

NPPTL COVID-19 Response: International Respirator Assessment

Manufacturer: Changning Lingjiakang Protective Products Factory

Model Tested: KN95 Stereo Protective Mask

Date Tested: April 13, 2020

These findings pertain to the Changning Lingjiakang Protective Products Factory, model KN95 Stereo Protective Mask. The labeling for these respirators indicate they meet EN149:2001+A1:2009. This is the European standard for Respiratory Protective Devices – Filtering Half Masks to Protect Against Particles – Requirements, Testing, Marking.

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 50.74% and 33.75%, respectively. One of the respirators could not be tested due to separation of the center seam. The remaining nine respirators all 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: April 13, 2020

Report Prepared: April 15, 2020

Manufacturer: Changning Lingjiakang Protective Products

Factory Item Tested: KN95 Stereo Protective Mask

Country of Certification: China (European Standard EN149)

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	9.2	49.26	49.26	50.74
2	85	9.2	52.06	52.06	47.94
3	85	5.8	65.97	66.25	33.75
4	85	6.1	63.4	65.8	34.2
5	85	6.3	64.9	65.9	34.1
6	85	6.9	64.4	65.5	34.5
7	85	6.6	63.2	64.3	35.7
8	85	6.1	65.3	65.9	34.1
9	85	5.9	63.8	65.8	34.2
10	85				
Minimum Filter Efficiency: 33.75			Maximum Filter Efficiency: 50.74		

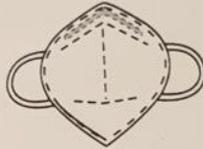
- The test method utilized in this assessment is not the NIOSH standard test procedure that is used for certification of respirators. Respirators assessed to this modified test plan do not meet the requirements of STP-0059, and therefore cannot be considered equivalent to N95 respirators that were tested 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.



HOW TO WEAR



1 Hold the mask in your hand, with your fingertips at the nose clip position, and slowly open the mask.



2 Place the nose clip above the mask, apply the mask to the face, and press the nose clip at the same time to ensure the tightness of the mask.



3 Hang the earband on both ears and adjust the length of the earband at the same time to make it more comfortable to wear.



4 Check: Cover your mask and breathe quickly. Feel the gas leak from the nose. Please tighten the nose clip. If you feel the air leaks from the edge, please readjust the ear band until the mask fits tightly on the face.

PRECAUTIONS

1. KN95 three-dimensional protective mask adopts three-dimensional cutting to maintain breathable space, and use adjustable nose bridge strips to obtain the best fit with the face shape.
2. Wearing method: It is recommended to replace it every 4 hours. Do not wash it with water and do not reuse it.
3. Children under three have low vital capacity and are not recommended.
4. Storage temperature: $-20\text{--}30\text{ }^{\circ}\text{C}$, storage humidity is 80% or more.

PRODUCT MANUAL

Product Name: KN95 Stereo Protective Mask

Product material: meltblown filter material, non-woven fabric

Executive standard: EN 149:2001+A1:2009

Shelf life: 3 years

Manufacturer: Changning Lingjiakang Protective Products Factory

Phone: 0734-7763498

Address: Jingxian Group, Xia Lian Village, Quanfeng Office, Changning City, Hengyang City, Hunan Province



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