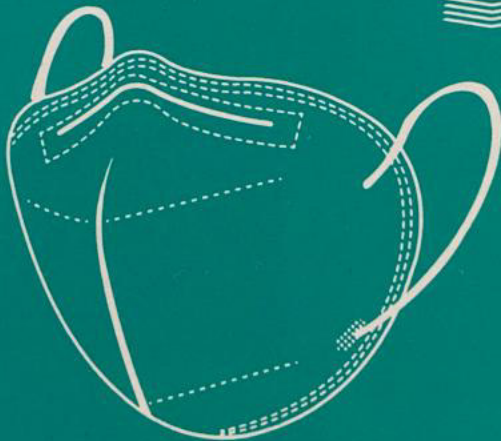
FULL COLOR

SERIX

WHITE

CE 1463

 5 LAYERS



BREATHABLE



EFFICIENT FILTRATION



ANTI-DUST ODOR

20 PCS
INDIVIDUALLY PACKAGED

SERIX FFP2 MASK

FULL COLOR

Particle filtering half mask FFP2 NR
Partikelfiltrierende Halbmaske FFP2 NR
Mască de filtrare particule tip FFP2 NR
Ημιμάσκα φιλτραρίσματος σωματιδίων FFP2 NR
Polomaska filtrující částice FFP2 NR
Полумаска за филтриране на частици FFP2 NR



Characteristics / Eigenschaften / Caracteristici / Χαρακτηριστικά / Vlastnosti / характеристики



5 Layers, BFE≥95%
5 Schichten, BFE≥95%
5 Straturi, BFE≥95%
5 στρώσεις, BFE≥95%
5 vrstev, BFE≥95%
5 слоя, BFE≥95%



Double nasal metal rod
Doppelnasen Metallstab
Tijă metalică nazală dublă
Διπλή ρινική μεταλλική ράβδος
Dvojitá nosní kovová tyč
Двоен носов метален прът



20 individually packaged masks
20 einzeln verpackte Masken
20 măști ambalate individual
20 ατομικές συσκευασμένες μάσκες
20 Jednotlivě balených masek
20 индивидуално опаковани маски



White
Weiß
Alb
άσπρο
Bijl
Бяла

Instructions / Anweisungen / Instrucțiuni / Οδηγίες / Instrucție / Инструкции



[EN] Make sure the metal nose clip is facing up.

[DE] Stellen Sie sicher, dass der Nasenclip aus Metall nach oben zeigt.

[RO] Asigurați-vă că clema metalică pentru nas este orientată în sus.

[GR] Βεβαιωθείτε ότι το μεταλλικό κλιπ μύτης είναι στραμμένο προς τα επάνω.

[CZ] Ujistěte se, že kovový nosní klip směřuje nahoru.

[BG] Уверете се, че металната скоба за носа е обръната нагоре.



[EN] Put on the mask and fasten the ear flaps.
[DE] Setzen Sie die Maske auf und befestigen Sie die Ohrenklappen.

[RO] Puneți masca și fixați clapetele pentru urechi.

[GR] Φοράστε τη μάσκα και στερεώστε τα πτερύγια του αυτιού.

[CZ] Nasadte masku a upevněte klapy na uši.

[BG] Сложете маската и затегнете ушите.



[EN] Adjust the mask to fit the face completely.

[DE] Passen Sie die Maske vollständig an das Gesicht an.

[RO] Ajustați masca pentru a se potrivi complet pe față.

[GR] Προσαρμόστε τη μάσκα ώστε να ταιριάζει πλήρως στο πρόσωπο.

[CZ] Upravte masku tak, aby zcela seděla na obličej.

[BG] Нагласете маската така, че да пасне напълно на лицето.



[EN] Press the nose clip against the nose bridge.

[DE] Drücken Sie die Nasenklammer gegen den Nasenrücken.

[RO] Apăsați clema pentru nas pe puntea nasului.

[GR] Πίστετε το κλιπ μύτης πάνω στη γέφυρα της μύτης.

[CZ] Přitlačte nosní sponu proti hřbetu nosu.

[BG] Притиснете щипката за носа към носа на носа.



[EN] Cover the mask with your hands, exhale, inhale and adjust the mask until no gas leaks out.

[DE] Bedecken Sie die Maske mit Ihren Händen, atmen Sie aus, atmen Sie ein und passen Sie die Maske an, bis kein Gas austritt.

[RO] Acoperiți masca cu mâinile, expirați, inspirați și reglați masca până când nu mai iese gaz.

[GR] Καλύψτε τη μάσκα με τα χέρια σας, εκπνεύστε, εισπνεύστε και προσαρμόστε τη μάσκα μέχρι να μην διαρρέεται αέριο.

[CZ] Zakryjte masku rukama, vydechněte, nadechněte se a upravte masku, dokud nebude unikat žádný plyn.

[BG] Покрийте маската с ръце, издишайте, вдишайте и регулирайте маската, докато не изтече газ.

LOT: 20211215

MW: 20211215

16: 20241215

SERIX



AC 114

**CERTYFIKAT ZGODNOŚCI Z TYPEM W OPARCIU O WEWNĘTRZNĄ KONTROLĘ
PRODUKCJI ORAZ NADZOROWANE KONTROLE PRODUKTU
W LOSOWYCH ODSTĘPACH CZASU (Moduł C2)**

**CONFORMITY TO TYPE CERTIFICATE BASED ON INTERNAL PRODUCTION CONTROL
PLUS SUPERVISED PRODUCT CHECKS AT RANDOM INTERVALS (Module C2)**

Nr
No. CW/PPER/7/04/2021Okres objęty certyfikatem
Period covered by the certificate

2021-04-02 – 2022-04-01

Dokumenty odniesienia:
General reference documents: Rozporządzenie UE 2016/425 dotyczące środków ochrony indywidualnej (PPE), załącznik VII
Regulation (EU) 2016/425 on personal protective equipment (PPE), Annex VIIPosiadacz certyfikatu
Certificate holder **Anhui Sunshine Home Textile Co., Ltd.**
Fangang Town, East Industrial Park,
Tongcheng City, Anhui Province, China.

Wyrób Product	Certyfikat badania typu UE EU Type-examination certificate	Normy zharmonizowane/Specyfikacje Harmonised standards/Specifications
Maska Ochronna , model: ZC-2021 (klasa FFP2 NR). <i>Protective Mask, Model: ZC-2021 (class FFP2 NR).</i>	CW/PPER/17/03/2021	PN-EN 149+A1:2010 EN 149:2001+A1:2009

A Roczna ocena zgodności wyrobów z normą/specyfikacją i badanym typem**Annual assessment of products compliance with standard/specification and type-examined**1 Miejsca i daty wizyt
Visit locations and dates

Anhui Sunshine Home Textile Co., Ltd.

2a Wyboru dokonał (imię, nazwisko)
Selection carried out by (Name)
Związek z jednostką notyfikowaną
Relationship to notified body

Zbigniew Orłowski

Ekspert Biura Certyfikacji Wyrobów i Osób
Products and Persons Certification Bureau Expert2b Przedstawiciel firmy (imię, nazwisko)
Company representative (Name)
Stanowisko
Position

Zhang Chi

Project Manager

3 Związek pomiędzy wizytowaną firmą a posiadaczem certyfikatu badania typu UE
Relationship of company visited to EU type-examination certificate holder Posiadacz certyfikatu
Certificate holder Miejsce produkcji
Production site Inne miejsce produkcji
Secondary production site Importer
Importer Dystrybutor
Distributor Sprzedaż detaliczna
Retail outlet Europejskie biuro firmy
European office of the company Inny:
Other:Wykaz środków ochrony indywidualnej
List of personal protection equipment Dostępny
Available Niedostępny
Not availableWybór próbek
Sample selection Wybrano – Nr egz./partii:
Selected – lot/batch No.

ZC-2021 & ZC-2021BE, BK, R, Y, NB, G – 03/2021

 Nie wybrano
Not selected4 Wybór próbek
Sample selection Prawidłowy
Correct Nieprawidłowy
IncorrectWyniki badań
Result of tests Pozytywne
Positive Negatywne
Negative5 Wybór próbki i badania wykazały zgodność z przywołanymi normami/specyfikacjami i badanym typem
Sample selection and testing demonstrated compliance with the reference standards/specifications and type-examined Tak
Yes Nie
NoNr jednostki notyfikowanej
No. of notified body

1463

Polski Rejestr Statków S.A.
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80-416 Gdańsk, Polandtel. (+48) (58) 346 17 00
fax (+48) (58) 346 03 92
e-mail: mailbox@prs.pl
www: http://www.prs.pl/

B Roczna ocena niejednorodności produkcji
Annual assessment of production non-homogeneity

1 Zastosowana metoda przy dokonaniu oceny
 Method employed to perform assessment

- Inspekcja procesu produkcyjnego i zapisów z prób
 On-site review of production and test records
- Audit kontroli procesu produkcyjnego
 On-site audit of production control
- Ocena niejednorodności produkcji poprzez ocenę jednej dużej próbki
 Production non-homogeneity assessed by selection of a single, large sample
- Ocena niejednorodności produkcji poprzez ocenę próbek w ciągu roku
 Production non-homogeneity assessed by assessment of samples throughout the year

2a Ocenę przeprowadził (imię, nazwisko) ----
 Assessment carried out by (Name)
 Związek z jednostką notyfikowaną ----
 Relationship to notified body

2b Przedstawiciel firmy (imię, nazwisko) ----
 Company representative (Name)
 Stanowisko ----
 Position

3 Na podstawie przeprowadzonej oceny stwierdzono, że proces produkcyjny jest jednorodny
 On the basis of the assessment, it has been concluded the production is homogeneous Tak Yes Nie No

C Podsumowanie
Conclusion

Uzasadnienie niezgodności
 Justification of non-conformities

Nie było żadnych niezgodności / There were no non-conformities.

Wnioski jednostki notyfikowanej
 Conclusions of notified body

Środek ochrony osobistej jest kompatybilny z typem określonym w certyfikacie badania typu UE.
 Personal protective equipment is compatible with the type defined in the EU type-examination certificate.

Uwagi
 Remarks

1. Półmaska filtrująca przeznaczone do jednorazowego użytku.
2. Dokumentacja techniczna zatwierdzona w języku angielskim.

1. Filtering Half Mask shall not be used for more than one shift.
2. Technical documentation approved in English.

D Załączniki
Attachments

Sprawozdania z wizyty Nr CW/ZO/PPER/38/2021 dated 2021-04-02.
 Visit reports No.

Sprawozdania z badań Nr Raport z badań nr CL/PCLB8/3/4/2021 wydany przez Laboratorium Badawcze PRS S.A. w dniu
 Test reports No. 2021-04-02.
 Test report no. CL/PCLB8/3/4/2021 issued by Testing Laboratory PRS S.A. on 2021-04-02.

Ogólna ocena z rocznego nadzoru
 Overall assessment of the annual surveillance

Pozytywna Positive Negatywna Negative



Zastępca Dyrektora Pionu Certyfikacji
 Certification Division Deputy Director

(Handwritten signature)

Przemysław Gałka

Gdańsk, 2021-04-02



AC 114

CERTYFIKAT BADANIA TYPU UE (MODUŁ B) EU TYPE-EXAMINATION CERTIFICATE (MODULE B)

Nr
No. CW/PPER/17/03/2021

ZAŚWIADCZA SIĘ,

że Polski Rejestr Statków S.A. (PRS) przeprowadził procedurę badania typu wymienionego niżej wyrobu i stwierdził jego zgodność z wymaganiami określonymi w załączniku V do Rozporządzenia Parlamentu Europejskiego i Rady (UE) 2016/425 (PPE) w sprawie środków ochrony indywidualnej oraz uchylecia dyrektywy Rady 89/686/EWG, ze zmianami.

THIS IS TO CERTIFY

that Polski Rejestr Statków S.A. (PRS) did undertake the EU type-examination procedure for the product identified below which was found to be in compliance with the requirements of Annex V to the Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC, as amended.

Wnioskodawca Applicant	Anhui Sunshine Home Textile Co., Ltd. Fangang Town, East Industrial Park, Tongcheng City, Anhui Province, China.
Producent Manufacturer	Anhui Sunshine Home Textile Co., Ltd. Fangang Town, East Industrial Park, Tongcheng City, Anhui Province, China.
Typ wyrobu Product type	Sprzęt ochrony układu oddechowego. Półmaski filtrujące do ochrony przed cząstkami. Półmaska filtrująca, przeciwpyłowa bez zaworu. <i>Respiratory protective devices. Filtering half masks to protect against particles. Type Dust Particle Filtering Half Mask without valve.</i>
Opis wyrobu Product description	Maska Ochronna , model: ZC-2021 (klasa FFP2 NR). <i>Protective Mask, Model: ZC-2021 (class FFP2 NR).</i>
Zastosowane normy Specified standards	PN-EN 149+A1:2010 EN 149:2001+A1:2009

Niniejszy certyfikat pozostaje ważny do czasu unieważnienia przy zachowaniu warunków uznania (patrz str. 2).
This certificate remains valid unless cancelled or revoked, provided the approval conditions (see page 2) are complied with.

Data ważności
Expiry date 2026-03-09



Dyrektor Pionu Certyfikacji
Certification Division Director

Michał Chudziński

Gdańsk, 2021-03-10



Nr jednostki notyfikowanej
No. of notified body

1463

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al. Gen. Józefa Hallera 126
80-416 Gdańsk, Poland

tel. (+48) (58) 346 17 00
fax (+48) (58) 341 77 69
e-mail: dc@prs.pl
www: <http://www.prs.pl>

Wykaz dokumentacji
List of documents

- Umowa w sprawie przeprowadzenia badania typu UE nr: 159/2021 z dnia 2021-03-08.
- Instrukcja użytkowania - zatwierdzona przez PRS S.A. dnia 2021-03-09.
- Ocena ryzyka - zatwierdzona przez PRS S.A. dnia 2021-03-09.
- Dokumentacja techniczna „Maski ochronnej, model: ZC-2021” - zatwierdzona przez PRS S.A. dnia 2021-03-09.
- Raporty z badań nr PTC21022604701C-EN01 z dnia 2021-03-05, oraz PTC21022604702C-EN01, PTC21022604703C-EN01, PTC21022604704C-EN01, PTC21022604705C-EN01, PTC21022604706C-EN01 i PTC21022604707C-EN01 z dnia 2021-03-06, wydane przez Precise Testing & Certification (Guangdong) Co., Ltd. z akredytacją CNAS L5772.
- Sprawozdanie z przeglądu PRS S.A. nr CW/ZO/PPER/25/2021 z dnia 2021-03-10.

- EU type examination contract No: 159/2021 dated 2021-03-08.
- Instruction of use - approved by PRS S.A. on 2021-03-09.
- Risk analysis - approved by PRS S.A. on 2021-03-09.
- Technical documentation "Protective Mask, Model: ZC-2021" - approved by PRS S.A. on 2021-03-09.
- Test reports No. PTC21022604701C-EN01 dated 2021-03-05 and PTC21022604702C-EN01, PTC21022604703C-EN01, PTC21022604704C-EN01, PTC21022604705C-EN01, PTC21022604706C-EN01, PTC21022604707C-EN01 dated 2021-03-06 issued by Precise Testing & Certification(Guangdong) Co., Ltd. with CNAS accreditation no. L5772.
- PRS S.A. Survey Report No. CW/ZO/PPER/25/2021 dated 2021-03-10.

Miejsca produkcji
(inne niż podane na stronie 1)
Places of production
(different than given on page 1)

Ograniczenia uznania
Approval limitations

- Dane techniczne:
 - maska ochronna z regulowanym klipsem na nos,
 - klips na nos montowany wewnątrz maski ochronnej,
 - maska ochronna wykonana z 5 warstwowej włókniny z filtrem z tkaniny,
 - maska ochronna wyposażona w zauszniki,
 - maska ochronna bez zaworu,
 - wymiary: 108 mm ± 5 mm x 158 mm ± 5 mm,
 - kolory:

oznaczenie modelu	maska ochronna	zauszniki	klips na nos	zawór
ZC-2021	biała	białe	n / d	n / d
ZC-2021BE	niebieska	białe	n / d	n / d
ZC-2021BK	czarna	białe	n / d	n / d
ZC-2021R	czerwona	białe	n / d	n / d
ZC-2021Y	żółta	białe	n / d	n / d
ZC-2021NB	granatowa	białe	n / d	n / d
ZC-2021G	zielona	białe	n / d	n / d

- Półmaska filtrująca przeznaczona do jednorazowego użytku.
- Dokumentacja techniczna zatwierdzona w języku angielskim.

- Specifications:
 - protective mask with adjustable nose clip,
 - nose clip mounted inside the protective mask,
 - protective mask made with 5 layers non-woven fabric with melt-blown fabric filter,
 - protective mask with ear loops,
 - protective mask without valve,
 - size: 108 mm ± 5 mm x 158 mm ± 5 mm,
 - colors:

particular model	protective mask	ear loops	nose clip	valve
ZC-2021	white	white	NA	NA
ZC-2021BE	blue	white	NA	NA
ZC-2021BK	black	white	NA	NA
ZC-2021R	red	white	NA	NA
ZC-2021Y	yellow	white	NA	NA
ZC-2021NB	navy blue	white	NA	NA
ZC-2021G	green	white	NA	NA

- protective mask shall not be used for more than one shift.
- Technical documentation approved in English.

Warunki uznania
Approval conditions

- Niniejszy certyfikat straci ważność po wprowadzeniu zmian lub modyfikacji w wyrobie bez uprzedniego uzgodnienia z PRS.
This certificate becomes invalid after changes or modifications to the product without prior agreement with PRS.
- Znak zgodności może być umieszczony na uznanym wyrobie oraz może być wystawiona deklaracja zgodności tylko pod warunkiem, że łącznie z badaniem typu UE zostanie przeprowadzona ocena zgodności produkcji pod nadzorem jednostki notyfikowanej, według załącznika VII lub VIII wymienionego wyżej rozporządzenia.
The Mark of Conformity may only be affixed to the above type approved product and a manufacturer's Declaration of Conformity issued provided the production is assessed under surveillance of a notified body according to Annex VII or VIII of the a/m Regulation.

Factory Name: Anhui Sunshine Home Textile Co., Ltd.
Address: Fangang Town East Industrial Park, Tongcheng City, Anhui Province, China

EU DECLARATION OF CONFORMITY

1. **Personal protective equipment:** Protective Mask (Models: ZC-2021, ZC-2021BE, ZC-2021BK, ZC-2021R, ZC-2021Y, ZC-2021NB, ZC-2021G), Class: FFP2 NR.

2. **Name and address of the manufacturer:**

Name: Anhui Sunshine Home Textile Co., Ltd.

Address : Fangang Town East Industrial Park, Tongcheng City, Anhui Province, China

3. **This declaration of conformity is issued under the sole responsibility of the manufacturer:** Anhui Sunshine Home Textile Co., Ltd.

4. **Object of the declaration is:** Protective Mask (Models: ZC-2021, ZC-2021BE, ZC-2021BK, ZC-2021R, ZC-2021Y, ZC-2021NB, ZC-2021G), Class: FFP2 NR for respiratory protection against particular.

5. **The object of the declaration described in point 4 is in conformity with the relevant Union Harmonization legislation:** REGULATION (EU) 2016/425 on personal protective equipment and repealing Council Directive 89/686/EEC.

6. Protective Mask (Models: ZC-2021, ZC-2021BE, ZC-2021BK, ZC-2021R, ZC-2021Y, ZC-2021NB, ZC-2021G) meets the FFP2 NR requirements of the harmonized standard EN 149:2001+2009 used in order to confirm the conformity with the relevant Union harmonization legislation: REGULATION (EU)2016/425 on personal protective equipment and repealing Council Directive 89/686/EE.

7. **The notified body:** NB 1463- POLSKI REJESTR STATKOW S.A..

8. **Certification Module:** EU TYPE EXAMINATION (Module B) + INTERNAL PRODUCTION CONTROL PLUS SUPERVISED CONTROL OF PRODUCTS AT ALEATORY INTERVALS (Module C2)

Issued by notified body: NB 1463- POLSKI REJESTR STATKOW S.A., with address: Al. Gen. Jozefa Hallera 126
80-416 GDANSK, Country : Poland

Signed for and on behalf of: Anhui Sunshine Home Textile Co., Ltd.

Fangang Town East Industrial Park, Tongcheng City, Anhui Province, China

Place and date of issue:

Tongcheng City, Anhui Province, China

2021


(Signature & Stamp)



扫描全能王 创建



中国认可
国际互认
检测
TESTING
CNAS L5772

Test Report

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

Product: Protective Mask
Report No.: PTC21022604701C-EN01
Client: Anhui Sunshine Home Textile Co., LTD.
Client Address: Fangang town east industrial park, Tongcheng City, Anhui Province, China
Manufacturer: Anhui Sunshine Home Textile Co., LTD.
Manufacturer Address: Fangang town east industrial park, Tongcheng City, Anhui Province, China
Contact: Zhang Chi
Model(s): ZC-2021
Classification: FFP2 NR
Date of Tests: 2021.03.01~2021.03.05

Signed for and on Behalf of PTC

Prepare by:

Arme

Checked by:

Jue

Approved by:

Jim Mo



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Precise Testing & Certification (Guangdong) Co., Ltd. (PTC)

Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China.
Tel: 86-769-38808222 Fax: 86-769-38826111 [http:// www.ptc-testing.com](http://www.ptc-testing.com)



Test Report

Report No.:PTC21022604701C-EN01

Issue Date: Mar.05, 2021

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Summary of assessment

Clause	Assessment
7.3 Visual inspection	NOT TESTED
7.4 Packaging	PASS
7.5 Material	PASS
7.6 Cleaning and disinfecting	N/A
7.7 Practical performance	PASS
7.8 Finish of parts	PASS
7.9.1 Total inward leakage	PASS
7.9.2 Penetration of filter material	PASS
7.10 Compatibility with skin	PASS
7.11 Flammability	PASS
7.12 Carbon dioxide content of the inhalation air	PASS
7.13 Head harness	PASS
7.14 Field of vision	PASS
7.15 Exhalation valve	N/A
7.16 Breathing resistance	PASS
7.17 Clogging	N/A
7.18 Demountable parts	N/A
9 Marking	NOT TESTED

Remark:

PASS: comply with requirement of standard

N/A: not application

NOT TESTED: the clause were not required

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Test Report

Report No.:PTC21022604701C-EN01

Issue Date: Mar.05, 2021

Page 3 of 14

Test Result:

Requirement	Test Result	Conclusion
7.3 Visual inspection The visual inspection shall also include the marking and the information supplied by the manufacturer.	Not tested	Not tested
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.	In accordance with the requirement.	Pass
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. Any material from the filter media released by the air flow through the filter shall not constitute a hazard or nuisance for the wearer. 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.	No mechanical failure after undergoing the conditioning described in 8.3.1, No collapse when conditioned in accordance with 8.3.1 and 8.3.2.	Pass
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.	Single shift use only	N/A
7.7 Practical performance The particle filtering half mask shall undergo practical performance tests under realistic conditions	No imperfections	Pass
7.8 Finish of parts 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

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Test Report

Report No.:PTC21022604701C-EN01

Issue Date: Mar.05, 2021

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7.9.1 Total inward leakage

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

FFP2, Test results are shown in Annex A Table 7.9.1-A&B

Pass

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.

7.9.2 Penetration of filter material

The penetration of the filter of the particle filtering half mask shall meet the requirements of Table 1.

	Sodium chloride test 95 l/min	Paraffin oil test 95 l/min
FFP1	≤ 20%	≤ 20%
FFP2	≤ 6%	≤ 6%
FFP3	≤ 1%	≤ 1%

FFP2, Test results are shown in Annex A Table 7.9.2.

Pass

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.

No irritation or any other adverse effect to health.

Pass

7.11 Flammability

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.

Test results are shown in Annex A Table 7.11.

Pass

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)

Test results are shown in Annex A Table 7.12.

Pass

7.13 Head harness

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

Head harness can be donned and removed easily, adjustable or self-adjusting and

Pass

The head harness shall be adjustable or self-adjusting and shall be

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sufficiently robust to hold the particle filtering half mask firmly in position and be capable of maintaining total inward leakage requirements for the device.

have sufficiently robust to hold the particle filtering half mask firmly.

7.14 Field of vision

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

Pass the practical performance tests.

Pass

7.15 Exhalation valve

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.

No exhalation valve

N/A

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

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

FFP2. Test results are shown in Annex A Table 7.16.

Pass

7.17 Clogging

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

Single shift use only.

N/A

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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

7.17.3 Penetration of filter material

	Sodium chloride test 95 l/min	Paraffin oil test 95 l/min
FFP1	≤ 20%	≤ 20%
FFP2	≤ 6%	≤ 6%
FFP3	≤ 1%	≤ 1%

7.18 Demountable parts

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

No demountable parts.

N/A

9 Marking

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

Not tested

Not tested

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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.

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

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Annex A: Summarization of Test Data

Table 7.9.1-A: Inward Leakage Test Data

Test specification: EN 149:2001+A1:2009 Clause 8.5

Subject	Sample No.	Condition	Walk (%)	Head Side/side (%)	Head up/down (%)	Talk (%)	Walk (%)	Mean (%)
Lv	1	A.R	5.5	4.9	2.8	5.8	6.5	5.1
Li	2	A.R	6.3	6.9	6.4	7.5	7.9	7.0
Zhong	3	A.R	2.9	2.9	2.6	2.6	2.7	2.7
Xu	4	A.R	4.0	2.5	2.5	2.3	2.1	2.7
Ma	5	A.R	4.0	2.6	2.9	3.7	3.6	3.4
Chen	6	T.C	4.1	3.3	2.9	2.7	2.2	3.0
Chen	7	T.C	2.0	2.7	2.6	2.7	2.8	2.6
Zhuo	8	T.C	2.3	2.2	3.1	4.1	2.5	2.8
Chen	9	T.C	7.1	5.2	4.7	4.2	4.6	5.2
Zhang	10	T.C	3.5	3.0	2.9	3.3	4.1	3.4

Table 7.9.1-B: Facial dimension

Subject	Face Length	Face Width	Face Depth	Mouth Width
Lv	113	139	104	53
Li	120	135	112	55
Zhong	108	135	106	56
Xu	120	150	120	70
Ma	130	170	130	80
Chen	110	160	90	40
Chen	115	145	110	50
Zhuo	103	146	100	50
Chen	110	145	95	40
Zhang	144	141	101	54

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Table 7.9.2: Penetration of filter material

Test specification: EN 149:2001+A1:2009 Clause 8.11

Aerosol	Condition	Sample No.	Penetration (%)	Assessment
Sodium chloride test	As received	11	0.1	Pass
		12	0.1	
		13	0.1	
	Simulated wearing treatment	14	0.1	
		15	0.2	
		16	0.2	
	Mechanical strength + Temperature conditioned	17	0.1	
		18	0.1	
		19	0.1	
Paraffin oil test	As received	20	0.1	
		21	0.1	
		22	0.1	
	Simulated wearing treatment	23	0.1	
		24	0.1	
		25	0.1	
	Mechanical strength + Temperature conditioned	26	0.4	
		27	0.3	
		28	0.4	

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Table 7.11: Flammability

Test specification: EN 149:2001+A1:2009 Clause 8.6

Condition	Sample No.	Result	Assessment
As received	29	No burn	Pass
	30	No burn	
Temperature conditioned	31	No burn	
	32	No burn	

Table 7.12: Carbon dioxide content of the inhalation air

Test specification: EN 149:2001+A1:2009 Clause 8.7

Condition	Sample No.	Result (%)	Assessment
As received	33	0.05	Pass
	34	0.05	
	35	0.05	
Mean value:		0.05	

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Table 7.16: Breathing resistance (mbar)

Test specification: EN 149:2001+A1:2009 Clause 8.9

As received	Flow Rate		36					37					38				
	Inhalation	30 l/min	0.37					0.36					0.38				
		95 l/min	1.21					1.21					1.25				
Exhalation	160 l/min	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	
		1.77	1.77	1.73	1.77	1.71	1.74	1.78	1.69	1.70	1.72	1.74	1.78	1.78	1.72	1.74	
Simulated wearing treatment	Flow Rate		39					40					41				
	Inhalation	30 l/min	0.34					0.34					0.33				
		95 l/min	1.23					1.18					1.22				
Exhalation	160 l/min	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	
		1.68	1.69	1.71	1.67	1.68	1.69	1.69	1.66	1.66	1.65	1.68	1.71	1.67	1.67	1.67	
Temperature conditioned	Flow Rate		42					43					44				
	Inhalation	30 l/min	0.32					0.32					0.32				
		95 l/min	1.11					1.08					1.10				
Exhalation	160 l/min	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	
		1.58	1.55	1.56	1.54	1.54	1.54	1.53	1.53	1.56	1.53	1.57	1.57	1.56	1.57	1.54	
Assessment	Pass																

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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Test	Uncertainty
Total inward leakage	3.8%
Penetration of filter material(NaCl)	3.5%
Penetration of filter material(Paraffin oil)	4.2%
Carbon dioxide content of the inhalation air	4.5%
Breathing resistance(30L/min)	5.2%
Breathing resistance(95L/min)	5.4%
Breathing resistance(160)L/min)	6.0%

Photo(s) of Sample:



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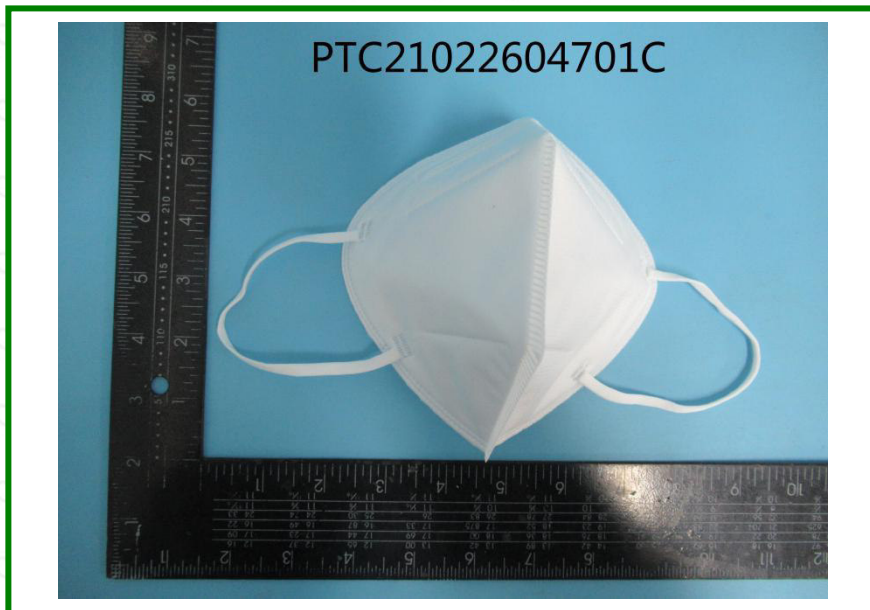


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