

KN95 Masks provide same filtration level as NIOSH N95

Zack Hopkins the owner of 18650 Battery Store explains the high-quality features of KN95 and N95 masks

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/EINPresswire.com/ -- Since the outbreak of the coronavirus pandemic where the world has been inundated with misinformation and speculation as to what we can all do to protect ourselves and others from the virus. At the very beginning of the pandemic, many healthcare professionals including the WHO (World Health Organization) were reluctant to advise the general public to wear masks and were debating how effective they actually are at blocking transmission of the virus from one person to another.

Many advocated that there is no evidence that masks actually work, without that meaning however that they don't work. Since then, the WHO has revised its guidelines, as the transmission of the virus happens via respiratory droplets, masks are advised to be worn wherever social distancing cannot be followed in order to minimize the risk of infection in the general public. However, the use of face masks should always be combined with adequate hand hygiene and physical distancing, wherever possible.



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Zack Hopkins, Owner 18650 Battery Store

protecting other people from getting the virus thus you are actually helping decrease the spread

Based on this comparison, it is reasonable to consider China KN95, AS/NZ P2, Korea 1st Class, and Japan DS FFRs as “equivalent” to US NIOSH N95 and European FFP2 respirators, for filtering non-oil-based particles such as those resulting from wildfires, PM 2.5 air pollution, volcanic eruptions, or bioaerosols (e.g. viruses). However, prior to selecting a respirator, users should consult their local respiratory protection regulations and requirements or check with their local public health authorities for selection guidance.

Certification/Class (Standard)	N95 (NIOSH-42C FR84)	FFP2 (EN 149-2001)	KN95 (GB2626-2006)	P2 (AS/NZ 1716:2012)	Korea 1 st Class (KMOEL-2017-64)	DS (Japan JMHLW-Notification 214, 2018)
Filter performance – (must be ≥ X% efficient)	≥ 95%	≥ 94%	≥ 95%	≥ 94%	≥ 94%	≥ 95%
Test agent	NaCl	NaCl and paraffin oil	NaCl	NaCl	NaCl and paraffin oil	NaCl
Flow rate	85 L/min	95 L/min	85 L/min	95 L/min	95 L/min	85 L/min
Total inward leakage (TIL)* – tested on human subjects each performing exercises	N/A	≤ 8% leakage (arithmetic mean)	≤ 8% leakage (arithmetic mean)	≤ 8% leakage (individual and arithmetic mean)	≤ 8% leakage (arithmetic mean)	Inward Leakage measured and included in User Instructions
Inhalation resistance – max pressure drop	≤ 343 Pa	≤ 70 Pa (at 30 L/min) ≤ 240 Pa (at 95 L/min) ≤ 500 Pa (clogging)	≤ 350 Pa	≤ 70 Pa (at 30 L/min) ≤ 240 Pa (at 95 L/min)	≤ 70 Pa (at 30 L/min) ≤ 240 Pa (at 95 L/min)	≤ 70 Pa (w/valve) ≤ 50 Pa (no valve)
Flow rate	85 L/min	Varied – see above	85 L/min	Varied – see above	Varied – see above	40 L/min
Exhalation resistance - max pressure drop	≤ 245 Pa	≤ 300 Pa	≤ 250 Pa	≤ 120 Pa	≤ 300 Pa	≤ 70 Pa (w/valve) ≤ 50 Pa (no valve)
Flow rate	85 L/min	160 L/min	85 L/min	85 L/min	160 L/min	40 L/min
Exhalation valve leakage requirement	Leak rate ≤ 30 mL/min	N/A	Depressurization to 0 Pa ≥ 20 sec	Leak rate ≤ 30 mL/min	visual inspection after 300 L /min for 30 sec	Depressurization to 0 Pa ≥ 15 sec
Force applied	-245 Pa	N/A	-1180 Pa	-250 Pa	N/A	-1,470 Pa
CO ₂ clearance requirement	N/A	≤ 1%	≤ 1%	≤ 1%	≤ 1%	≤ 1%

*Japan JMHLW-Notification 214 requires an Inward Leakage test rather than a TIL test.

KN95 and K95 Comparison Chart

rate from not only one person to another but many more people that could likely be infected - reducing systemic risk of spread.

So the question comes down to which mask is more efficient in protecting from micro-particles and bio-aerosols, e.g viruses, bacteria, and other tiny particles? Since an overwhelming amount of information on the subject can be found all over the internet the below is an attempt to clear up any misconceptions.



In an effort to make choosing an effective mask a much easier task for the consumer, we attempt to compare KN95 masks with NIOSH N95 masks in order to shine some light and tackle the issue in a simple and practical manner. First of all, the KN 95 Mask is the China standard and NIOSH (National Institute for Occupational Safety and Health) N95 is the American standard.

Fit tests are very important and the KN95 standard has a requirement on fit tests, showing how well the mask filters out air and how well the mask fits on to your face. The N95 standard on the other hand does not have a fit test requirement. The N95 masks have stricter requirements pertaining to breathability, meaning that it can be slightly easier to breathe in and out of the N95 mask compared to the KN95. As you can see from the 3M chart comparing the two masks, the differences are really minute and they are on the whole very similar in almost every aspect. (see the chart for a detailed side by side comparison of the masks)

As owner, Zack Hopkins underlines “The mask manufacturer 3M says that it is reasonable to consider the [KN95 mask](#) equivalent to the N95 mask” and goes on to add that these masks are also similar to the relevant Korean, European FFP2 and Japan DS FFR respirator masks. One of the most important aspects a user should consider when choosing a mask is how well they filter small particles, protecting the user from bacteria and viruses. Both the N95 and KN95 masks filter out at least 95% of tiny particles (specifically 0.3 micron particles). Thus both masks provide the same 95% filtration level.

You can find more info on the KN95 mask on the company website, with mask specifications on the filtration efficiency and other product characteristics that you might be wondering about. The mask’s design is also super breathable and comfortable especially during spring and summer months and claims to cause no irritation to the skin barrier. There are also easy to follow instructions on how to wear the KN95 masks, how to efficiently adjust the nose clip, and the tightness of the mask to ensure maximum protection.

Zack Hopkins
18650 Battery Store
+1 800-547-3050

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