NPPTL COVID-19 Response: International Respirator Assessment

Manufacturer: Guangzhou Powecom Labor Insurance Supplies Co., Ltd.
Model Tested: KN95
Date Tested: June 26, 2020

These findings pertain to the Guangzhou Powecom Labor Insurance Supplies Co., Ltd., model KN95. The packaging and labeling for this product indicate that it meets GB2626-2006 (the Chinese standard for Respiratory Protective Equipment – Non-Powered Air-Purifying Particle Respirator).

Thirty respirators were submitted for evaluation. The respirators were sampled into groups of ten 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 99.56% and 98.18%, respectively. All thirty respirators measured more 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:** June 26, 2020

**Report Prepared:** June 26, 2020

**Manufacturer:** Guangzhou Powecom Labor Insurance Supplies Co., Ltd.

**Item Tested:** KN95 (Sample Group 1 of 3)

**Country of Certification:** China (GB2626-2006)

<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>11.0</td>
<td>0.59</td>
<td>0.59</td>
<td>99.41</td>
</tr>
<tr>
<td>2</td>
<td>85</td>
<td>10.4</td>
<td>0.68</td>
<td>0.68</td>
<td>99.32</td>
</tr>
<tr>
<td>3</td>
<td>85</td>
<td>10.6</td>
<td>0.44</td>
<td>0.44</td>
<td>99.56</td>
</tr>
<tr>
<td>4</td>
<td>85</td>
<td>10.6</td>
<td>0.68</td>
<td>0.68</td>
<td>99.32</td>
</tr>
<tr>
<td>5</td>
<td>85</td>
<td>11.8</td>
<td>0.66</td>
<td>0.66</td>
<td>99.34</td>
</tr>
<tr>
<td>6</td>
<td>85</td>
<td>10.6</td>
<td>0.53</td>
<td>0.53</td>
<td>99.47</td>
</tr>
<tr>
<td>7</td>
<td>85</td>
<td>11.3</td>
<td>0.72</td>
<td>0.72</td>
<td>99.28</td>
</tr>
<tr>
<td>8</td>
<td>85</td>
<td>11.2</td>
<td>0.86</td>
<td>0.86</td>
<td>99.14</td>
</tr>
<tr>
<td>9</td>
<td>85</td>
<td>10.8</td>
<td>0.53</td>
<td>0.53</td>
<td>99.47</td>
</tr>
<tr>
<td>10</td>
<td>85</td>
<td>12.6</td>
<td>0.57</td>
<td>0.57</td>
<td>99.43</td>
</tr>
</tbody>
</table>

Minimum Filter Efficiency: 99.14

Maximum Filter Efficiency: 99.56

- 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.

Pictures have been added to the end of this report.
NPPTL COVID-19 Response: International Respirator Assessment

**Test:** Modified TEB-APR-STP-0059

**Date Tested:** June 26, 2020

**Report Prepared:** June 26, 2020

**Manufacturer:** Guangzhou Powecom Labor Insurance Supplies Co., Ltd.

**Item Tested:** KN95 (Sample Group 2 of 3)

**Country of Certification:** China (GB2626-2006)

<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>11</td>
<td>85</td>
<td>11.5</td>
<td>0.96</td>
<td>0.96</td>
<td>99.04</td>
</tr>
<tr>
<td>12</td>
<td>85</td>
<td>10.0</td>
<td>1.04</td>
<td>1.04</td>
<td>98.96</td>
</tr>
<tr>
<td>13</td>
<td>85</td>
<td>11.0</td>
<td>0.97</td>
<td>0.97</td>
<td>99.03</td>
</tr>
<tr>
<td>14</td>
<td>85</td>
<td>11.4</td>
<td>0.87</td>
<td>0.87</td>
<td>99.13</td>
</tr>
<tr>
<td>15</td>
<td>85</td>
<td>10.7</td>
<td>0.94</td>
<td>0.94</td>
<td>99.06</td>
</tr>
<tr>
<td>16</td>
<td>85</td>
<td>11.7</td>
<td>1.00</td>
<td>1.00</td>
<td>99.00</td>
</tr>
<tr>
<td>17</td>
<td>85</td>
<td>12.4</td>
<td>0.79</td>
<td>0.79</td>
<td>99.21</td>
</tr>
<tr>
<td>18</td>
<td>85</td>
<td>10.0</td>
<td>0.90</td>
<td>0.90</td>
<td>99.10</td>
</tr>
<tr>
<td>19</td>
<td>85</td>
<td>12.2</td>
<td>1.07</td>
<td>1.07</td>
<td>98.93</td>
</tr>
<tr>
<td>20</td>
<td>85</td>
<td>10.8</td>
<td>1.11</td>
<td>1.11</td>
<td>98.89</td>
</tr>
</tbody>
</table>

- Minimum Filter Efficiency: 98.89
- Maximum Filter Efficiency: 99.21

- 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.
NPPTL COVID-19 Response: International Respirator Assessment

**Test:** Modified TEB-APR-STP-0059

**Date Tested:** June 26, 2020

**Report Prepared:** June 26, 2020

**Manufacturer:** Guangzhou Powecom Labor Insurance Supplies Co., Ltd.

**Item Tested:** KN95 (Sample Group 3 of 3)

**Country of Certification:** China (GB2626-2006)

<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>21</td>
<td>85</td>
<td>10.4</td>
<td>1.05</td>
<td>1.05</td>
<td>98.95</td>
</tr>
<tr>
<td>22</td>
<td>85</td>
<td>12.9</td>
<td>0.85</td>
<td>0.85</td>
<td>99.15</td>
</tr>
<tr>
<td>23</td>
<td>85</td>
<td>12.8</td>
<td>0.88</td>
<td>0.88</td>
<td>99.12</td>
</tr>
<tr>
<td>24</td>
<td>85</td>
<td>12.1</td>
<td>1.02</td>
<td>1.02</td>
<td>98.98</td>
</tr>
<tr>
<td>25</td>
<td>85</td>
<td>11.7</td>
<td>1.01</td>
<td>1.01</td>
<td>98.99</td>
</tr>
<tr>
<td>26</td>
<td>85</td>
<td>9.5</td>
<td>1.82</td>
<td>1.82</td>
<td>98.18</td>
</tr>
<tr>
<td>27</td>
<td>85</td>
<td>1.0</td>
<td>1.02</td>
<td>1.02</td>
<td>98.98</td>
</tr>
<tr>
<td>28</td>
<td>85</td>
<td>12.7</td>
<td>0.97</td>
<td>0.97</td>
<td>99.03</td>
</tr>
<tr>
<td>29</td>
<td>85</td>
<td>10.8</td>
<td>1.20</td>
<td>1.20</td>
<td>98.80</td>
</tr>
<tr>
<td>30</td>
<td>85</td>
<td>10.8</td>
<td>1.06</td>
<td>1.06</td>
<td>98.94</td>
</tr>
</tbody>
</table>

- Minimum Filter Efficiency: 98.18
- Maximum Filter Efficiency: 99.15

- 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.
APPLICATION:
Suitable for protection against powder, PM2.5 smog, particulates, saliva, dust etc. The face mask is good for wind proof and protection the face against cold weather.

INSTRUCTION FOR USE:
Open the mask and place the bridge of the nose on it. After wearing the mask, press the bridge of the nose to close it. The protective effect is better.

MODEL NO.: KN95
PRODUCTION DATE AND EXPIRATION: See Qualification Certificate for
STANDARD: GB2626 - 2006 KN95
CAUTIONS:
1. Keep the face mask clean before use. Do not touch the rear side of face mask.
2. Ensure the face mask fit to face, by adjusting the nose piece, keeping mask edge close to face.
3. Check the air sealing of mask. Do not use if the face mask is broken or with hole or leakage.
4. Do not wash the face mask with water. Water will destroy filtering ability and protection.
5. Do not steam the face mask, and do not put it in microwave.
6. Keep the face mask away from vapor, oils, chemicals, paints, liquid, acid, alkaline objects.
7. Discard the face mask when it gets quite dirty or breathing resistance increase remarkably.

MANUFACTURER:
Guangzhou Powecom Labor Insurance Supplies Co., Ltd.
Add: Floor 1, 3 and 4, Building 1, No. 43, Tianjie Road,
Xinga Street, Huadu District, Guangzhou City,
Guangdong Province, P.R. China
Tel: +86-020-86609663 Fax: +86-020-36092323
Made in China
PRODUCT INSTRUCTION

MODEL: KN95 (Earloop style)
ITEM: KN95 Protective Mask (Non-Medical)

APPLICATION:
Suitable for protection against powder, PM2.5 smog, particulates, flu, bacteria, saliva, dust etc. The face mask is good for windproof and protection the face against cold weather.

COMPOSITION:
Outer layer PP Non-woven fabric
Middle layer ES hot air cotton Non-woven fabric and efficiency electrostatic Melt-blown fabric
Inner layer PP Non-woven fabric
Executive standard GB 2626-2006 KN95
Non-oily particulate filtering efficiency ≥95%

STORAGE TEMPERATURE:
Temperature -10°C ~ 40°C, humidity < 80%
Store in dry and cool place

VALIDITY: Three years

INSTRUCTION FOR USE:

1. Stretch face mask
2. Place the e-earloop to ear
3. Adjust and press the nose piece
4. Ensure covering the chin

CAUTIONS:
1. This product cannot be used to prevent harmful gases.
2. Discard the face mask when it gets quite dirty or breathing resistance increase remarkably.
3. Please avoid storing this product in the environment of high temperature, humidity or harmful chemicals.
4. Preschoolers or patients with respiratory abnormalities can’t use it.
5. Everytime you use it, please check the wearing “adhesive” to ensure that the mask is worn correctly contamination.
6. Not suitable for use in environments with toxic gases or oxygen concentrations below 19.5%.
7. Cannot be used in microwave oven.

CUSTOMER SERVICE HOTLINE: 400-008-5933

MANUFACTURER:
Guangzhou Powecom Labor Insurance Supplies Co., Ltd
Addr: Floor 1, 3 and 4, Building 1, No. 43, Tuanjie Road, Xinya Street, Huang District, Guangzhou City, Guangdong Province, P. R. China

合格证
Certificate

品牌: 保为康
型号: KN95
Brand: Powecom
Model No.: KN95

品名: KN95防护口罩（非医用）
Item: KN95 Protective Mask (Non-Medical)

数量: 10只/袋 等级: KN95
Packaging: 10pcs/bag Grade: KN95

执行标准: GB2626-2006 KN95
Standard: GB2626-2006 KN95

生产日期: 2020/05/15
Data of Manufacture: 15/05/2020

生产批次: 20200515
Batch No.: 20200515

有效期: 3年
Validity: Three years

地址: 广州市广为康劳保用品有限公司
Address: Guangzhou Powecom Labor Insurance Supplies Co., Ltd

Add: Floor 1, 3 and 4, Building 1, No. 43, Tuanjie Road, Xinya Street, Huang District, Guangzhou City, Guangdong Province, P. R. China
NPPTL COVID-19 Response: International Respirator Assessment