

**Temple  
University**

**COVID Assistance Team**

# **Homemade Face Shield Assembly Guide**

**Version 1**

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**Foam shield assembly instructions:**



**Materials:**

- 1.25" to 2.25" open cell polyurethane foam
- 12" x 12" clear plastic
- Elastic or hook and loop material (**TBD**)
- Adhesive (carpet tape or something like 3M Super 77)
- Measuring tape or ruler
- Stapler
- Scissors

**Instructions:**

**1. Cut an 8" length of foam.**



**2. Cut three V's into the foam.**



You will almost certainly need to do a gentle grab and tear to get the V chunks to come out after you cut them. These V's will help with bending. You will be adhering the side opposite these V-cuts, so that the V's will be against the person's forehead when worn.

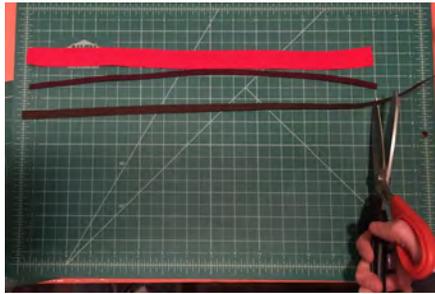
3. If using carpet tape, line up the tape to the foam and cut it to length. Slightly shorter is ok. Leave the protective paper on the top side of the tape and stick the exposed side of the carpet tape on the side of the foam opposite of the V's and press firmly. Run your fingers along the tape several times to ensure it is completely adhered to the foam. Be careful about this step as we want to avoid any adhesive sticking out from under the foam, because it is very sticky.

(tip: The tape is extremely sticky, so bonus points if you can use a pair of your own inexpensive scissors. You can clean off adhesive residue with white vinegar and a paper towel.)

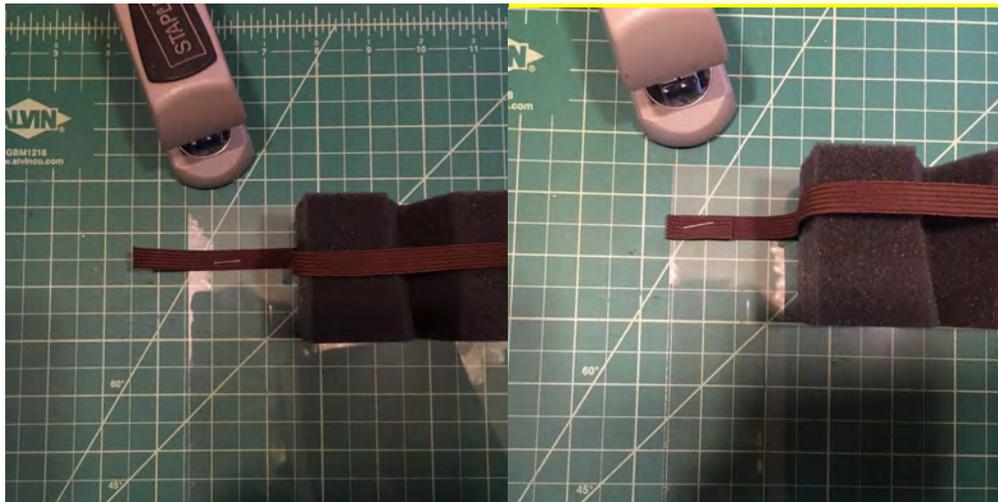
- a. If you're using spray-on adhesive, you'll want to make a simple stencil with an approximately 2.25"x8" window to limit the adhesive only to the area of interest. Be wary of overspray and completely cover the plastic when applying the adhesive. Follow the directions on the can.
  - b. For 3M Super 77 you will need to spray both surfaces and let stand for at least 30 seconds to reach a usable level of tackiness. Test the tackiness with your knuckle. If it adheres, you are ready to stick the pieces together. Remember, you have 15 minutes to stick the two pieces together, so best to wait a bit longer than to put the two pieces together before they are ready.
4. Carpet tape: Remove the protective paper and position the foam slightly below the top of the plastic shield and attach. You do not need to leave a large lip; rather, this is again to prevent any overhang of sticky carpet tape being exposed toward the front of the shield.
    - a. If using 3M Super 77 or another adhesive, after sticking the two pieces together (position carefully, as you will have no opportunity to reposition once the two are touching), I would recommend putting a heavy book on it. I used a cutting board to distribute the weight more evenly, and a 15 lb weight. I walked away and prepped other shields during this time.



5. Cut the elastic to 15".



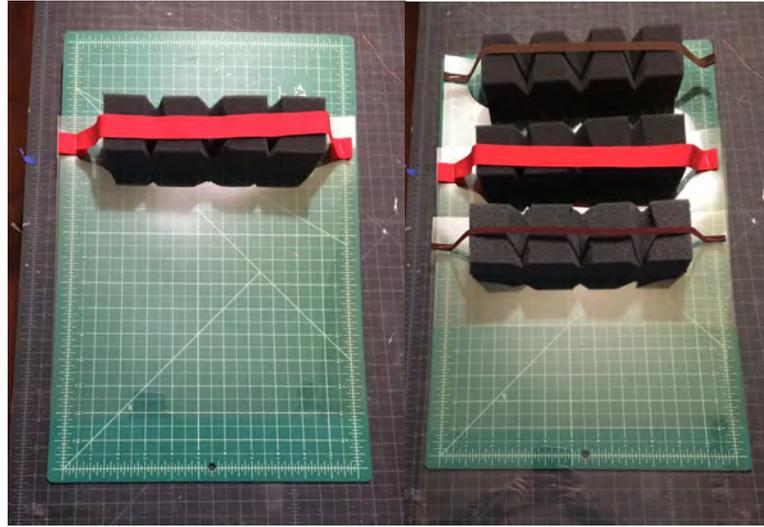
6. Staple the elastic with about 1" extending off the edge. Fold the extra inch of elastic back, reinforcing the area you just stapled. Staple a second time making sure the staple goes through both layers of the elastic and the plastic.



7. Repeat for the other side.



**8. Your mask is complete! Repeat for as many supplies as you have.**



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This device should NOT be used as a replacement for conventional and approved Personal Protective Equipment (PPE) when available. Use of these face shields alone will NOT prevent infection from microbes or viruses, including COVID-19. This device has not been industry tested nor has it been NIOSH approved.

These face shields have been designed by Temple University for low impact use to protect the user's eyes and face from bodily fluids, liquid splashes, or potentially infectious materials. These face shields were designed for multi-use by a single provider, however, users should exercise caution and clean the face shields after each use. Manufacturers and users are solely responsible for any and all risks associated with production, use, and cleaning of face shields. THIS PRODUCT DESIGN AND RELATED INFORMATION IS MADE AVAILABLE AS-IS, AND TEMPLE UNIVERSITY EXPRESSLY DISCLAIMS, ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NONINFRINGEMENT. Reference to any particular product brand name or materials does not constitute an endorsement, guarantee, or representation by Temple University.