Directions for Creating MERV 13 Filter Face Masks



1.

Cut 2 pieces of 1/4" elastic 7" long.

If no elastic is available, 4 pieces of 15" cloth, ribbon or shoelace-type material can be used to make it a mask that can be tied behind the head.

2.

Pre-wash your chosen fabric, then dry and iron it to soften it and preshrink it.

Next, cut out a piece 9" by 20" to make the mask.





Cut a 12" piece of fine, bendable wire (20 gauge or higher).

Fold it in half and twist it. This wire will be the wire used to form the mask around the user's nose.

4.

Fold in each of the 20" long sides by 1/4", then iron the folds flat.

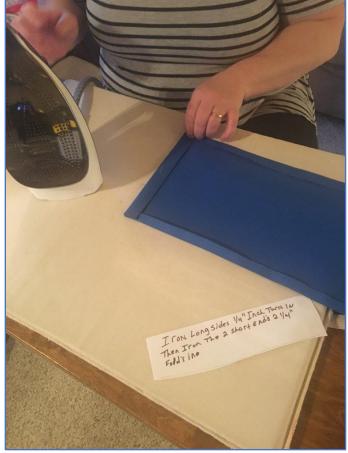




Fold both shorter 9" sides inward twice - each fold should be approximately 1/4".

5.

6. Iron the double folds to hold their shape.





Fold the 20" length side of material in half and Iron to hold the shape. This will create the pocket the MERV 13 filter material will be held in. All the pre-folded hems should be on the <u>inside</u> of the folded piece created.

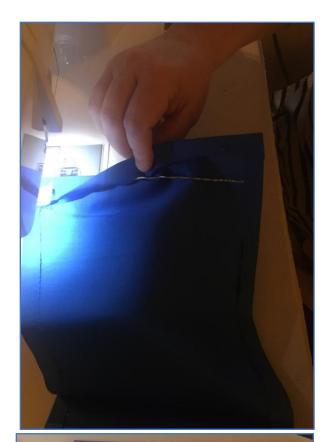
8.

Center and place the previously cut and twisted wire within the inside of one of the double 1/2" folds. This wired hem will become the top of the mask.



9.

Sew both of the top 1/2" hems, making sure the wire is sealed inside the double 1/2" hem in which it was placed.









At 1" from the bottom of the mask, create the first pleat by doubling up the material 1/2" toward the bottom of the mask to create a "Z" type pleat.

4

Hold this in place on both sides with a small clip or pin.



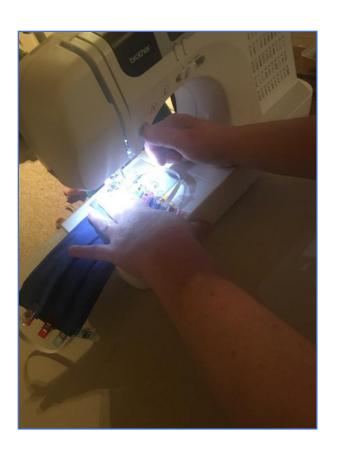
Repeat the pleat creation twice more so that the mask has three 1" pleats, starting at 1" from the bottom of the mask, created by the 1/2" overlaps of material. Clip or pin both sides of each pleat as shown.

12.

Place one end of each previously cut elastic strips (or one end of each if using a ties) between the bottom fold and the two top hems. Repeat this on the other side of the mask with the remaining elastic (or ties).







Sew the pleats together by sewing the sides of the mask together 1/4" from the edge. Make sure that the elastic (or the ties) are in far enough to be attached as well.

When done, remove the clips or pins.

14.

Cut the MERV 13 filter material into 6-1/2" squares. Cut two 45° cuts at the bottom corners 2-1/2" in on the sides and bottom as shown.

The angled cuts will be stuffed into the bottom of the filter so the straight edge is at the top covering the user's nose and mouth.



This is a completed mask that will hold the MERV 13 filter material.



MASK CARE & STERILIZATION

To sterilize the mask between each use, preheat an oven to 170° F. Without removing the filter material, place the mask with the filter material inside it on a baking sheet within the hot oven for 1/2 hour. Viruses and germs do not survive temperatures over 150° F.

If you need to wash the mask, remove the filter material and hand wash. Washing in a washing machine tends to crumple the nose wire which will cause it to eventually break. The mask can be air dried or dried in a clothes dryer as long as there are no other clothes in the dryer that would damage the wire.

Do not use a microwave since this will not kill viruses, and the mask has metal in it.

Do not use dryer to sterilize since dryers typically only heat up to 135° F.

