

D&T ASSOCIATION NHS PPE MANUFACTURE GUIDANCE

GENERAL ADVICE

There is a demand for a large quantity of visors to be used in conjunction with face masks to help protect medical staff from Covid19. **This is not intended to be used in place of a surgical visor, but where the alternative would be no visor at all.** The visor can take the form of a disposable item or with the right processing between uses can be reusable or could have a reusable section with a disposable screen. The visor will in most cases be used for a period of four hours at a time so some consideration should be given to the comfort of the device. The visor should be held slightly away from the face to accommodate a face mask and possibility of prescription glasses and to reduce fogging due to breathing on the item. If possible, the visor should provide protection between the top of the product and the forehead of the wearer. The size of the visor should be no smaller than A4, covering ear to ear and extending below the mouth. The shape must not splay out at the bottom and be rounded to prevent it digging into the body.

MANUFACTURE

There are 2 main ways we are recommending manufacture; 3D printing or Laser Cutting.

3D Printing. We are recommending the PRUSA file [HERE](#)

Laser Cutting. There are 3 files for different schools to choose;

- 3 Part 'Kitronik' version [HERE](#)
- 2 Part 'Stamford Endowed School' version [HERE](#)
- Covered head 'Marlborough College' version [HERE](#)

MATERIALS

- All visor screens are to be made from PVC or PETg 400 – 1000 micron (500 microns is ideal) and ideally supplied on a roll to give natural curvature. Minimum A4 size.
- Laser-cut headbands should use PP 0.8mm – 1mm

The following companies had materials in stock at the time of writing:

Company	Phone	Email	Area	Material
Aquarius Plastics	01483 576044	enquiries@aquariusplastics.co.uk	Surrey	PVC
Plastic Sheet Shop	0122 39 76 701	info@plasticsheetsshop.co.uk	Leeds	PVC
The Plastic People	0113 249 2222	service@theplasticpeople.co.uk	Leeds	PVC
Par Group Preston-Head Office	01257 248369	https://www.par-direct.co.uk/	Preston	PVC
Just Buy Plastic	01204 841 111	https://www.justbuyplastic.co.uk/products	Bolton	PVC
Allplas	01462 682663	https://www.allplas.co.uk/index.html	Letchworth	PVC

Paperstory	07446 266789	https://paperstory.co.uk/products/extra-thick-clear-acetate-500-microns-ultra-vision-100-crystal-clear?variant=23281178443834	Norfolk	PETg 500 micron
Rayflex	01925 638753	https://www.rayflexgroup.co.uk/index.php	Warrington	PVC
RS Components	0845 720 1201	https://uk.rs-online.com/web/	Corby	PVC
Attwoolls	01452 742211	manufacturing@attwoolls.co.uk	Gloucester	PVC
Direct Plastics	0114 2560889	sales@directplastics.co.uk	Sheffield	PVC 0.5 mm thick coming in next week
Simply Plastics	01206 638056	info@simplyplastics.com	Colchester	PVC
E KLEIN & CO	020 79871171	richard@eklein.co.uk	London	PVC
Smile Plastics	Unknown	info@smile-plastics.com	Swansea	PVC
Flight Plastics	01794 830525	kevin@flightplastics.co.uk	Romsey	PETG
Epsotech	0131 333 3369	https://epsotech.com/en/	Newbridge	Various
Peerless Plastics & Coatings Ltd	01842 750333	https://www.peerless-coatings.co.uk/	Thetford	Various
Eagle Plastics	0116 276 6363	https://www.eagleplastics.co.uk/	Leicester	Various
Stephen Webster Plastics	01727 863138	https://www.stephen-webster.co.uk/	Herts	PETg
Vacuum Formers	01625 428389	http://www.vacuumformers.co.uk/contact.aspx	Macclesfield	PETg
Macpac	0161 442 1642	https://www.macpac.co.uk/	Stockport	PETg
RENOLIT Ltd	01670 718222	https://www.renolit.com/en/career/global-careers/renolit-cramlington-limited	Northumberland	PVC

DISTRIBUTION

We are advising teachers who do not have an established route to front line clinicians to sign up with 3D Crowd through this website <https://www.3dcrowd.uk/> If you scroll to the bottom of the site to '3D Printing of face shields' and sign up as a volunteer, teachers can join a local area network. On joining, a regional coordinator can see you and will be in contact to assist you in getting shields from your school to the nearest place of need. The regional coordinator will arrange collection and through their agreement with NHS Trust, will guarantee sterilisation and distribution to those who

need it. Please note, schools need to make sure you have a **minimum of 40 pieces** for collection. They can be flat-packed or assembled.

This route is applicable for any of our recommended face shields, 3D printed or laser-cut.

CLEAPSS GUIDANCE

Many schoolteachers and leaders stated that they wanted their school to get involved but did not see how they could comply with the CLEAPSS guidance issued last week. We have today worked closely with our friends at CLEAPSS, and as a result, [a new set of guidance](#) was released. We believe that this guidance will allow more schools to involve themselves in the movement to get PPE where it is so badly needed if you follow our advice and procedures stated here.

TECHNICAL SUPPORT

For further technical support, please refer to the 3D Crowd Slack channel [here](#)

THANKS

Thanks to all teachers that are working on these during this time and for Prusa, Kitronik, Queen Elizabeth's School Barnet, Marlborough College Malaysia and Stamford Endowed School Lincs for sharing technical knowledge, advice and their designs.