http://airqueenmask.com

Powerful filtering, excellent permeability

AirQUEEN Nano Mask

Masks are a must!
Introducing easy-to-breathe mask with exceptional filter

CE
FFP2

http://airqueenmask.com

MADE IN KOREA

Made with our own proud technology-AirQUEEN Nano Mask

- Nanofiber Filter Manufactured by: LEMON Co., Ltd.
- Mask Manufacture & Distribution: TOPTEC Co., Ltd.

http://airqueenmask.com

Breathing New Technology, Nanofiber

Nanofiber Filter

Nano fibers are only 1 nanometer, 1 billionth of a meter, in thickness. Nanofiber is a new material made by building these fibers sterically for a fishnet structure that has better permeability, blockability, and durability than any fiber ever invented.

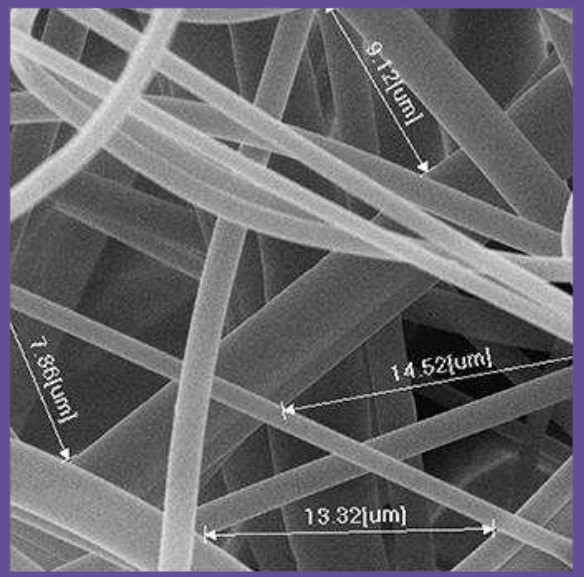
Permeability Blockability Durability

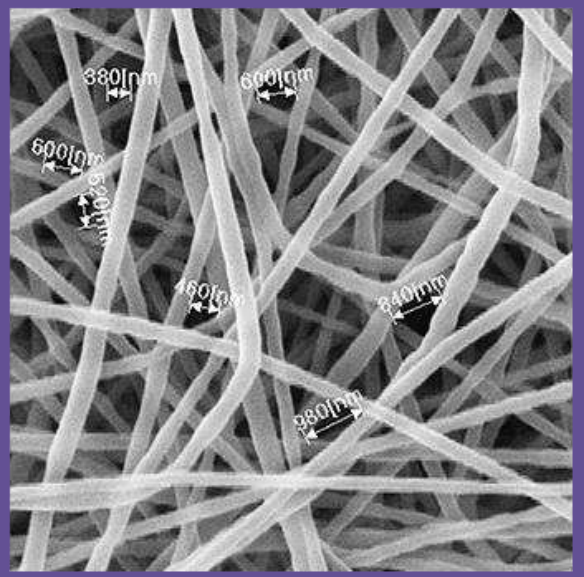
http://airqueenmask.com

Nanofiber Filter has a different
fiber thickness / space between fibers / filtering method
from the existing electrostatic filter

Melt-Blown Filter
5,000 times
enlarged

The fiber is thick
Average space between the fibers is over 10μm





Nanofiber Filter
15,000 times
enlarged

Very thin, nano thickness
Average space between the fibers is 1.0μm, with self-filtering

http://airqueenmask.com

The Nanofiber Filter from LEMON Co., ltd is a cutting-edge technology applied to global brands and products

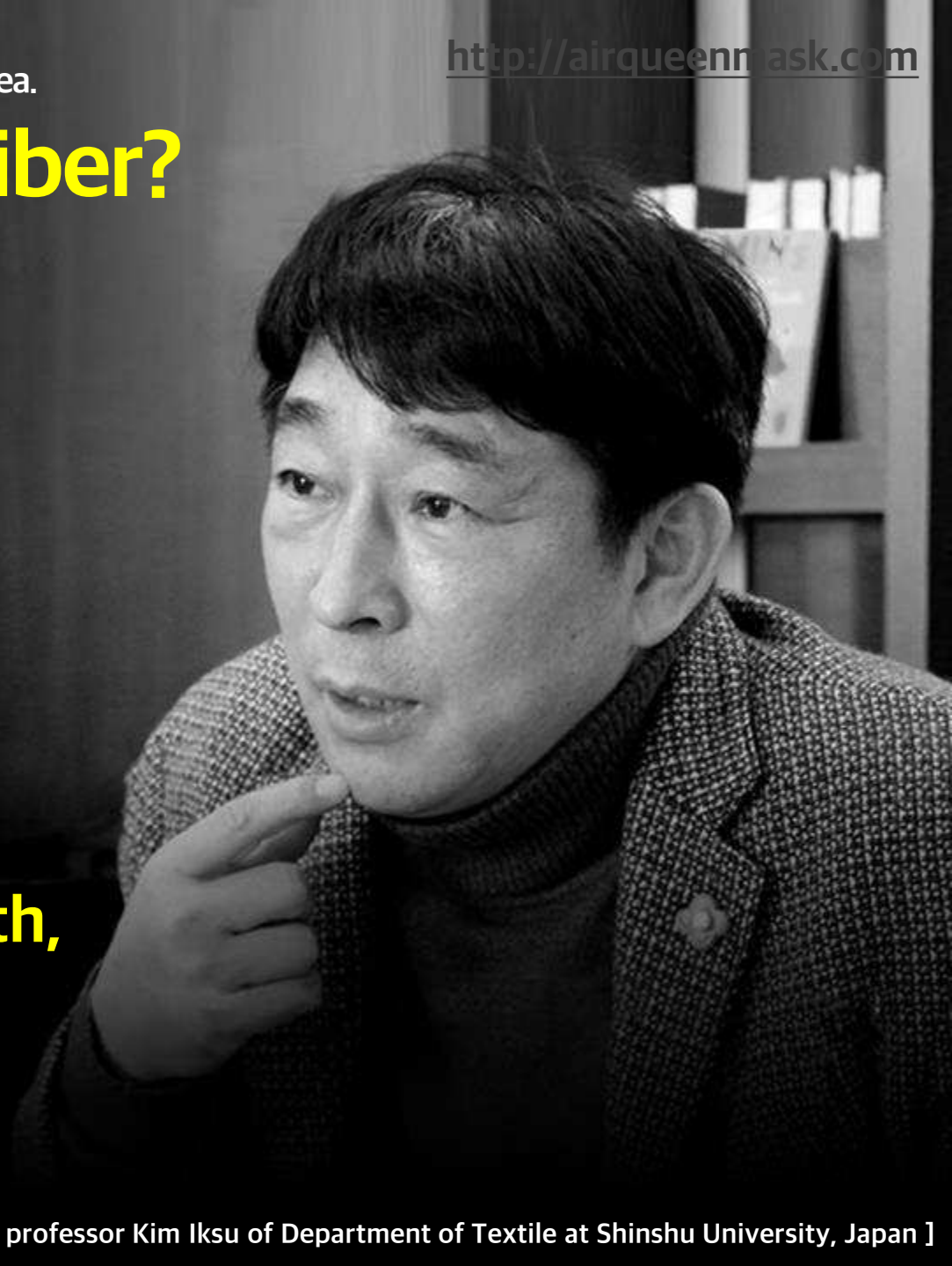
It is exclusively distributed to THE NORTH FACE as the brand FUTURELIGHT.

It is also used for RENERGIE mask pack from LANCOME that touches the skin directly.

This technology is used for smart devices that sends sounds but needs protection against dust and moisture.

We asked professor Kim Iksu, the most renowned professor in the fiber research area.

What kind of material is Nanofiber?



The thickness of a nano fiber is only a thousandth of a strand of hair.
Nanofiber is a material made by building these fibers sterically for a fishnet structure,
and nanofiber of 85% processing rate has both permeability and blockability.

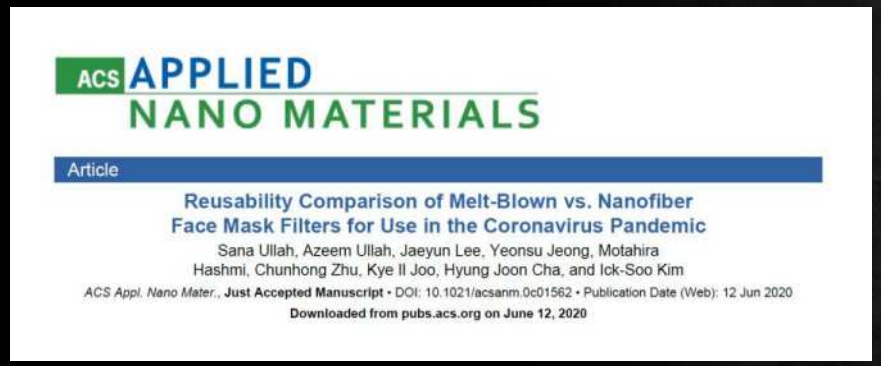
The Nanofibers of LEMON have consistent thickness and pore size.
This means the ratio of the pores in the general area becomes very high,
which is relevant to permeability.

Because it touches the nose and the mouth, this fiber is very appropriate for masks where permeability is important

[From interview with professor Kim Iksu of Department of Textile at Shinshu University, Japan]

We asked professor Kim Iksu, the most renowned professor in the fiber research area.

Is it possible to reuse Nanofiber masks?



ACS APPLIED NANO MATERIALS

Article

Reusability Comparison of Melt-Blown vs. Nanofiber Face Mask Filters for Use in the Coronavirus Pandemic

Sana Ullah, Azeem Ullah, Jaeyun Lee, Yeonsu Jeong, Motahira Hashmi, Chunhong Zhu, Kye Il Joo, Hyung Joon Cha, and Ick-Soo Kim

ACS Appl. Nano Mater., **Just Accepted Manuscript** • DOI: 10.1021/acsanm.0c01562 • Publication Date (Web): 12 Jun 2020

Downloaded from pubs.acs.org on June 12, 2020

When MB filter was sprayed with ethanol and reused, the filtration efficiency was reduced by up to 64%.
On the other hand, the nanofiber filter retained almost the same efficiency as the first time even after 10 reuses.
This difference is due to the decrease in static electricity in the filter after spraying.
Unlike MB fibers, nanofibers are filtered according to the morphological characteristics
and nano size spiracle of the surface, so efficiency is maintained after cleaning.

As a result of joint research by POSTECH and Shinshu University in Japan,
it was found that the efficiency of nanofiber masks remains almost the same even after 10 reuses after spraying ethanol.

[Download PDF of research results : https://pubs.acs.org/doi/10.1021/acsanm.0c01562]

Long-lasting freshness from morning to evening!

The effectiveness of electrostatic masks decreases with each breath due to the moisture
Nanofiber Filter has great permeability, so you can feel fresh even after a long term use


http://airqueenmask.com
Excellent filtering and permeability of Nanofiber
Nanofiber smart filter
blocks pollutants and enables easier breathing

http://airqueenmask.com

Wearing mask all day causes skin trouble (C Newspaper)

Must wear permeable masks (M Newspaper)

Pimple breaks out due to wearing masks
(National Health Insurance Service blog)

If you care about the skin, permeability is even more important

There is moisture in our respiratory system
If a mask has bad permeability, the moisture from within cannot escape, which causes eczema

If you wear a mask for a long time, you really need a permeable mask

Because we need to wear it all day, we made it lighter.

http://airqueenmask.com

AirQUEEN Nano mask 4.38g

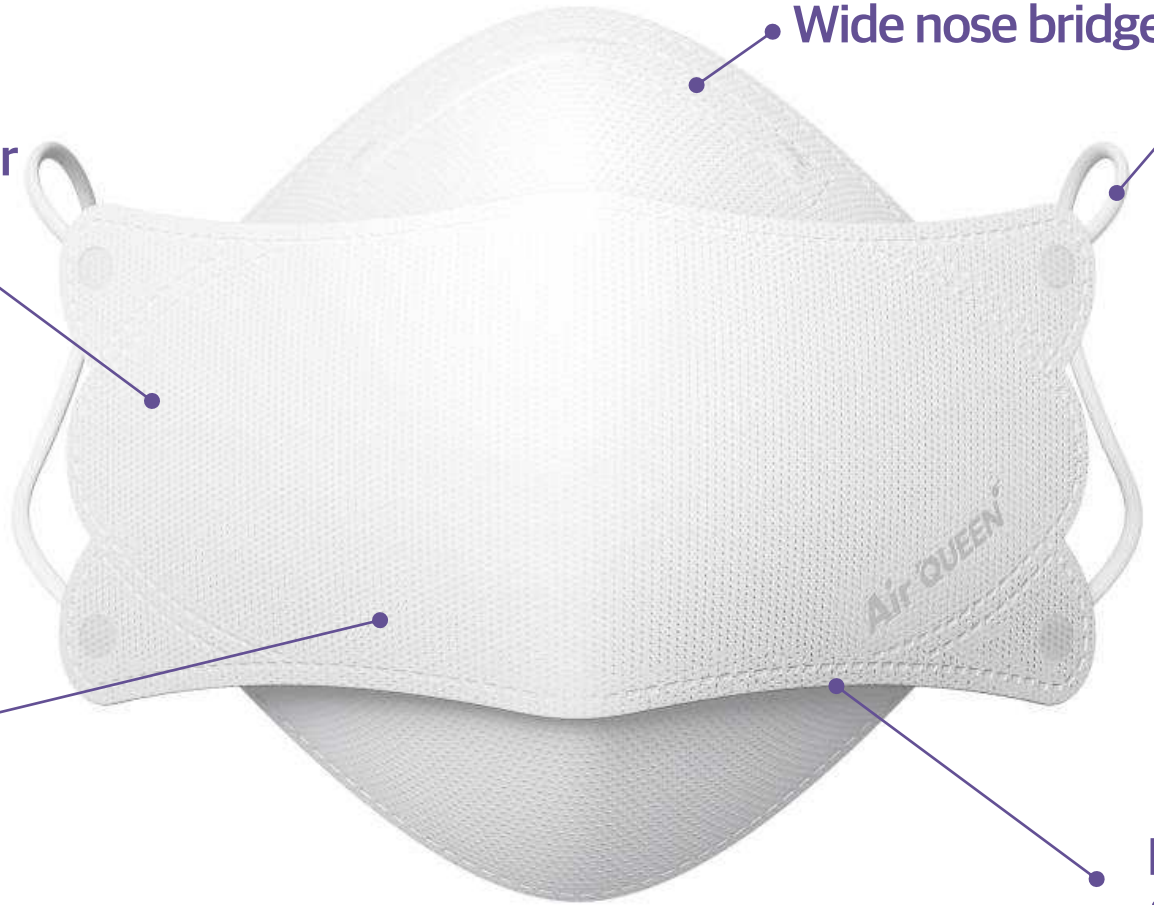
Lighter than a sheet of paper, so you won't even realize wearing it!

※ a sheet of paper = 4.72g

http://airqueenmask.com

3D ergonomic design to fit perfectly on all face types.

Nose bridge prevents sliding or fogging up.



Wide nose bridge

Comfortable elastic ear band

Nanofiber-
a breathing smart filter

High permeability
NO skin trouble

Light weight
for all-day wear

http://airqueenmask.com

Individually wrapped for easy carrying and using

UNIVERSAL CERTIFICATION
NB 2163

EU TYPE EXAMINATION CERTIFICATE

Certificate No: 2163-PPE-1433

Respiratory protective devices, filtering half masks to protect against particles manufactured by

TOPTEC CO., LTD.

140-22, Cheomdangieop 5-ro, Sandong-myeon, Gumi-si, Gyeongsangbuk-do, Republic of Korea

are tested and evaluated according to

EN 149:2001 + A1:2009 Respiratory Protective Devices - Filtering Half Masks to Protect Against Particles - Requirements, Testing, Marking

Based on the type examination conducted with the evaluation of test reports, technical file according to Personal Protective Equipment Regulation (EU) 2016/425 Annex 5, it is approved that the product meets the requirements of the regulation.

Product Definition

Brand Name: Air Queen Model: Breeze Mask
Filtering half mask
Classification: FFP2 NR

Here by the manufacturer is allowed to use notified body number (2163) and can fix CE mark, as shown below, on the Category III product models given above, with;

- Issuing an appropriate EU Declaration of Conformity according to Personal Protective Equipment Regulation (EU) 2016/425 Annex 9.
- Ongoing successful performance in fulfilment of the requirements set out in Personal Protective Equipment Regulation (EU) 2016/425 and harmonised standards, ensured by assessments based on Annex 7 (Module C2) or Annex 8 (Module D) of the regulation no later than 1 year from the beginning of serial production

This certificate is initially issued on 11/09/2020 and will be valid for 5 years, if there is no change in the relevant harmonised standard affecting the essential health and safety requirements.

CE 2163

Sinir KACMAZ
UNIVERSAL CERTIFICATION
Director

UNIVERSALCERT.COM

Certificate No: 2163-PPE-1433

Respiratory protective devices, filtering half masks to protect against particles manufactured by

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EN 149:2001 + A1:2009 Respiratory Protective Devices - Filtering Half Masks to Protect Against Particles - Requirements, Testing, Marking

Product Definition

Brand Name: Air Queen Model: Breeze Mask
Filtering half mask
Classification: FFP2 NR

http://airqueenmask.com

CE FFP2

AirQUEEN Nano Mask is a FFP2 grade level mask that has officially been certified by European Commission

- Certificate Holder : TOPTEC CO., LTD.
- Certificate No : 2163-PPE-1433
- Model Name : Air Queen / Breeze Mask FFP2 NR

http://airqueenmask.com

FDA

AirQUEEN Nano Mask is registered with FDA 510(k).

FDA Establishment Registration & Device Listing

THIS ACKNOWLEDGES THAT

TOPTEC CO., LTD.

WITH OWNER/OPERATOR NUMBER 10072713

HAS BEEN REGISTERED AS OWNER/OPERATOR FOR FOLLOWING ESTABLISHMENTS:

TOPTEC CO., LTD. located at 122 Asanvalley-Ro, Dunpo-Myeon, Asan-Si Chungcheongnamdo, KR 310409
Registration Number: 3016790437

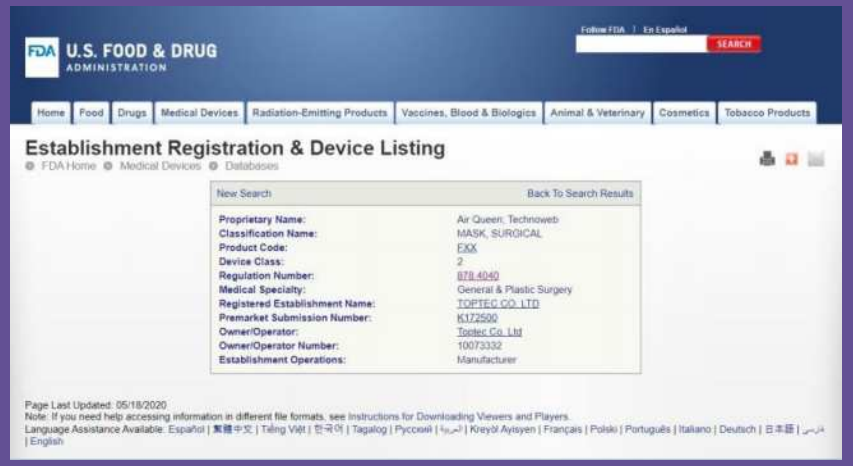
NANO FILTER, INC. located at 3833 McGowen St. Long Beach , CA 90808
Registration Number: 3016766213

LIME CO., LTD. located at 212-27 Hanppuri-1-Gil, Ujeong-Eup, Hwaseong-Si Gyeonggido, KR 18561
Registration Number: Active and Awaiting Assignment of Registration Number

AND OWNER OF FOLLOWING DEVICE:

Proprietary Name: AIR QUEEN, AIR QUEEN BREEZE, NANO MASK, PURE MASK, TECHNO WEB, TECHNOWEB
Classification Name: MASK, SURGICAL
Product Code: FXX
Device Class: 2
Premarket Submission Number: K172500

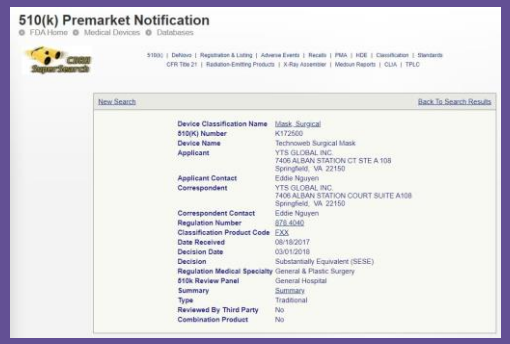
THIS REGISTRATION IS VALID UNTIL 12/31/2020.



U.S. FOOD & DRUG ADMINISTRATION

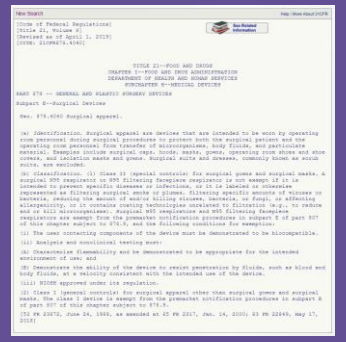
Establishment Registration & Device Listing

Proprietary Name:	Air Queen; Technoweb
Classification Name:	MASK, SURGICAL
Product Code:	FXX
Device Class:	2
Regulation Number:	878.4040
Medical Specialty:	General & Plastic Surgery
Registered Establishment Name:	TOPTEC CO. LTD
Premarket Submission Number:	K172500
Owner/Operator:	Toptec Co. Ltd
Owner/Operator Number:	10073332
Establishment Operations:	Manufacturer



510(k) Premarket Notification

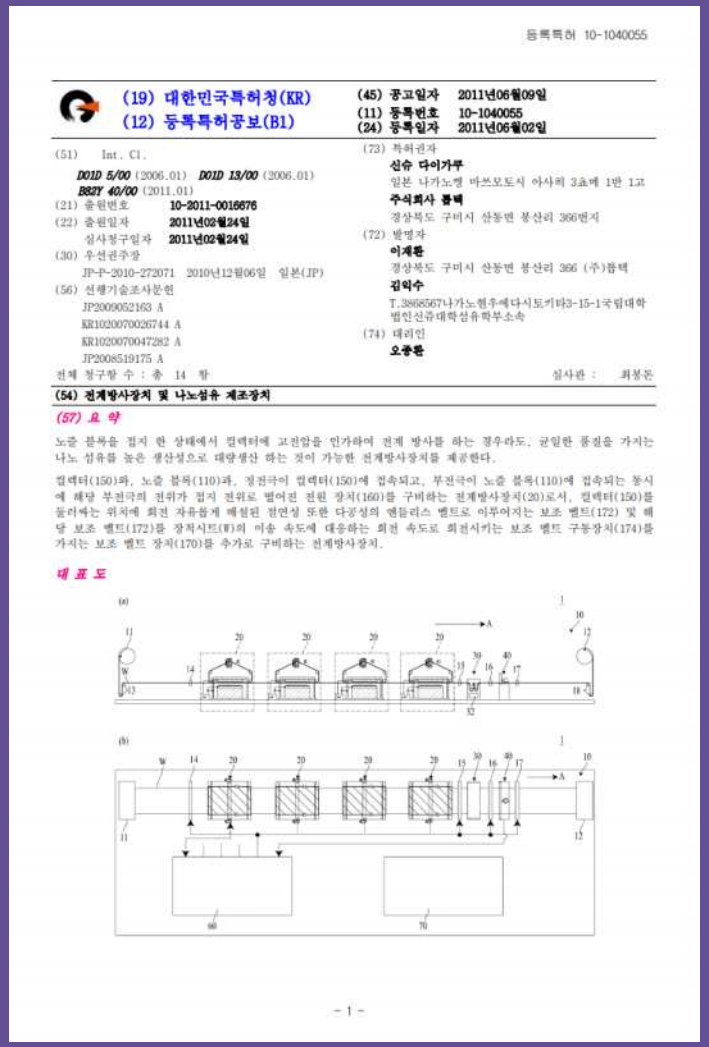
Device Classification Name	Mask, Surgical
510(K) Number	K172500
Device Name	Technoweb Surgical Mask
Applicant	YTS GLOBAL INC 7406 ALBAN STATION CT STE A 108 Springfield, VA 22150
Applicant Contact	Eddie Nguyen
Correspondent	YTS GLOBAL INC 7406 ALBAN STATION COURT SUITE A108 Springfield, VA 22150
Correspondent Contact	Eddie Nguyen
Regulation Number	878.4040
Classification Product Code	FXX
Date Received	08/18/2017
Decision Date	03/01/2018
Decision	Substantially Equivalent (SESE)
Regulation Medical Specialty	General & Plastic Surgery
510k Review Panel	General Hospital
Summary	Summary
Type	Traditional
Reviewed By Third Party	No
Combination Product	No



- Classification : Mask, Surgical
- Device Class : Class2
- 510(K) Number : K172500

PATENT

The Nanofiber Filter of AirQUEEN Nano Mask is manufactured with patent technology.



등록특허 10-1040055

(19) 대한민국특허청(KR)
(12) 등록특허공보(B1)

(45) 공고일자 2011년06월09일
(11) 등록번호 10-1040055
(24) 등록일자 2011년06월02일

(51) Int. Cl.
D01D 5/00 (2006.01) *D01D 13/00* (2006.01)
B82Y 40/00 (2011.01)
(21) 출원번호 10-2011-0016676
(22) 출원일자 2011년02월24일
심사청구일자 2011년02월24일
(30) 우선권주장
JP-P-2010-272071 2010년12월06일 일본(JP)
(56) 선행기술조사문헌
JP2009052163 A
KR1020070026744 A
KR1020070047282 A
JP2008519175 A

(73) 특허권자
신슈 다이가쿠
일본 나가노켄 마쓰모토시 아사히 3쵸메 1반 1고
주식회사 폼텍
경상북도 구미시 산동면 봉산리 366번지
(72) 발명자
이계훈
경상북도 구미시 산동면 봉산리 366 (주)폼텍
김익수
T.3868567나가노현우에다시토키타3-15-1국립대학법인신쥬대학섬유학부소속
(74) 대리인
오종훈

전체 청구항 수 : 총 14 항 심사관 : 최봉돈

(54) 전계방사장치 및 나노섬유 제조장치

(57) 요 약

노즐 블록을 접지 한 상태에서 컬렉터에 고전압을 인가하여 전계 방사를 하는 경우라도, 균일한 품질을 가지는 나노 섬유를 높은 생산성으로 대량생산 하는 것이 가능한 전계방사장치를 제공한다.

컬렉터(150)와, 노즐 블록(110)과, 정전극이 컬렉터(150)에 접속되고, 부전극이 노즐 블록(110)에 접속되는 동시에 해당 부전극의 전위가 접지 전위로 떨어진 전원 장치(160)를 구비하는 전계방사장치(20)로서, 컬렉터(150)를 둘러싸는 위치에 회전 자유롭게 배설된 절연성 또한 다공성의 엔들리스 벨트로 이루어지는 보조 벨트(172) 및 해당 보조 벨트(172)를 장착시트(W)의 이송 속도에 대응하는 회전 속도로 회전시키는 보조 벨트 구동장치(174)를 가지는 보조 벨트 장치(170)를 추가로 구비하는 전계방사장치.

대 표 도

- 1 -

- Patent Registration no. : 10-1040055
- Name of Invention:
  An electrospinning device and an apparatus for manufacturing nano-fiber

Cutting-edge technology that mass-produces consistent nano fiber filters
Selected as one of 100 technologies to lead Korea in 2020
Approximately 50 patents around the world

ISO

The Nanofiber Filter of AirQUEEN Nano Mask is produced in a clean and sanitary facility.


GERMAN CERT
Quality Management System Certificate

㈜레몬

ISO 9001:2015

GERMAN CERT
QUALITY MANAGEMENT SYSTEM

Proven suitable for ISO 9001 quality management system


GERMAN CERT
Environmental Management System Certificate

㈜레몬

ISO 14001:2015

GERMAN CERT
ENVIRONMENTAL MANAGEMENT SYSTEM

Proven suitable for ISO 14001 environment management system

The Nanofiber Filter used for AirQUEEN Masks is produced in a facility approved for environment management system, so it is safe and sanitary.

http://airqueenmask.com

SGS

The Nanofiber Filter of AirQUEEN Nano Mask is approved by European SGS, REACH, and RoHS, and therefore is safe.

SGS

Test Report No. F690101/LF-CTSAYGA18-00327 Issued Date: 2018. 01. 16. Page 1 of 17

LEMON CO., LTD.
1105-65 Sanho-daero, Sandong-myeon
Gumi-si, Gyeongbuk
Korea

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

SGS File No.	:	AYGA18-00327
Product Name	:	Nano membrane (sanitary pad)
Item/Part Name	:	N/A
Received Date	:	2018. 01. 09
Test Period	:	2018. 01. 09. ~ 2018. 01. 16.
Test Requested	:	One hundred-Seventy four (174) substances in the Candidate List of Substances of Very High Concern (SVHC) for authorization published by European Chemicals Agency (ECHA) on July 7, 2017 regarding Regulation (EC) No 1907/2006 concerning the REACH. Eight (8) substances in the Public Consultation List of potential Substances of Very High Concern (SVHC) published by European Chemicals Agency (ECHA) on Sep 5, 2017 regarding Regulation (EC) No 1907/2006 concerning the REACH.
Test Method	:	Please refer to next page(s).
Test Result(s)	:	Please refer to next page(s).
Summary	:	According to the specified scope and evaluation screening, the test results of SVHC are ≤ 0.1% (w/w) in the articles of the submitted sample.

SGS Korea Co., Ltd

Jeff Jang / Chemical Lab Mgr

RoHS

Metal material and harmful compound not detected

REACH COMPLIANCE

Organic solvent and compound not detected

- Cadmium N/D
- Lead N/D
- Mercury N/D
- Hexavalent chromium N/D
- Other 182 categories N/D

http://airqueenmask.com

KAKEN

Nanofiber filter is approved its safety by KAKEN which is Japanese Certification Authority.


KAKEN

試験報告書

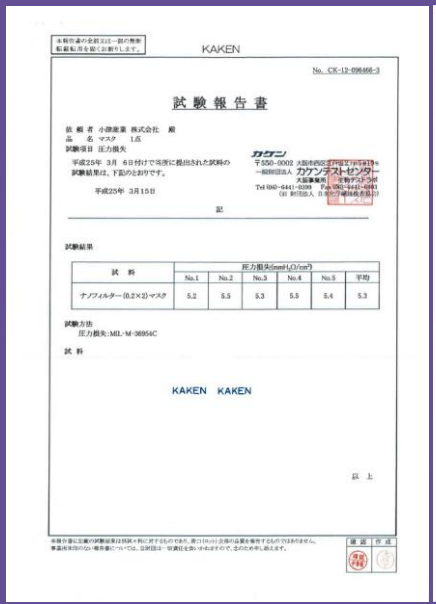
KAKEN KAKEN

KAKEN KAKEN


KAKEN

試験報告書

KAKEN KAKEN


KAKEN

No. CK-12-096666-3

試験報告書

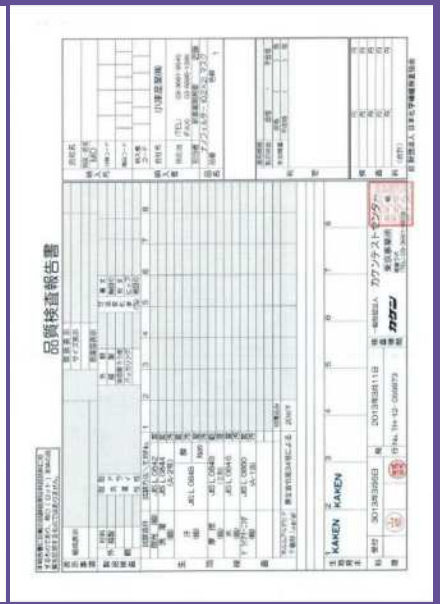
試料	圧力損失(mmH2O/cm2)					
	No.1	No.2	No.3	No.4	No.5	平均
ナノフィルター(0.2×2)マスク	5.2	5.5	5.3	5.5	5.4	5.3

試験方法
圧力損失:MIL-M-36954C

試料

KAKEN KAKEN

以上


品質検査報告書

Approved for safety by KAKEN TEST CENTER which is a Global Certification Authority evaluate a quality and a performance of textile products, household goods, and functional high-tech materials as an analyze center of JSTIIF.

confidential

http://airqueenmask.com

KCL

This is an industrial product that passed the tests of KCL and is [currently in process] of being approved by the MFDS.

Applied for the KF approval at the MFDS early April of 2020
after passing the test done by KCL, a testing institute designated by the MFDS.

It is manufactured with the same technology as Technoweb Disposable dustproof mask (KF94) from FTENE, the subsidiary company of TOPTEC, but if the manufacturer or brand is changed, the approval from the MFDS needs to be renewed, and until then, it cannot be publically distributed.

However, after the KF certification, 80% of the supply will be distributed as public, so there might be a shortage.

Fiti

As a result of testing at Fiti, a testing agency designated by MFDS and obtained an appropriate level of evaluation for KF94 in the test.

fiti

(08511) 302-ho, 254, Beotkkot-ro, Geumcheon-gu, Seoul, Korea
Tel : 02-2113-8135 Fax : 02-2113-8130

TEST REPORT FOR REFERENCE ONLY

APPLICANT : SOOMLAB

REPORT NO. : N271-20-00801
SAMPLE RECEIVED DATE : 2020-04-17
TEST STARTED DATE : 2020-04-17
REPORT ISSUED DATE : 2020-05-13
PAGE : 1 OF 5

DESCRIPTION : ONE(1) PIECE OF SUBMITTED CUTTING SAID TO BE MASK.

ITEM : AIRQUEEN NANO MASK, NANOFIBER FILTER

TEST CONDUCTED : AS REQUESTED BY THE APPLICANT, FOR DETAILS PLEASE SEE ATTACHED PAGES.

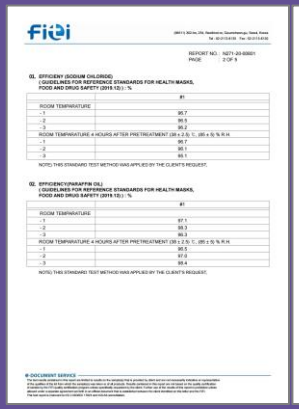
PREPARED AND CHECKED BY
FOR FITI
Kwang Jae Park
GWANG JAE, PARK
QUALITY MANAGER

AUTHORIZED BY
FOR FITI
Jun Je Goo
JE-GOO JUN
PRESIDENT

■ Report Verification No.: Y4V9-GL2E-LDRU ■
(You can see the authenticity of your test report through the above "Report Verification No." at FITI homepage.)

e-DOCUMENT SERVICE

The test results contained in this report are limited to results on the sample(s) that is provided by client and are not necessarily indicative or representative of the qualities of the lot from which the sample(s) was taken or of all products. Results contained in this report are not based on the quality certification of sample by the FITI quality certification program unless specifically requested by the client. Further use of the results of this report is prohibited unless allowed under a separate agreement set forth in an official document that is established between the client identified on this letter and the FITI. This test report is irrelevant to KS Q ISO/IEC 17025 and KOLAS accreditation.



fiti

REPORT NO. : N271-20-00801
PAGE : 2 OF 5

01. EFFICIENY (SODIUM CHLORIDE)
(GUIDELINES FOR REFERENCE STANDARDS FOR HEALTH MASKS, FOOD AND DRUG SAFETY (2019.12)) : %

	#1
ROOM TEMPERATURE	
- 1	95.7
- 2	96.5
- 3	95.2
ROOM TEMPERATURE 4 HOURS AFTER PRETREATMENT (38 ± 2.5) ℃, (85 ± 5) % R.H.	
- 1	95.7
- 2	96.1
- 3	95.1

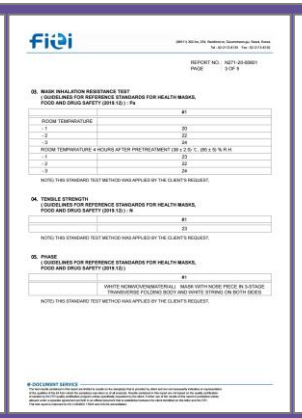
NOTE) THIS STANDARD TEST METHOD WAS APPLIED BY THE CLIENT'S REQUEST.

02. EFFICIENCY(PARAFFIN OIL)
(GUIDELINES FOR REFERENCE STANDARDS FOR HEALTH MASKS, FOOD AND DRUG SAFETY (2019.12)) : %

	#1
ROOM TEMPERATURE	
- 1	97.1
- 2	96.3
- 3	96.3
ROOM TEMPERATURE 4 HOURS AFTER PRETREATMENT (38 ± 2.5) ℃, (85 ± 5) % R.H.	
- 1	95.5
- 2	97.0
- 3	95.4

NOTE) THIS STANDARD TEST METHOD WAS APPLIED BY THE CLIENT'S REQUEST.

e-DOCUMENT SERVICE



fiti

REPORT NO. : N271-20-00801
PAGE : 3 OF 5

03. MASK INHALATION RESISTANCE TEST
(GUIDELINES FOR REFERENCE STANDARDS FOR HEALTH MASKS, FOOD AND DRUG SAFETY (2019.12)) : Pa

	#1
ROOM TEMPERATURE	
- 1	20
- 2	22
- 3	24
ROOM TEMPERATURE 4 HOURS AFTER PRETREATMENT (38 ± 2.5) ℃, (85 ± 5) % R.H.	
- 1	23
- 2	22
- 3	24

NOTE) THIS STANDARD TEST METHOD WAS APPLIED BY THE CLIENT'S REQUEST.

04. TENSILE STRENGTH
(GUIDELINES FOR REFERENCE STANDARDS FOR HEALTH MASKS, FOOD AND DRUG SAFETY (2019.12)) : N

	#1
	23

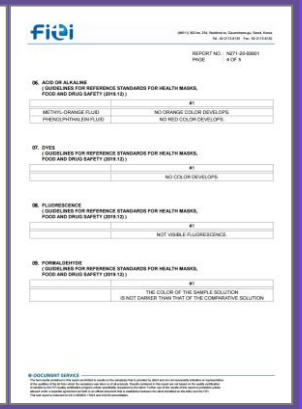
NOTE) THIS STANDARD TEST METHOD WAS APPLIED BY THE CLIENT'S REQUEST.

05. PHASE
(GUIDELINES FOR REFERENCE STANDARDS FOR HEALTH MASKS, FOOD AND DRUG SAFETY (2019.12))

	#1
	WHITE NONWOVEN(MATERIAL) MASK WITH NOSE PIECE IN 3-STAGE TRANSVERSE FOLDING BODY AND WHITE STRING ON BOTH SIDES

NOTE) THIS STANDARD TEST METHOD WAS APPLIED BY THE CLIENT'S REQUEST.

e-DOCUMENT SERVICE



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06. ACID OR ALKALINE
(GUIDELINES FOR REFERENCE STANDARDS FOR HEALTH MASKS, FOOD AND DRUG SAFETY (2019.12))

	#1
METHYL-ORANGE FLUID	NO ORANGE COLOR DEVELOPS
PHENOLPHTHALEIN FLUID	NO RED COLOR DEVELOPS

07. DYES
(GUIDELINES FOR REFERENCE STANDARDS FOR HEALTH MASKS, FOOD AND DRUG SAFETY (2019.12))

	#1
	NO COLOR DEVELOPS

08. FLUORESCENCE
(GUIDELINES FOR REFERENCE STANDARDS FOR HEALTH MASKS, FOOD AND DRUG SAFETY (2019.12))

	#1
	NOT VISIBLE FLUORESCENCE.

09. FORMALDEHYDE
(GUIDELINES FOR REFERENCE STANDARDS FOR HEALTH MASKS, FOOD AND DRUG SAFETY (2019.12))

	#1
	THE COLOR OF THE SAMPLE SOLUTION IS NOT DARKER THAN THAT OF THE COMPARATIVE SOLUTION

e-DOCUMENT SERVICE

Obtained an appropriate level of evaluation for KF94 in test items such as dust collection efficiency (sodium chloride), dust collection efficiency (paraffin oil), and mask inhalation resistance test.

http://airqueenmask.com

NIOSH

AirQUEEN Nano Mask has passed every conformity evaluation test for N95 and CE FFP2 certificates.

Nelson Labs
A Sotera Health company

Sponsor:
Kyunghan Chung
Toptec Co., Ltd.
140-22, Cheomdangieop 5-ro, Sandong-myeon
Gumi-si, Gyeongsangbuk-do, 39171
KOREA, REPUBLIC OF

Sodium Chloride (NaCl) Aerosol Test Final Report

Test Article: Air Queen Breeze Mask
Study Number: 1295789-501
Study Received Date: 04 May 2020
Testing Facility: Nelson Laboratories, LLC
6280 S. Redwood Rd.
Salt Lake City, UT 84123 U.S.A.
Test Procedure(s): Standard Test Protocol (STP) Number: STP0014 Rev 09
Deviation(s): None

Summary: This procedure was performed to evaluate particulate filter penetration as specified in 42 CFR Part 84 and TEB-APR-STP-0059 for requirements on a N95 respirator. Respirators were conditioned then tested for particle penetration against a polydispersed, sodium chloride (NaCl) particulate aerosol. The challenge aerosol was dried, neutralized, and passed through the test article at a concentration not exceeding 200 mg/m^3. The initial airflow resistance and particle penetration for each respirator was determined.

According to 42 CFR Part 84.64, pretesting must be performed by all applicants as part of the application process with NIOSH. Results seen below are part of that pretesting and must be submitted to and accepted by NIOSH for respirator approval.

All test method acceptance criteria were met. Testing was performed in compliance with US FDA good manufacturing practice (GMP) regulations 21 CFR Parts 210, 211 and 820.

Robert Dieker electronically approved for
Study Director
Curtis Gerow

02 Jun 2020 15:37 (+00:00)
Study Completion Date and Time

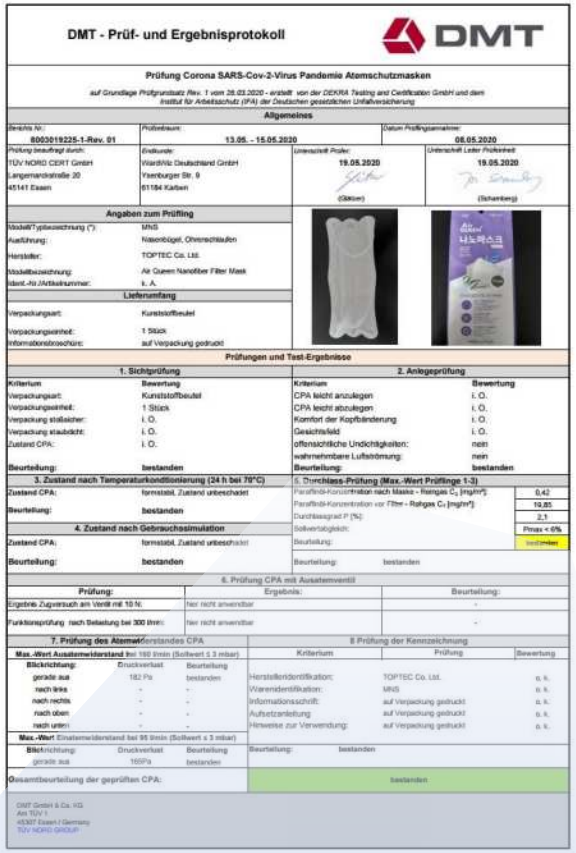
Page 1 of 3

Filter efficiency meets all of the N95(NIOSH) and CE FFP2 performance as 96.03%~99.694% and it has been found to have excellent functions in inhalation resistance(under 35mmH2O strandard 8.2~8.8mmH2O) and exhalation resistance(under 25mmH2O 7.9~8.3mmH2O standard), making it a differentiated breathing convenience with the filter function of the mask.

http://airqueenmask.com

TUV NORD

AirQUEEN Nano Mask has passed the test by certified European facility TUV NORD.



DMT - Prüf- und Ergebnisprotokoll

DMT

Prüfung Corona SARS-Cov-2-Virus Pandemie Atemschutzmasken

auf Grundlage Prüfgrundsatz Rev. 1 vom 26.03.2020 - erstellt von der DEKRA Testing and Certification GmbH und dem Institut für Arbeitsschutz (IFA) der Deutschen gesetzlichen Unfallversicherung

Allgemeines

Berichts Nr.:	Prüfzeitraum:	Datum Prüfungsannahme:
8003019225-1-Rev. 01	13.05. - 15.05.2020	08.05.2020

Prüfung beauftragt durch:	Endkunde:	Unterschrift Prüfer:	Unterschrift Leiter Prüflabor:
TÜV NORD CERT GmbH Langemarckstraße 20 45141 Essen	WanWiz Deutschland GmbH Ysenburger Str. 9 61184 Karben	19.05.2020 (Gläser)	19.05.2020 (Schamberg)

Angaben zum Prüfling

Modell/Typbezeichnung (*):	MNS
Ausführung:	Nasenbügel, Ohrenschlaufen
Hersteller:	TOPTEC Co. Ltd.
Modellbezeichnung:	Air Queen Nanofiber Filter Mask
Ident.-Nr./Artikelnummer:	k. A.

Lieferumfang

Verpackungsart:	Kunststoffbeutel
Verpackungseinheit:	1 Stück
Informationsbroschüre:	auf Verpackung gedruckt

Prüfungen und Test-Ergebnisse

1. Sichtprüfung

Kriterium	Bewertung
Verpackungsart:	Kunststoffbeutel
Verpackungseinheit:	1 Stück
Verpackung stabil/steif:	i. O.
Verpackung staubdicht:	i. O.
Zustand CPA:	i. O.
Beurteilung:	bestanden

2. Anlegeprüfung

Kriterium	Bewertung
CPA leicht anzulegen	i. O.
CPA leicht abzulegen	i. O.
Komfort der Kopfbänderung	i. O.
Gesichtsfeld	i. O.
offensichtliche Undichtigkeiten:	nein
wahrnehmbare Luftströmung:	nein
Beurteilung:	bestanden

3. Zustand nach Temperaturkonditionierung (24 h bei 70°C)

Zustand CPA:	formstabil, Zustand unbeschadet
Beurteilung:	bestanden

4. Zustand nach Gebrauchssimulation

Zustand CPA:	formstabil, Zustand unbeschadet
Beurteilung:	bestanden

5. Durchlass-Prüfung (Max.-Wert Prüflinge 1-3)

Paraffinöl-Konzentration nach Maske - Reingas C_2 [mg/m³]:	0,42
Paraffinöl-Konzentration vor Filter - Rohgas C_1 [mg/m³]:	19,85
Durchlassgrad P [%]:	2,1
Sollwertabgleich:	Pmax < 6%
Beurteilung:	bestanden

6. Prüfung CPA mit Ausatemventil

Prüfung:	Ergebnis:	Beurteilung:
Ergebnis Zugversuch am Ventil mit 10 N:	Nicht anwendbar	-
Funktionsprüfung nach Belastung bei 300 l/min:	Nicht anwendbar	-

7. Prüfung des Atemwiderstandes CPA

Max.-Wert Ausatemwiderstand bei 160 l/min (Sollwert ≤ 3 mbar)

Blickrichtung:	Druckverlust	Beurteilung
gerade aus	182 Pa	bestanden
nach links	-	-
nach rechts	-	-
nach oben	-	-
nach unten	-	-

Max.-Wert Einatemwiderstand bei 95 l/min (Sollwert ≤ 3 mbar)

Blickrichtung:	Druckverlust	Beurteilung
gerade aus	169Pa	bestanden

Gesamtbeurteilung der geprüften CPA: bestanden

8 Prüfung der Kennzeichnung

Kriterium	Prüfung	Bewertung
Herstelleridentifikation:	TOPTEC Co. Ltd.	o. k.
Warenidentifikation:	MNS	o. k.
Informationsschrift:	auf Verpackung gedruckt	o. k.
Aufsetzanleitung:	auf Verpackung gedruckt	o. k.
Hinweise zur Verwendung:	auf Verpackung gedruckt	o. k.

Beurteilung: bestanden

DMT GmbH & Co. KG
Am TÜV 1
45307 Essen / Germany
TÜV NORD GROUP

5. Durchlass-Prüfung (Max.-Wert Prüflinge 1-3)

Paraffinöl-Konzentration nach Maske - Reingas C_2 [mg/m³]:	0,42
Paraffinöl-Konzentration vor Filter - Rohgas C_1 [mg/m³]:	19,85
Durchlassgrad P [%]:	2,1
Sollwertabgleich:	Pmax < 6%
Beurteilung:	bestanden

Beurteilung: **bestanden**

“bestanden = pass”

TUV NORD Group is a technical service provider with worldwide activities. Founded in 1869 and headquartered in Hanover, Germany.

HALAL

Korea Halal Authority certifies the AirQUEEN.

한국할랄인증서
CERTIFICATE OF KOREA HALAL

korea halal

인증번호 (Certification No):KHA-20F-00362904

한국할랄인증원(KHA)은 아래 조직에서 생산되는 제품에 대하여 다음 인증규격의 요구사항에 적합함을 인증합니다.
Korea Halal Authority(KHA) certifies that product manufactured by the Below organization complies with the requirements and certification scope of the following certification standards.

회사명(Name of Company): 주식회사 툽텍/ TOPTEC CO., Ltd

회사주소(Company Address): 충남 아산시 둔포면 아산밸리로 122
122, Asanvalley-ro, Dunpo-myeon, Asan-si, Chungcheongnam-do, Korea

인증제품명(Name of Products): 나노 마스크(Air Queen)/ Nano Mask(Air Queen)

인증규격(Certification standard): KHAS 29000-할랄 공산용품 일반 규정
KHAS 29000-General Standards For HALAL Industrial Products

이 인증서에 명시되지 않은 다른 제품들은 할랄 제품으로 인정하지 않습니다.
We do not approve of any other products not specified in this certificate as Halal.

인증발행일자(Certification Date of issue): 29.04.2020
인증만료일자(Certification Expiration Date): 28.04.2021

대 표 이 사
Chief Executive Officer
Safiah Weon-Suk Kim

한국할랄인증원
KOREA HALAL AUTHORITY

Certification No : KHA-20F-00362904
Name of Products : Air Queen / Nano Mask
Certification standard : KHAS 29000-General Standards for HALAL Industrial Products

SOOMLAB exports the mask after Formal Custom Clearance

http://airqueenmask.com

Quality Indication According to Electric Products and Household Safety Law

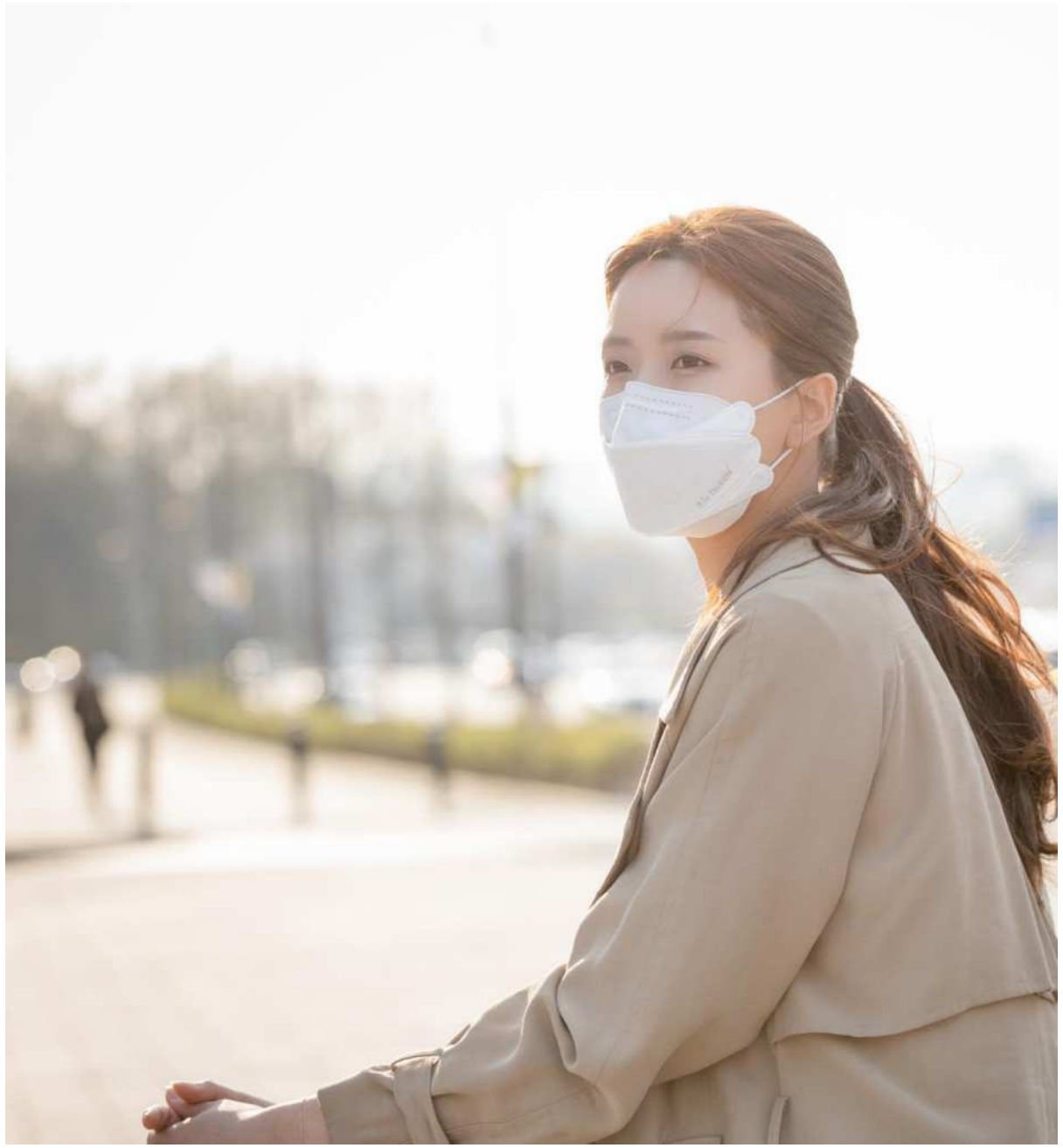
- Product: AirQUEEN Mask
- Manufactured in: Korea
- Manufacturer: TOPTEC
- Distributor: TOPTEC
- Weight: 4.38g
- Product Type: Mask
- Expiry Date: 36 months
- Storage Directions: closed container, in room temperature (1~30℃)
- Entire Ingredients:
  felt (outer fabric, filter, inner fabric), plastic sheath wire, polypropylene ring, nylon strap

http://airqueenmask.com

http://airqueenmask.com

http://airqueenmask.com

http://airqueenmask.com



AirQUEEN Mask is an industrial product.

http://airqueenmask.com

AirQUEEN Mask uses the Nanofiber Filter technology of LEMON
and is manufactured by TOPTEC.
Currently, the MFDS approval is being processed,
and when it is approved as sanitation mask,
80% of the product supply will be distributed as public distribution.

http://airqueenmask.com

Masks are a must!
Prepare in advance
with AirQUEEN Nano Mask

SOOMLAB is a partner of LEMON that joint-developed
the Hyper Purifying Breathing Mask which is
SOOMLAB's unique brand that has exclusive sales right.

SOOMLAB is a primary sales company of AirQUEEN Nano mask
and authorized as a distributor by TOPTEC, a parent company of LEMON.

SOOMLAB and BOOSTERZ are in charge of marketing,
distribution, and sales of AirQUEEN Nano Mask.

[AirQUEEN Mask mass purchase inquiry]

Email : contact@soomlab.co.kr
Store : http://airqueenmask.com