



INDICATIVE TEXTILE MATERIAL PROPERTIES FOR NON-MEDICAL CLOTH MASKS FOR COMMUNITY USE

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Disclaimer: *These specifications are based on data^b and studies^{d,e} that were obtained on either a single fabric, at two layers of fabrics, and on the REwear™ mask project. While these may serve as a guide, the overall performance of the composite textile output (mask assembly) can not be accurately predicted/approximated from these individual specifications. Actual testing based on standards is strongly recommended.*

	Fabric Type	Water-Repellency (WR) or Absorbency (A)	Material	Grammage, gsm	Threads per Inch (TPI)
Outer	Knitted	WR (70)	Cotton, Cotton-blends, Polyester, Polypropylene, PET, etc. No elastic material	130- 230^{a,b}	n/a
	Woven	WR (70)	Cotton, Cotton-blends, Polyester, Polypropylene, PET, etc. No elastic material		200-600 ^{a,c,e}
Middle	Knitted	WR/A	Cotton, Cotton-blends, Polyester, Polypropylene, PET, etc	130-230^b	n/a
	Woven	WR/A	Cotton, Cotton-blends, Polyester, Polypropylene, PET, etc		80-600^c
	Nonwoven	WR/A	PP, PET, CA (Meltblown, spunbonded)		20-30^d
Inner	Knitted	A (≤5s)	Cotton, Cotton-Poly blends	130- 230^b	n/a
	Woven	A (≤5s)	Cotton, Cotton-Poly blends		80-600 ^{c,e}

^a If cotton or blends, may require finishing to meet the water-repellency

^b Based on single jersey knit fabrics used for the REwear™ masks

^c Indicative value from the second layer assessed for filtration efficiency.

^d Konda, A., et al. *Aerosol Filtration Efficiency of Common Fabrics Used in Respiratory Cloth Masks*. *ACS Nano* **2020**, *14*, 6339–6347

^e Zhao, M., et al. *Household Materials Selection for Homemade Cloth Face Coverings and Their Filtration Efficiency Enhancement with Triboelectric Charging*. *Nano Lett.* **2020**, *20*, 5544–5552

The Philippine Textile Research Institute

Recommended Face Mask Shapes

for Non-Medical Masks for community use



Flat-Fold

Rectangular-shaped mask with 2 horizontal folds designed to cover the nose, cheeks and chin of the wearer.



Duckbill

Pouch style face mask that provides an air pocket that allows wearer to breathe easier and to feel less restricted.



Curved

Curve-shaped mask that features a vertical seam in the middle designed to cover the nose, cheeks and chin of the wearer.

