

Directions to Make 3D Printed Face Shield

March 24, 2020 - Current .stl file is 'Covid-19 Shield V1'

Printing the Files

- One .stl file is needed per shield
- We suggest PLA material on an FDM printer (SLA and SLS will work but have not been tested by us)
- We suggest using 0% infill as this reduces material and decreases print time
- Takes 1 hour and varies printer to printer
- Designed to be printed without supports, using 0.28mm layer height, and 80mm/s

3D Print Technical Specifications

- Material used - 13g
- Print time - 1hr 4min
- Base dimensions - 7"L x 6"W x 0.35"H (approx.)
- Weight – 0.4oz

Making the Mask

- Cut a 12" length of elastic. The elastic should be 1/4"-3/8"
- Knot a small loop on either end
- Attach the cord to the cleats on either end of the head piece
- Use an 8.5" x 11" clear plastic report cover or any 8.5"x11" sheet of clear rigid plastic as the visor – use in landscape position
- Use a standard 3-ring hole puncher to punch holes on the long end of the sheet, position the holes exactly as you would in a binder
- Snap the clear visor onto the studs located on the front of the headpiece

Aseptic Techniques

- Wear gloves when handling your finished print and put immediately into a sealable bag
- These masks are reusable, but each person should have their own.
- Masks can be cleaned and disinfected by soap and water as well as disinfectant agents
- Practice good hygiene by washing hands before and after changing filters and removing masks
- Clean mask often, change clear visor as needed

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