

NPPTL COVID-19 Response: International Respirator Assessment

Manufacturer: Toptec Co., Ltd.

Model Tested: Air Queen Nano Mask

Date Tested: May 27, 2020

These findings pertain to the Toptec Co., Ltd., Air Queen Nano Mask. The packaging for this product indicates that these respirators were made in Korea. However, there is no indication that the product meets the requirements of KMOEL-2017-64 (the Korean standard).

Ten respirators were submitted for evaluation. The samples were tested using a modified version of NIOSH Standard Test Procedure (STP) TEB-APR-STP-0059. This modified assessment plan can be found [here](#).

No certificate of approval was provided with the samples received; therefore, the authenticity of the claims cannot be validated.

The maximum and minimum filter efficiency was 97.05% and 90.12%, respectively. Four respirators measured more than 95%. Six respirators measured less than 95%.

While the above-listed product classification has similar performance requirements to NIOSH-approved devices, NIOSH does not have knowledge about the sustained manufacturer quality system and product quality control for these products. NIOSH also does not have knowledge about the product's handling and exposures after leaving its manufacturer's control.

In addition, this product is an ear loop design. Currently, there are no NIOSH-approved products with ear loops; NIOSH-approved N95s have head bands. Furthermore, limited assessment of ear loop designs, indicate difficulty achieving a proper fit. While filter efficiency shows how well the filter media performs, users must ensure a proper fit is achieved.

This assessment is not a part of the NIOSH respirator approval process and will in no way lead to or preclude NIOSH approval through the official approval process. This assessment was developed as an assessment of the filter efficiency for those respirator's represented as certified by an international certification authority, other than NIOSH, to support the availability of respiratory protection to US healthcare workers due to the respirator shortage associated with COVID-19. Only particulate filter efficiency was assessed.

The results provided in this letter are specific to the subset of samples that were provided to NPPTL for evaluation.

These results will be used to update the CDC guidance for [Crisis Capacity Strategies \(during known shortages\)](#).

Evaluation of International Respirators

Test: Modified TEB-APR-STP-0059

Date Tested: May 27, 2020

Report Prepared: May 27, 2020

Manufacturer: Toptec Co., Ltd.

Item Tested: Air Queen Nano Mask

Country of Certification: Republic of Korea (GB2626-2006)

Pictures have been added to the end of this report.

Filter	Flow Rate (Lpm)	Initial Filter Resistance (mmH ₂ O)	Initial Percent Leakage (%)	Maximum Percent Leakage (%)	Filter Efficiency
1	85	10.0	8.34	8.34	91.66
2	85	8.9	9.88	9.88	90.12
3	85	10.9	6.56	6.56	93.44
4	85	11.1	7.17	7.17	92.83
5	85	10.7	3.92	3.92	96.08
6	85	11.5	2.95	2.95	97.05
7	85	11.3	3.56	3.56	96.44
8	85	11.6	7.46	7.46	92.54
9	85	9.7	7.06	7.06	92.94
10	85	10.6	3.25	3.25	96.75
Minimum Filter Efficiency: 90.12			Maximum Filter Efficiency: 97.05		

- The test method utilized in this assessment is not the NIOSH standard test procedure that is used for certification of respirators. Respirators assessed to this modified test plan do not meet the requirements of STP-0059, and therefore cannot be considered equivalent to N95 respirators that were tested to STP-0059.
- Respirators tested may not be representative of all respirators with the same certification mark. NIOSH has no control over suppliers and distributors of respirators certified by other national or international parties.
- This assessment is not a confirmation that it conforms with any or all of its specifications in accordance with its certification mark.
- This assessment was not a part of the NIOSH approval program. These results do not imply nor preclude a future approval through the NIOSH respirator approval program.



Air QUEEN | 나노마스크

제품 사용방법 (How to use the product)

- 1 마스크를 코와 턱을 감싸도록 안면에 맞춥니다.
(Wear the mask to cover your nose and chin.)
- 2 머리끈을 귀에 걸쳐 위치를 고정시킵니다.
(Hook each strap over your ear to lock them in place.)
- 3 양손의 손가락으로 코밀착 부분이 코에 밀착되도록 클립을 눌러줍니다.
(Press the nose piece with the fingers of both hands so that mask is in close contact with your face.)
- 4 양손으로 마스크 전체를 감싸고 공기 누설을 체크하면서 안면에 밀착되도록 조정합니다.
(Cover the entire mask with both hands and adjust it to fit the face to make sure there is no air leakage.)

사용상 주의사항 (Precautions for Use)

- 1 수건, 휴지등을 사용하여 호흡기를 감싼 다음 그 위에 착용하지 마십시오.
(Make sure not to place towel, tissue, etc. inside of the mask.)
- 2 마스크 안쪽이 오염되었을 시는 사용하지 마십시오.
(Do not use if the inside of the mask is contaminated.)
- 3 세탁하여 사용하지 마십시오. (Do not wash for use.)
- 4 면체를 찌그러뜨리거나 변형하여 사용하지 마십시오.
(Do not crush or deform the mask.)
- 5 착용 후 마스크의 표면을 만지지 마십시오.
(Do not touch the surface of the mask after wearing.)
- 6 임신부, 호흡기·심혈관 질환자, 어린이, 노약자 등 마스크 착용으로 호흡이 불편한 경우 사용을 중지하고, 필요시 의사 등의 전문가와 상의하시기 바랍니다.
(If you are a pregnant women, a child, a senior citizen, a patient suffering from respiratory tract or cardiovascular disease and feel uncomfortable in breathing when you wear the mask please discontinue using immediately and consult your doctor or other specialist if necessary.)

제품명 : 에어퀸 나노 마스크 Product Name : Air QUEEN Nano Mask	마스크의 종류 : 마스크 Type of Mask : Mask
프장매수 : 1매 Quantity : 1 piece	저장 방법 : 밀폐 용기, 실온(1~30°C)보관 Storage : In a sealed pack at a room temperature(1~30°C)
전성분 : 부직포(겉감, 필터, 안감), 플라스틱피복철사, 폴리프로필렌고리, 나일론끈 Ingredients : nonwoven(outer, filter, lining), plastic coated wire, polypropylene loop, nylon string	
사용기한 : 하단부 별도표기 Expiration Date : Printed on the package	제조번호 : 하단부 별도표기 Lot. No. : Printed on the package
고객상담실 : 080-001-1011 / Customer Service : +82-80-001-1011	

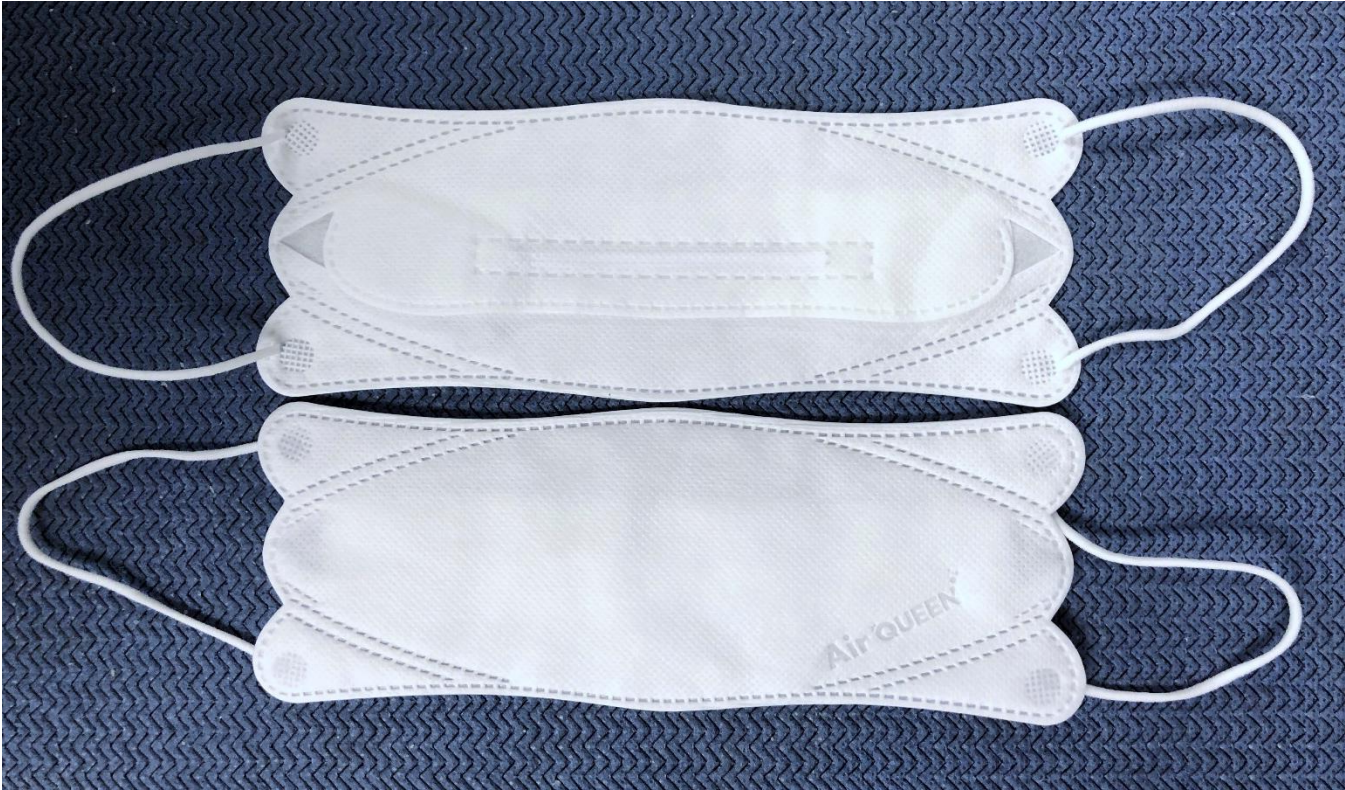
제조업자 : (주)토펙충남 아산시 둔포면 아산밸리로 122 (Manufacturer : TOPTEC Co., Ltd. 122, Asanvalley-ro, Dunpo-myeon, Asan-si, Chungcheongnam-do, Republic of Korea)
 판매업자 : (주)토펙충남 아산시 둔포면 아산밸리로 122 (Manufacturer : TOPTEC Co., Ltd. 122, Asanvalley-ro, Dunpo-myeon, Asan-si, Chungcheongnam-do, Republic of Korea)
 (주)레몬 경북 구미시 산동면 산포대로 1105-65 (Distributor : LEMON Co., Ltd. 1105-65, Sanho-daero, Sandong-myeon, Gumi-si, Gyeongsangbuk-do, Republic of Korea)
 본 제품에 이상이 있을 경우 공정거래위원회에서 고시한 소비자 분쟁 해결기준에 따라 교환 및 환불 받으실 수 있습니다.
 (If there is something wrong with this product, it can be exchanged and refunded according to the consumer dispute resolution standard announced by the Fair Trade Commission.)

Made in KOREA

제조 2020.04



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