**First and foremost, THANK YOU for all you do on the front lines of this pandemic.**

In an effort to help you with PPE shortages, many volunteers have been coming together to try and produce some additional PPE through a variety of techniques.

We are hobbyists with no professional manufacturing or medical experience. We believe these shields will be helpful and safe, but cannot make guarantees. Every effort was made to deliver these as clean/sterile as possible. Please use your own judgement to determine if additional steps are needed before you use them.

Below is some information about the materials and the process used to produce this batch of face shields:

**Design**

* There are many designs for face shields to be 3d printed, but this one was selected because it can be produced relatively quickly and with only 2 materials
* It is intended to be pressure-fit, but elastic or ties can be added if needed

**Materials**

* The RED frames in this batch were 3d printed from Inland brand PETG plastic. We could not find any Material Data Safety Sheets from the manufacturer and do not know what additives they might have introduced into the plastic to make it suitable for printing. PETG has a melting point of 225℃
* The PINK frames in this batch were 3d printed from Inland brand PLA plastic. We could not find any Material Data Safety Sheets from the manufacturer and do not know what additives they might have introduced into the plastic to make it suitable for printing. PLA has a melting point of 170℃
* The material for the shield is Apollo brand “Plain Paper Copier Transparency Film”, purchased from Office Depot. There is no material information on the box, but the detail page on Amazon.com says they’re made from Polyethylene

**Process**

* These shields were produced by a family of four, none of which have been tested for COVID-19, but have no reason to believe we have been exposed to COVID-19
* The plastics were printed on consumer-grade 3d printers in open environment (our kitchen)
* We placed each frame in a 70% Isopropyl Alcohol bath for 1-2 mins before putting them into unused Zip-loc bags using nitrile gloves
* The shields were wiped on both sides with 70% Isopropyl Alcohol before being bagged

**Final Notes**

* The frames are **not** expensive to produce, but take about an hour each, so it’s hard to produce them as quickly as we would like to. If you can safely reuse the frames, please do so, but not if you feel it will compromise your safety.
* In an effort to deliver as many as we can to you, we are including some frames that have some blemishes or defects from the printing process, but should be structurally ok to use. Please use your judgement on whether they can be made to work for you or not.

**Please stay safe!**