

# How effective are these masks?

The Straits Times looks at the effectiveness and greenness of different types of masks, from surgical masks layered with a reusable cloth mask to the new Livinguard mask distributed by Temasek Foundation.



How effective is it in preventing the transmission of droplets?



Is it environmentally friendly?

## N95



Able to filter around

**95%**

of **airborne particles**, such as pollutants which cause the haze, as the mask is worn very close to the face, forming an air-tight seal.



No,

as it should be worn only once.

## SURGICAL MASKS



Certified surgical masks have a particle filtration efficiency of at least 95 per cent, meaning that they are able to prevent

**95%** of **tiny respiratory droplets** at 0.1 micron in size from escaping. This is around the size of the Sars-CoV-2 virus, which is mainly transmitted through respiratory droplets.



No,

as it should be worn only once.

## CLOTH MASKS



Most cloth masks are double-layered and made of cotton. As such, most reusable cloth masks have a lower particle filtration efficiency in preventing tiny respiratory droplets from escaping. However, if a filter is inserted into the mask, its filtration efficiency improves.



Yes,

cloth masks can be reused and washed around 20 to 30 times. Only the filter has to be changed.



## CLOTH MASK ON TOP OF A SURGICAL MASK



Can reduce exposure to Covid-19 respiratory droplets and aerosols by up to

**96%**

according to a study by the US Centres for Disease Control and Prevention.

Wearing a tighter cloth mask over the surgical mask can create a tighter seal, **especially if the surgical mask is loose at the sides**, thus increasing protection for the wearer.



No,

as the surgical mask is disposable. The cloth mask on the outer layer can be reused.



## LIVINGUARD MASK



The Livinguard mask is treated with a technology such that it has billions of positive charges per sq cm on its fabric.

When an aerosol or a droplet containing viruses or bacteria falls on its surface, the positive charge on the fabric destabilises the negatively charged bacterial cell walls and viral protein shells, eventually destroying them.



Yes,

the mask can be washed 30 times or more. Even after 30 washes, the mask is able to inactivate over

**97%** of the viruses, and has an antibacterial performance of over 99.75 per cent. This is reduced after each subsequent wash.