NPPTL COVID-19 Response: International Respirator Assessment

Manufacturer: Shandong Shengquan New Materials Co., Ltd.
Model Tested: Biomass Graphene Particulate Respirator (C-Shaped)
Date Tested: June 9, 2020


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 99.30% and 96.52%, 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 9, 2020

**Report Prepared:** June 10, 2020

**Manufacturer:** Shandong Shengquan New Materials Co., Ltd.

**Item Tested:** Biomass Graphene Particulate Respirator (C-Shaped) (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>11.4</td>
<td>2.73</td>
<td>2.73</td>
<td>97.27</td>
</tr>
<tr>
<td>2</td>
<td>85</td>
<td>11.5</td>
<td>2.95</td>
<td>2.95</td>
<td>97.05</td>
</tr>
<tr>
<td>3</td>
<td>85</td>
<td>12.1</td>
<td>1.97</td>
<td>1.97</td>
<td>98.03</td>
</tr>
<tr>
<td>4</td>
<td>85</td>
<td>12.7</td>
<td>2.13</td>
<td>2.13</td>
<td>97.87</td>
</tr>
<tr>
<td>5</td>
<td>85</td>
<td>12.3</td>
<td>2.49</td>
<td>2.49</td>
<td>97.51</td>
</tr>
<tr>
<td>6</td>
<td>85</td>
<td>12.5</td>
<td>2.09</td>
<td>2.09</td>
<td>97.91</td>
</tr>
<tr>
<td>7</td>
<td>85</td>
<td>13.3</td>
<td>1.80</td>
<td>1.80</td>
<td>98.20</td>
</tr>
<tr>
<td>8</td>
<td>85</td>
<td>14.5</td>
<td>2.02</td>
<td>2.02</td>
<td>97.98</td>
</tr>
<tr>
<td>9</td>
<td>85</td>
<td>13.1</td>
<td>2.85</td>
<td>2.85</td>
<td>97.15</td>
</tr>
<tr>
<td>10</td>
<td>85</td>
<td>16.6</td>
<td>0.70</td>
<td>0.70</td>
<td>99.30</td>
</tr>
</tbody>
</table>

**Minimum Filter Efficiency:** 97.05  **Maximum Filter Efficiency:** 99.30

- 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 9, 2020

Report Prepared: June 10, 2020

Manufacturer: Shandong Shengquan New Materials Co., Ltd.

Item Tested: Biomass Graphene Particulate Respirator (C-Shaped) (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>11.7</td>
<td>2.21</td>
<td>2.21</td>
<td>97.79</td>
</tr>
<tr>
<td>12</td>
<td>85</td>
<td>14.4</td>
<td>1.34</td>
<td>1.34</td>
<td>98.66</td>
</tr>
<tr>
<td>13</td>
<td>85</td>
<td>11.6</td>
<td>2.71</td>
<td>2.71</td>
<td>97.29</td>
</tr>
<tr>
<td>14</td>
<td>85</td>
<td>12.5</td>
<td>2.43</td>
<td>2.43</td>
<td>97.57</td>
</tr>
<tr>
<td>15</td>
<td>85</td>
<td>14.8</td>
<td>1.36</td>
<td>1.36</td>
<td>98.64</td>
</tr>
<tr>
<td>16</td>
<td>85</td>
<td>12.9</td>
<td>2.19</td>
<td>2.19</td>
<td>97.81</td>
</tr>
<tr>
<td>17</td>
<td>85</td>
<td>14.7</td>
<td>2.10</td>
<td>2.10</td>
<td>97.90</td>
</tr>
<tr>
<td>18</td>
<td>85</td>
<td>12.3</td>
<td>2.75</td>
<td>2.75</td>
<td>97.25</td>
</tr>
<tr>
<td>19</td>
<td>85</td>
<td>14.0</td>
<td>2.71</td>
<td>2.71</td>
<td>97.29</td>
</tr>
<tr>
<td>20</td>
<td>85</td>
<td>13.9</td>
<td>1.40</td>
<td>1.40</td>
<td>98.60</td>
</tr>
</tbody>
</table>

Minimum Filter Efficiency: 97.25  Maximum Filter Efficiency: 98.66

- 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-SP-0059  
**Date Tested:** June 9, 2020  
**Report Prepared:** June 10, 2020  
**Manufacturer:** Shandong Shengquan New Materials Co., Ltd.  
**Item Tested:** Biomass Graphene Particulate Respirator (C-Shaped) (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>13.7</td>
<td>1.71</td>
<td>1.71</td>
<td>98.29</td>
</tr>
<tr>
<td>22</td>
<td>85</td>
<td>16.0</td>
<td>1.08</td>
<td>1.08</td>
<td>98.92</td>
</tr>
<tr>
<td>23</td>
<td>85</td>
<td>11.4</td>
<td>3.48</td>
<td>3.48</td>
<td>96.52</td>
</tr>
<tr>
<td>24</td>
<td>85</td>
<td>16.0</td>
<td>1.27</td>
<td>1.27</td>
<td>98.73</td>
</tr>
<tr>
<td>25</td>
<td>85</td>
<td>14.8</td>
<td>1.42</td>
<td>1.42</td>
<td>98.58</td>
</tr>
<tr>
<td>26</td>
<td>85</td>
<td>15.4</td>
<td>1.45</td>
<td>1.45</td>
<td>98.55</td>
</tr>
<tr>
<td>27</td>
<td>85</td>
<td>16.4</td>
<td>1.44</td>
<td>1.44</td>
<td>98.56</td>
</tr>
<tr>
<td>28</td>
<td>85</td>
<td>11.0</td>
<td>2.39</td>
<td>2.39</td>
<td>97.61</td>
</tr>
<tr>
<td>29</td>
<td>85</td>
<td>14.8</td>
<td>2.87</td>
<td>2.87</td>
<td>97.13</td>
</tr>
<tr>
<td>30</td>
<td>85</td>
<td>12.8</td>
<td>2.60</td>
<td>2.60</td>
<td>97.40</td>
</tr>
</tbody>
</table>

Minimum Filter Efficiency: 96.52  
Maximum Filter Efficiency: 99.30

- 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
Non medical use
Shengquan USA Inc.
8889 West Olympic Boulevard,
Suite 1000 Beverly Hills,
CA 90211 USA
1-800-988-0510

Warning
This product is intended for the protection against certain particulate matter, such as dust, pollen, and other small particles. It is not intended to protect against bloodborne pathogens, viruses, or bacteria.

How to Take
1. Wash your hands before use and after each use.
2. Remove the protective film from the respirator.
3. Place your hands on the straps and pull the mask up to your face.
4. Adjust the nose clip to fit the shape of your nose.
5. Breathe and ensure the respirator fits snugly around your face.
6. To remove, pull the mask down and away from your face.

Caution:
1. Do not use this respirator if the material is damaged or contains dust.
2. Do not use if the respirator is contaminated with saliva or blood.
3. Do not use if the respirator is not fitted to your face or if the respirator is not comfortable.
4. Do not reuse this respirator.

Specifications
- Respirator Type: Non medical
- Color: Green
- Model: KN95
- Size: One size fits most
- Material: Non-woven fabric

Usage:
- Use in environments where particulate matter is present.
- Use in environments where dust, pollen, and other small particles are present.
- Use in environments where there is a risk of exposure to bloodborne pathogens, viruses, or bacteria.

Caution:
- Do not reuse this respirator.
- Do not store this respirator in environments where dust, pollen, and other small particles are present.
- Do not store this respirator in environments where there is a risk of exposure to bloodborne pathogens, viruses, or bacteria.

Fitting instructions:
- Place the respirator on your face and adjust the straps to fit snugly around your face.
- Adjust the nose clip to fit the shape of your nose.
- Breathe and ensure the respirator fits snugly around your face.

Caution:
- Do not use this respirator if the material is damaged or contains dust.
- Do not use if the respirator is contaminated with saliva or blood.
- Do not use if the respirator is not fitted to your face or if the respirator is not comfortable.
- Do not reuse this respirator.

Specifications:
- Respirator Type: Non medical
- Color: Green
- Model: KN95
- Size: One size fits most
- Material: Non-woven fabric
NPPTL COVID-19 Response: International Respirator Assessment

BIOLOGICAL GRAPHENE
生物质石墨烯防护口罩
PARTICULATE RESPIRATOR
KN95 FFP2

服务热线：
400-777-8118/www.shengquan.com

【制造商】：山东圣泉新材料股份有限公司
【地 址】：中国山东省济南市章丘区刁铺工业开发区

扫描二维码 / 一物一码 / 品质追溯
Scan the QR code to check the product genuine or not. One box one security code.
The quality can be traced.

Qualified Certificate

- Product Code: DXXH733998
- Safety Class: Class B
- Executive Standard: GB 2626-2006 KN95
- Graphene Protective Respirator (C Shaped)
- Main Raw Material: Polypropylene Nonwoven Fabric
- Color: White
- Size: 18.5"x10.5cm
- Batch No: V20416008
- Production Date: 19.04.2020
- Shandong Shengquan New Materials Co., Ltd.
  Diaozen Industrial Development Zone, Dang leading District, Jinan, Shandong, China.

[QR Code Image]

[Manufacturer Information]
[Service Hotline]: 0086-400-777-8118
[Address]: Diaozen industrial development zone, Zhanggu, Jinan, China.
NPPTL COVID-19 Response: International Respirator Assessment
NPPTL COVID-19 Response: International Respirator Assessment
NPPTL COVID-19 Response: International Respirator Assessment
NPPTL COVID-19 Response: International Respirator Assessment