Using this tutorial, you will be able to make a chain maille bra/bikini top. This tutorial uses EPDM and anodized aluminum rings. Other materials in the same sizes can be used instead of those listed here.

INTERMEDIATE

Weaves you should know:
European 4 in 1
European 6 in 1
How to seam 2 angles together

Supplies required, numbers are very approximate for D cup:
2,135 16g 1/4" ID aluminum (AA or BA rings)
1,450 16g 1/4" ID EPDM rings
280 16g 5/16" ID aluminum (AA or BA rings)
*your actual number of rings will depend on factors such as length of straps, bra modification, etc)

NOTE: There are many ways to make chain maille bras. This tutorial details the steps to make a basic bra, such as the one shown above. For more advanced fitting and modification techniques, please read the fitting notes at the end of the tutorial.

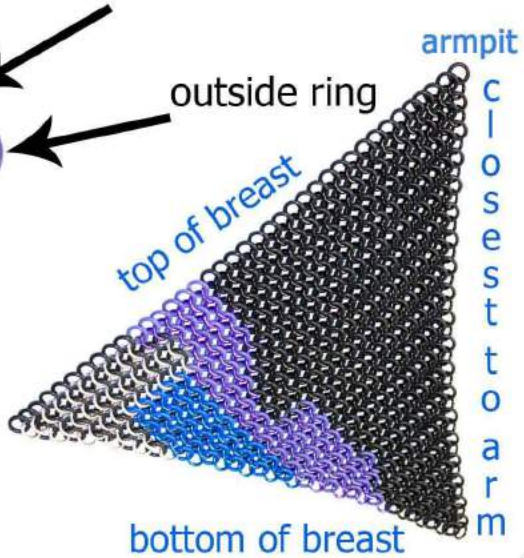
This chain maille bra is made up of 4 identically sized triangles, a neck strap and 2 short back straps. It is up to you to decide how you'd like it to close, whether via clasps or ribbon(s); this tutorial assumes the use of ribbon(s).

Use as many or as few colors in your bra design as you'd like.

To begin, weave a short section of E4-1 using the AA rings as the inside and the EPDM rings as the outside. This piece will start your first triangle.
TIP: I find it easier to begin in the middle of the triangle rather than at a point.

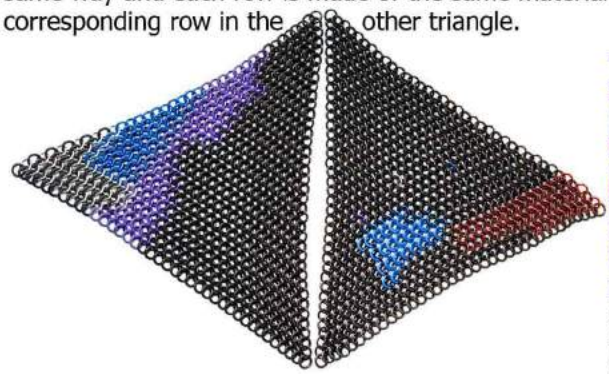
At either end of the short piece, add 1 middle ring and 1 outside ring to start forming the triangle shape. Continue weaving in a triangle shape. This piece will build from a trapezoid to a triangle.

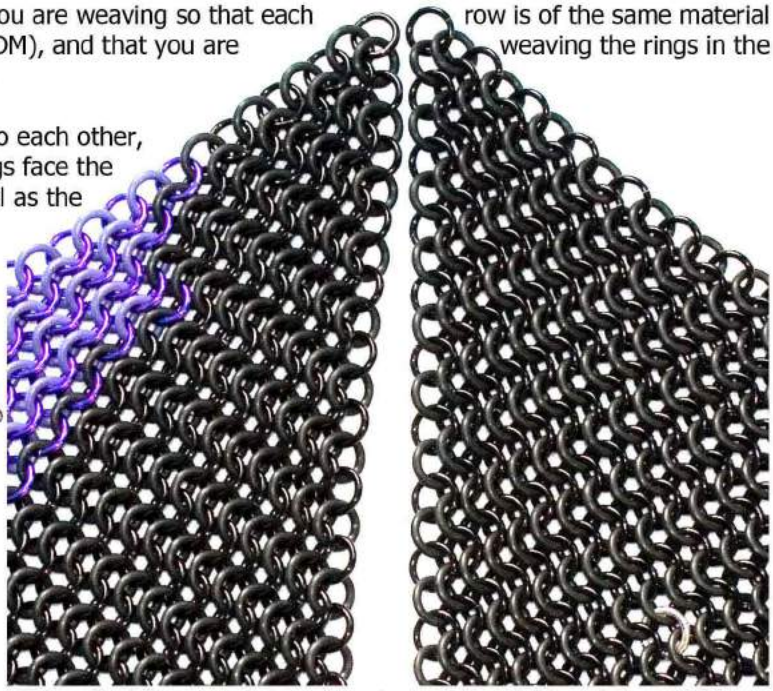
TIP: your last (and longest) row should be all EPDM rings, so plan your design accordingly.
SIZING: with one side of the triangle being parallel to the closest arm, the first triangle should cover approximately from armpit level down to the bottom of the breast, and up at an angle over about half of the breast.



Weave 3 more triangles of identical size. Make sure you are weaving so that each row is of the same material as your original triangle (metal to metal, EPDM to EPDM), and that you are weaving the rings in the same direction. End each triangle with an EPDM row.

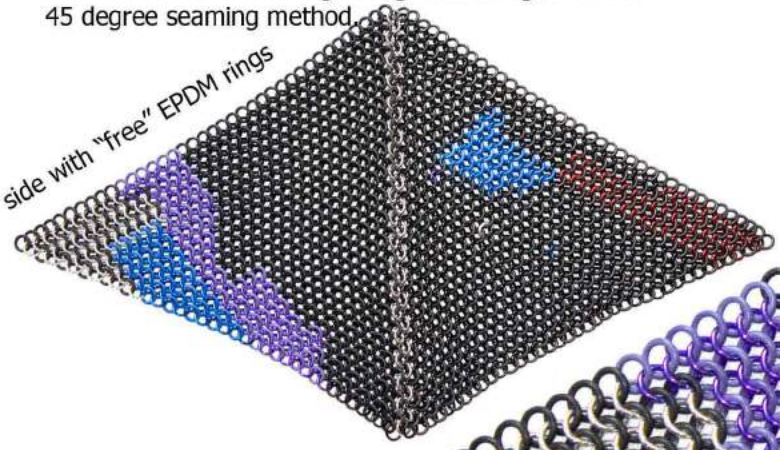
Below is a photo of 2 identically sized triangles next to each other, before being woven together. You can see all the rings face the same way and each row is made of the same material as the corresponding row in the other triangle.





Notice that the metal rings face toward the right and the EPDM rings face toward the left in both triangles.

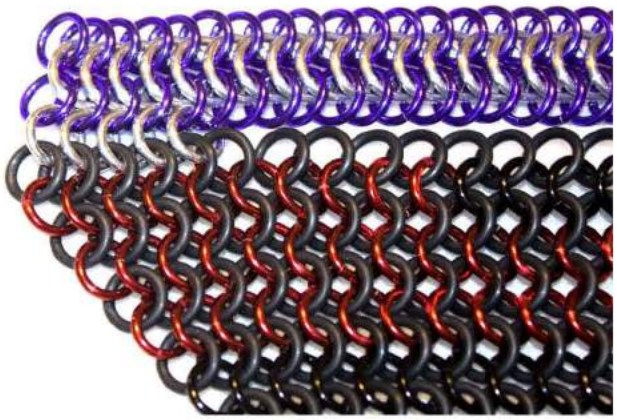
Stitch each set of 2 triangles together using the E4-1 45 degree seaming method.

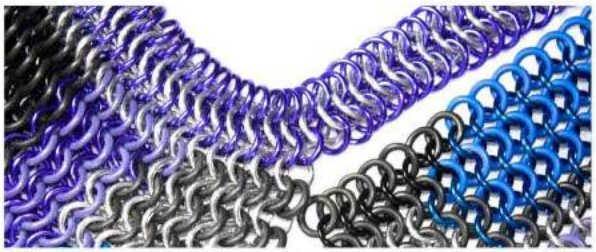


NOTE: read the fitting notes section before you continue with the next step if you intend to make a modified fit bra.

To make the neck band and shoulder straps, use 16g 5/16" ID rings as the middle rings and 16g 1/4" ID rings as the outside rings and weave a strip of E6-1. For now, the strip should be 4 times as long as your original triangle is wide, or 2 times as long one diamond.

Weave the neck band to the free EPDM rings at the top of the diamond shape using 16g 1/4" ID rings.





When you get to the mid-point where the two diamonds meet, if you are making a basic bra, simply continue weaving as if the 2 diamonds were already connected.

Once you've woven the neck strap to both diamonds, the piece will take on the familiar "bra" shape, with the cups being easily recognizable.

Continue weaving in E6-1 to lengthen each end of the neck band so that the shoulder straps form.

Weave 2 short sections of E6-1 for the back straps. Attach the straps with at least 2 rings for strength.

Adjust the length of both the shoulder straps and back straps to suit the wearer.

TIP: Double each end ring (or use a thicker gauge ring) so that they don't come apart due to the pressure of tightening the ribbon when wearing the bra.

At this point, you should have a bra that is similar in shape to this one:

FITTING and MODIFICATION NOTES

MINOR MODIFICATION

This is a common modification seen on chain maille bras. Instead of there being 2 distinct points like in the basic bra constructed at the beginning of this tutorial, the inner points of the diamonds have been removed, and the remaining rows stitched together. This results in a rectangle shape joining the cups as opposed to the 2 distinct points.

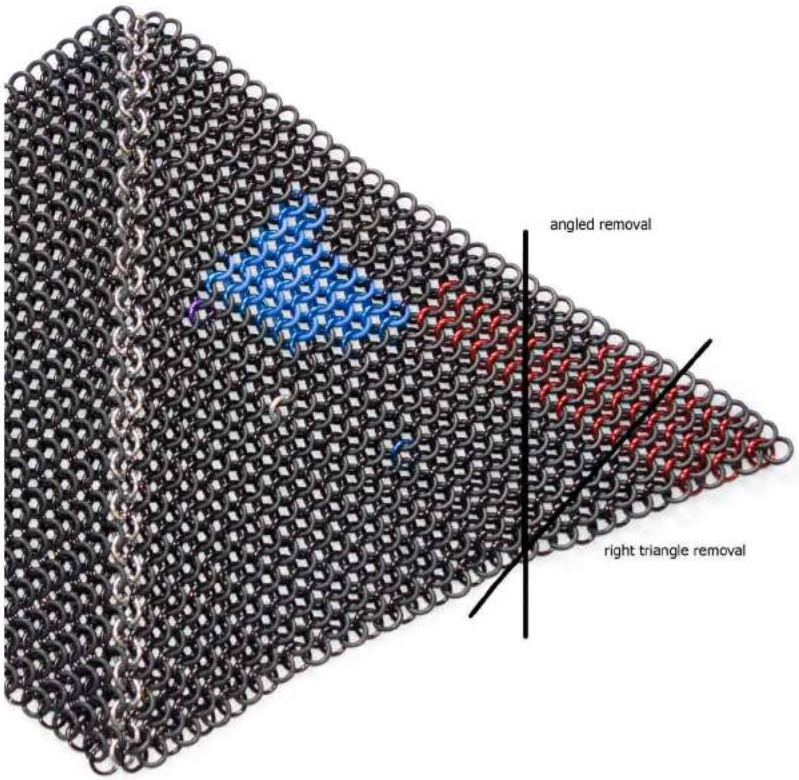
Many women, especially those with larger or less firm breasts, find this modification to be more supportive and comfortable.

To create this modification, first look at your design and change it accordingly. You'll need to decide how much of each inner point to remove. You can remove the sections either straight down or at an angle; this is personal preference.

NOTE: For the bra in this tutorial, I removed the sections at an angle. Removing the section straight down will give a straight bottom to the bra as shown above. Using the angled method will result in a more angled bottom to the bra.

See the illustration at right for section removal options.

With either removal technique, once the points have been removed, simply stitch the remaining rows back together using 16g 1/4" ID rings in E4-1.



FITTING and MODIFICATION NOTES

Fitting a bra properly is very important. There are differing opinions on how a properly fitted bra should look. I say that it is up to the wearer. Some key points to note are:
-how do you intend the cleavage to look (for example, will the breasts be more separate or will they be pushed together)?
-at what height do you want the top points of the cups to reach (in relation to the armpit)?
-is the bra meant to support the breasts or simply cover them?

BEFORE you decide that a bra doesn't fit properly, make sure you've tried a few different tricks: has the wearer adjusted her breasts (literally put her hand in each cup of the bra and lifted and moved each breast into the cup(? Have you tried tying the back in a different configuration (such as an X with one long ribbon, instead of 2 shorter ribbons)? Have you tried making the ribbon at the neckline slightly longer to allow the cups to come further down on the breasts? (This list is not exhaustive).

The model to the right is wearing an ill fitting bra. This is the bra made on pages 1-3 of this tutorial, with a minor adjustment to the inside points of the cups (see tutorial section entitled MINOR MODIFICATION), and also the initial fitting of this bra on the model. The main issue with this bra is that there is too much room between the two cups (which means the neckline is too long and the cups themselves are too large).

NOTE that the height of the top points of the cups is fine for her, as larger breasts tend to need support toward the area closest to the armpit.

To fix the issue of having too much room between the cups, first we need to figure out how much needs to be taken out. This is where having answers on the intent of the bra will help you. I intended for the breasts to be pushed together and also to support the breasts, not just cover them. To figure out the correct amount of bra to remove, I had my model push her breasts together while I pulled the bra out toward me from the middle and measured the outtake.

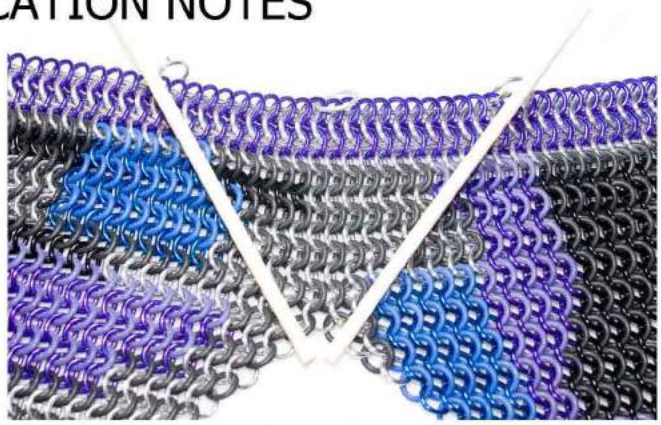
TIP: If you know you want that "push up" look from the start, have the model push her breasts together and take a measurement from the outer edge of one breast to the outer edge of the other. That will give you a good starting point when you make the bra.

Once you know how much to take out, find the center point of the bra and put a large ring on the top row to mark it. You'll need 2 additional rings to mark the total amount to be removed. For example, if you measured 4" to be removed, put one ring 2" to the left of the center ring and one 2" to the right of it.

Here again, you have the option of removing the excess at an angle or straight down. I chose to remove it an angle, as overall, it created less re-working of the bra.

FITTING and MODIFICATION NOTES

Due to the overall size of this bra, I chose to remove the section between the cups at an angle. I've illustrated it in the photo to the right. Had I done the removal in a straight line, I would have been removing and reworking many more rings.



NOTE: When removing a section between the cups, make sure you also remove the rings that make up the neck band.

Once this section was removed, I measured the cups across and compared that to the overall measurement I'd gotten from my model earlier. The cups themselves were still too big, so I ended up removing more of the cups, still at an angle, until I reached the approximate measurement of my model's breasts pushed together.

This is what the bra looked like after I'd removed the excess.

If I'd used the straight removal method, the triangle shaped area between the 2 cups would not be empty and the bottom of the bra would be straight across.

Once the correct measurement had been reached, I used the 45 degree seaming method to stitch the cups back together, and restitched the E6-1 neckband together. If I'd used the straight removal method, I would have stitched the cups together in regular E4-1 instead of at an angle.

I left the small triangle at the bottom center of the bra unstitched simply for visual impact, and also because the amount of stitching between the cups that I'd already done was sufficiently supportive to hold the breasts in place.

Please go to the next page to see the finished product on the model.

FITTING and MODIFICATION NOTES

This is the 2nd and final fitting for this bra.
The fit is perfect:
-the breasts are pushed together and nicely supported (they are not drooping)
-the seams are in the proper place on the breasts
-very little, if any, breast tissue is visible on the sides, which indicates a well fit bra (it is difficult to get ALL side-breast tissue into the bra, especially if the breast tissue is not firm)
-the model was able to dance, lift her arms and make other every day movements without the bra moving out of place or becoming uncomfortable