NPPTL COVID-19 Response: International Respirator Assessment

Manufacturer: Ningbo Laida Automotive Technology Co., Ltd.
Model Tested: KN95 High Protection Mask
Date Tested: August 17, 2020

These findings pertain to the Ningbo Laida Automotive Technology Co., Ltd., model KN95 High Protection Mask. The packaging and labeling indicate the models tested are KN95 Mask. However, there is no indication of what standard this product meets.

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 82.20% and 23.10%, respectively. All ten 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: August 17, 2020

Report Prepared: August 17, 2020

Manufacturer: Ningbo Laida Automotive Technology Co., Ltd.

Item Tested: KN95 High Protection Mask

Country of Certification: China (UNKNOWN)

<table>
<thead>
<tr>
<th>Filter</th>
<th>Flow Rate (LPM)</th>
<th>Initial Filter Resistance (mmH₂O)</th>
<th>Initial Percent Leakage (%)</th>
<th>Maximum Percent Leakage (%)</th>
<th>Filter Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>85</td>
<td>6.4</td>
<td>63.3</td>
<td>64.5</td>
<td>35.50</td>
</tr>
<tr>
<td>2</td>
<td>85</td>
<td>4.8</td>
<td>17.5</td>
<td>17.8</td>
<td>82.20</td>
</tr>
<tr>
<td>3</td>
<td>85</td>
<td>3.0</td>
<td>43.2</td>
<td>43.2</td>
<td>56.80</td>
</tr>
<tr>
<td>4</td>
<td>85</td>
<td>5.0</td>
<td>38.0</td>
<td>38.2</td>
<td>61.80</td>
</tr>
<tr>
<td>5</td>
<td>85</td>
<td>4.3</td>
<td>42.1</td>
<td>43.0</td>
<td>57.00</td>
</tr>
<tr>
<td>6</td>
<td>85</td>
<td>3.5</td>
<td>75.8</td>
<td>76.9</td>
<td>23.10</td>
</tr>
<tr>
<td>7</td>
<td>85</td>
<td>4.6</td>
<td>42.7</td>
<td>43.0</td>
<td>57.00</td>
</tr>
<tr>
<td>8</td>
<td>85</td>
<td>4.6</td>
<td>43.0</td>
<td>43.7</td>
<td>56.30</td>
</tr>
<tr>
<td>9</td>
<td>85</td>
<td>3.4</td>
<td>42.6</td>
<td>42.6</td>
<td>57.40</td>
</tr>
<tr>
<td>10</td>
<td>85</td>
<td>4.9</td>
<td>42.0</td>
<td>42.3</td>
<td>57.70</td>
</tr>
</tbody>
</table>

Minimum Filter Efficiency: 23.10  Maximum Filter Efficiency: 82.20

- 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.
KN95
High Protection Mask

Flat ear-hanging type 165×105mm

effective isolation from particles

- Advanced activated carbon filter material
- Five layers of protection
- 3D stretched design, adaptable to any face shape

10 PCS/BOX
NPPTL COVID-19 Response: International Respirator Assessment

KN95
High Protection Mask
Flat ear-hanging type
165x105mm

Structure and component
- This product is made by non-woven fabrics, melt-blown fabric, spandex ear belt, nose bridge bar etc.
- Inner nose bridge
- Anti fogging
- Melt-blown fabric
- Non-woven fabrics
- Soft and comfortable, odor, hypoallergenic
- 4mm wide ear belt
- Precise link

Features
- 3D three-dimensional design with fluffy, breathable and soft. Will not cause the fog when wearing glasses.
- Adjustable nose bridge and elastic earloop have enough elasticity to make a good seal.
- Multilayer protection can filter out dust, germs, smoke, pollution and almost 95% particles in the air.

Instructions
1. Take out and open up the mask from package with dry, clean hands
2. Make sure the nose bridge bar is at the topside, the angle of mask towards the face
3. Hang the belt after the ear, adjust and press the nose bridge bar to fit for face
4. Adjust the position of mask, make it fit your face precisely

Caution
- For single-use only. Ultimate continuous use time is 8 hours.
- Do not use if package is broken.
- Please change mask if there is liquid splash, damage, damp, or respiratory resistance increase.

KN95 High Protection Mask
Owner/Operator Number: 1052763
Component: non-woven fabrics, melt-blown fabric, spandex ear belt, nose bridge bar etc
SPEC: 10pcs
Size: 165mm x 105mm
Guarantee period: 3 years
Production Date: See package
Company: Ningbo Laida Automotive Technology Co., Ltd.
Made in China
NPPTL COVID-19 Response: International Respirator Assessment

[Image of a respiratory mask with text: "MowaY 95 High Protection Mask"]

- Advanced activated carbon filter material
- Five layers of protection
- 3D stretched design, adaptable to any face shape
PRODUCT CERTIFICATION

Product Name: Filter-type respirator
Specification: Disposable face mask (KN95)
Owner/Operator Number: 10062763
Inspector: MY001
Production Date:
Validity Date: 3 Years 2020 4 13
Storage:
Cool, ventilated place. Temperature: 20 °C - 30 °C,
Relative humidity is less than 80%.
Manufacturer:
Ningbo Laida Automotive Technology Co., Ltd.
Production Address:
Second floor, building 2, Kangzhuang South Road No. 515,
Jiangbei District, Ningbo City, Zhejiang Province, China, 315000
NPPTL COVID-19 Response: International Respirator Assessment
NPPTL COVID-19 Response: International Respirator Assessment
NPPTL COVID-19 Response: International Respirator Assessment