

HK MASK

HK Mask is a reusable cloth mask with a disposable middle layer filter. It was invented by Dr. K. Kwong during the outbreak of COVID-19 in early 2020.

The design of HK Mask is referred by that of 3-layer surgical mask in the market. The HK Mask is composed with a disposable middle layer filter which is sandwiched by a cloth mask as the outer and inner layers. There are a number of material chosen for the middle layer filter ranging from Kitchen Towel Paper to Nanofilter.



HK MASK

How To DIY it?



Reusable Cloth Mask
+
Kitchen Tower Paper
≈ N70 Mask

The filtration efficiency of a piece of kitchen towel paper is close to that of N70. The mask can be safely used after replacing a new middle layer filter to a cleaning and sterilizing the inner and outer layer cloth.

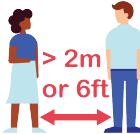
An important message from Dr. K Kwong: No WARS, Make MASK, HK MASK! (English)



I am Dr. K. Kwong, a scientist, an inventor and a KOL in HK, the creator of HK MASK, the Do It Yourself solution to save you!!!

Since the infection explosion of COVID-19 in China, we Hong Kong people, did the best to slow down the spreading of COVID-19 in Hong Kong. These actions are promoted by experts in medical fields and many many others (except Government officials). I am one of the KOL participated in the movement.

I hope the following measures (which are using in Hong Kong now) can help your motherland:



STOP social activities

that involve close contacts. At least 1.5 meter away from each other. Which means stop school activities, religious gathering etc. Home office is preferred.



If Bleach and Alcohol are not available

There are some other alternatives for disinfection, but basically SOAP, ALCOHOL, BLEACH work perfectly



WASH hands

with SOAP AND WATER FOR 30 seconds whenever you think your hands are contaminated



Before completely disinfection,

Do not touch your eyes, nose and mouth.



USE Alcohol Sanitizer

Use 60-90% alcohol-based (ethanol or isopropyl alcohol) hand sanitizer on contaminated skin



Avoid going to indoors with the Crowded

e.g. Bars, Gyms etc. If you think you are infected, you must do SELF-ISOLATION FOR 14 DAYS.



Disinfection with Bleach Solution

Use 1:99 Chlorine bleach (5% stock) to disinfectant other objects



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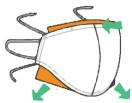
How To Wear

1



Open the mask cover, place the filter from the top. The furry side faces inside.

2



Close the mask cover, ensure the filter sticks out of the upper cover and the bottom corners.

3



The side with wire faces up, place the ear loops around ears.

4



Place the ties around your head and secure with a knot. First tie the collar, then tied back of head.

5



Mold or pinch the wire to the shape of your nose.

How To Clean & Sanitize



Wash with water and soap the fabric mask



Air dry, then iron for sanitization the fabric mask.

Usage Limitation

The use time is the same as the general disposable surgical masks.

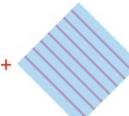
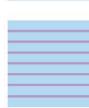
Users are recommended to replace the filter once when use it once every four hours. And the mask cover should also be sanitized and cleaned as instructed above.

Examples:

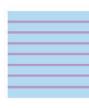
One
Tissue
Paper



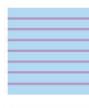
Two
Tissue
Papers
(0+45°)



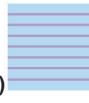
Two
Tissue
Papers
(0+90°)



Two
Tissue
Papers
(0+0°)



Three
Tissue
Papers
(0+0+0°)



Sample	Filtration Efficiency (%) @0.3um particle size	PD (mmH2O) flow rate: 32L/min
1 Mask only	8.70%	2.3
2 One tissue paper	45.75%	9.1
3 Two tissue paper (0+45°)	69.20%	16.8
4 Two tissue paper (0+90°)	70.10%	16.9
5 Two tissue paper (0+0°)	69.60%	17.1
6 Three tissue paper (0+0+0°)	83.00%	24.8
7 One kitchen paper	73.70%	37.1
8 Two kitchen paper (0+45°)	89.20%	60.7
9 Two kitchen paper (0+90°)	91.30%	66.4
MultiH *Nanofiber (K. Kwong)	86+-5%	lower <5.82

Sandwiched with HK MASK

Target

Ranges of surgical masks available in market	7.51-88.2%	0.42-5.82
N95	>95%	

(13 different masks tested)

* Higher filtration efficiency = better filtration effect
* Higher PD flow rate = more difficult to breathe

Tested on 20 Feb 2020



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masksbyhongkongers

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