

MEDNET

Model Exchange & Development of Nursing &
Engineering Technologies



Face Shield

MEDNET File: faceshield.zip

Description

The strip that goes across the forehead is 3D printed and is designed to be reused with replacement transparencies for the shield.

Features

The band across the forehead is constructed of PLA filament, while the shield is a transparency with holes drilled for easy installation.

Development Information

Materials needed: PLA filament, clear transparencies, and a perforated roll of disposable tourniquet.

Finished dimensions: N/A

PLA filament $\approx$ 0.04 of a roll

Clear Transparency $\approx$ 1 shield (10 transparencies/shield)

Disposable Tourniquet Perforated Roll $\approx$ 1 strap (25 straps per 1"x18" roll)

Production time $\approx$ 7 hrs

Approximate materials cost: \$3.00 (1 face shield, 1 transparency, and 1 strap)

For Transparency Holes Template see files: [Template-face shield.pdf](#)

Assembly Instructions see file: [Face Shield Assembly Inst.pdf](#)

Instructions for Use

These shields are designed to be worn over surgical masks for an added layer of protection. They are reusable and easy to sterilize. Using a drill press and provided template, an unopened package of 100 transparencies can be prepared with the necessary holes for installation. The role of elastic strap can be purchased perforated for easy installation. You can also find a stacked file of the face shields, so that you can print more than one shield at a time. There are two different variations of the stacked file. One has the slots for the elastic one does not. We have found that the printing time is cut in half by not including these slits. Instead of printing the slits on the model we have developed an adapter that can be printed in about fifteen minutes. We can cut down on printing time by printing the model with no slits and the adapter. However, both models are available to be printed.

Material Procurement Information

Filament: Hatchbox Filament 1.75mm - \$22.99/roll (prices vary per color)

https://www.amazon.com/HATCHBOX-3D-Filament-Dimensional-Accuracy/dp/B00J0ECR5I/ref=sr_1_4?crid=2GJUX43SIM4TP&dchild=1&keywords=pla+filament+1.75mm&qid=1590077168&sprefix=pla+filament%2Caps%2C178&sr=8-4

Clear Transparencies: Pack of 100 - \$19.32

https://www.amazon.com/School-Smart-Write-Transparency-Inches/dp/B003V1BPXG/ref=sr_1_5?crid=2EBHHCMC1HV9L&dchild=1&keywords=clear+transparency+sheet&qid=1590077285&sprefix=clear+transpa%2Caps%2C377&sr=8-5

Disposable Tourniquet Perforated Roll: 1 roll contains 25 perforated pieces - \$7.99

https://www.amazon.com/Disposable-Tourniquet-Perforated-Roll-Latex-free/dp/B00ELV0COI/ref=sr_1_1_sspa?dchild=1&keywords=emi+disposable+tourniquet+roll&qid=1590077527&sr=8-1-spons&psc=1&spLa=ZW5jcnlwdGVkUXVhbGlmaWVyPUEyREIUQ1UyNk03MDVOJmVuY3J5cHRlZEIkPUeWVjkwMTkzSkw5ODg3Vk5MWVBdJmVuY3J5cHRlZEFkSWQ9QTAWMzAwMzFKREREQTRYTlpHUUkmd2lkZ2V0TmFtZT1zcF9hdGYmYWN0aW9uPWNsaWNrUmVkaXJlY3QmZG9Ob3Rmb2dDbGljaz10cnVl

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