

COST EFFECTIVE MASKS TO BUY OR MAKE

MASK FABRICS

The following are the common materials/fabrics that masks come in (1):

- Flannel
- Nylon
- Cotton
- Silk
- Chiffon
- Polyester
- Denim

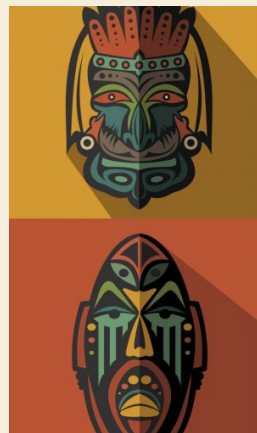
*****Any material that is tightly woven with few gaps and holes will have the highest protection. (2,3)**



FABRIC EFFECTIVENESS

Compared to a surgical mask that can filter 96% of particles (2)

- 4 layer silk: filters >80% (3)
- 1 layer cotton+ 2 layer silk: filters >80% (3)
- 1 layer cotton+ 2 layer chiffon: filters >80% (3)
- 1 layer cotton+ 1 layer flannel: filters >80% (3)
- 100% cotton: filters 69% (2)



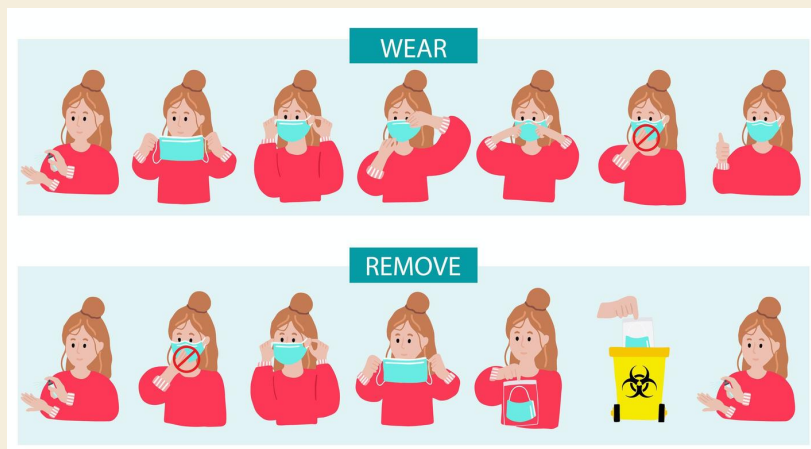
Polypropylene (plastic)

PRICES/YARD⁽⁴⁾

- Flannel: \$2
- Cotton: \$3-9
- Silk: \$30-80
- Chiffon: \$4-6

EXTRA PROTECTION⁽⁵⁾

- Use a polypropylene filter, which tends to catch extra air particles via electrostatic charge
- Rub your polypropylene filter with a plastic glove after washing to re-create the charge
- Use folded facial tissues inside your mask
- To seal your mask around your face, use panty hose



"Improperly fitting masks which left gaps for leakage decreased filtration efficiency over 60 percent." (1)

SOURCE:
 1. <https://www.forbes.com/sites/allisongasparini/2020/04/27/how-effective-are-cloth-face-masks-anyway-here-are-the-fabrics-which-filter-out-airborne-particles-best/?sh=54f0cc7633ce>
 2. LUSTIG, STEVEN R ET AL. "EFFECTIVENESS OF COMMON FABRICS TO BLOCK AQUEOUS AEROSOLS OF VIRUS-LIKE NANOPARTICLES." ACS NANO VOL. 14, 6 (2020): 7651-7658. DOI:10.1021/ACS.NANO.0C03972
 3. KONDA, ABHITEJA ET AL. "AEROSOL FILTRATION EFFICIENCY OF COMMON FABRICS USED IN RESPIRATORY CLOTH MASKS." ACS NANO VOL. 14, 5 (2020): 6339-6347. DOI:10.1021/ACS.NANO.0C03252
 4. <https://www.joanni.com/fabric/?prefni=isnew&srule=best-sellers&sz=54&start=0&prefvi=false&icn=search&ici=fabric>
 5. <https://www.npr.org/sections/goatsandsoda/2020/07/01/880621610/a-users-guide-to-masks-what-s-best-at-protecting-others-and-yourself>