

GUIDE TO PURCHASING MATERIALS TO MAKE A SOFT ANKLE SUPPORT GARMENT

Item	Potential Source
3mm Neoprene (sells as .5 foot increments x 48" wide)	Seattle Fabrics (part number: N5FT-BLACK) https://www.seattlefabrics.com/3-MM-Neoprene-by-the-Linear-Foot-1700-per-linear-foot_p_840.html
Heavyweight 4-way Stretch Ponte de Roma	Spandex World Inc., product ID: 14502 https://spandexworld.com/c3/catalog/product/14502
Marine Vinyl	Marine Vinyl 1" x 5.25" https://www.joann.com/marine-vinyl/12214060.html#q=marine+vinyl&start=7
Binding	Dritz 1" x 3 Yards Knit Elastic White https://www.joanne.com/white-knit-elastic/11384534.html
Corset Boning	Bias Bespoke 11 Yards of 1/4" Wide Spiral Stainless Steel Corset Boning https://www.amazon.com/gp/product/B01FEAB388/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1
.02mm Feeler Gauges	TBI Brass Feeler Gauge Strips (Item number: BF-2) 1/2" X 12" Strips https://products.trinitybrand.com/item/feeler-gage/brass-feeler-gage-strips/bf-2
Plasti Dip	Performix 11203 Plasti Dip Black Multi-Purpose Rubber Coating - https://www.amazon.com/Performix-075815116048-Blue-Plasti-Dip/dp/B000HE9T6A/ref=sr_1_8?dchild=1&keywords=plastidip&qid=1604416147&sr=8-8
Elastic (Choose color)	Dritz 9397-PAB Knit Elastic , 1-Inch x 1-Yard https://www.joann.com/white-knit-elastic/11384534.html
Waistband Elastic (Choose color)	Dritz 1 1/2" Soft Waistband Elastic- choose color https://www.amazon.com/Dritz-0372047-Waistband-Elastic-2inX2yd-Berry/dp/B01L0J06YY/ref=sr_1_23?crd=2R7SZ7GJZTVWU&keywords=dritz+soft+waistband+elastic&qid=1568771543&srefix=dritz+elastic+wais,aps,146&sr=8-23
Velcro	Amazon

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(Choose color)	Stencho 1 Inch Self Adhesive Hook & Loop - 5 Yards - Black Sticky Back Tape Fastener - 30 Feet Total - Light Weight https://www.amazon.com/Strenco-Inch-Self-Adhesive-Hook/dp/B00FQ937NM/ref=sr_1_1_sspa?keywords=black+velcro&qid=1570475968&sr=8-1-spons&psc=1&spLa=ZW5jcnlwdGVkUXVhbGlmaWVyPUEzUkc5VDZBV1VHNDNQJmVuY3J5cHRIZEIkPUEwNzk5NTA5MVA0UVhKTk9HM0NKUCZlbnNyeXB0ZW50ZWRBZEIkP
Trim (Optional)	Flameer 25mm DIY Embroidered Daisy Lace Trim Ribbon Handicrafts Sewing Crafts - 3 yd - Purple White https://www.amazon.com/Flameer-Embroidered-Ribbon-Handicrafts-Sewing/dp/B07FBZWFHV/ref=sr_1_11?keywords=purple+flower+trim&qid=1568771744&sr=8-11
Straight Cut Aviation Scissors	Finder 10" Straight Cut Aviation Snips, Scissors for Cutting Hard Material, Metal Sheet Cutter https://www.amazon.com/Straight-Aviation-Scissors-Cutting-Material/dp/B076GG9WWR/ref=sxin_9_ac_d_rm?ac_md=0-0-bWV0YWwgY3V0dGVy-ac_d_rm&cv_ct_cx=metal+cutter&dchild=1&keywords=metal+cutter&pd_rd_i=B076GG9WWR&pd_rd_r=5e610e31-a442-4cee-9eaf-2305b55b589b&pd_rd_w=uYXJe&pd_rd_wg=GmU3q&pf_rd_p=3d1a8341-be16-45b1-ae3d-ba8c533ec9f0&pf_rd_r=YJ91DZMG57YQPBS6KJRG&psc=1&qid=1602684115&sr=1-1-12d4272d-8adb-4121-8624-135149aa9081

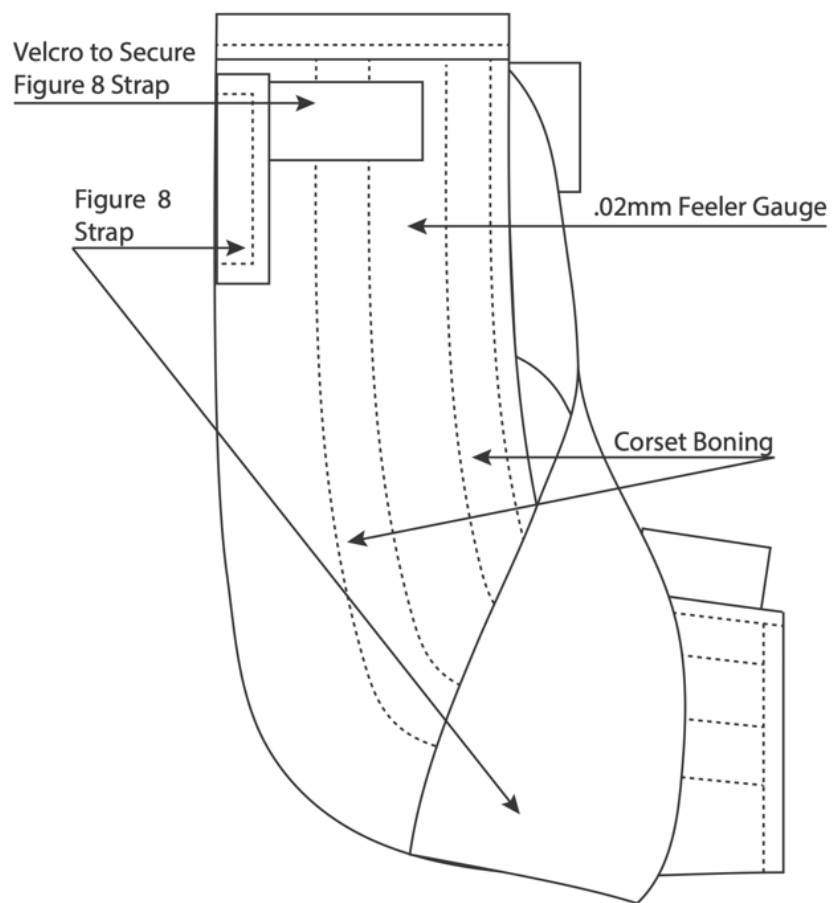




Figure 8 wrap design for wearers right side. Figure 8 strap should be reversed for left foot.



How to Make the Soft Ankle Support Garment

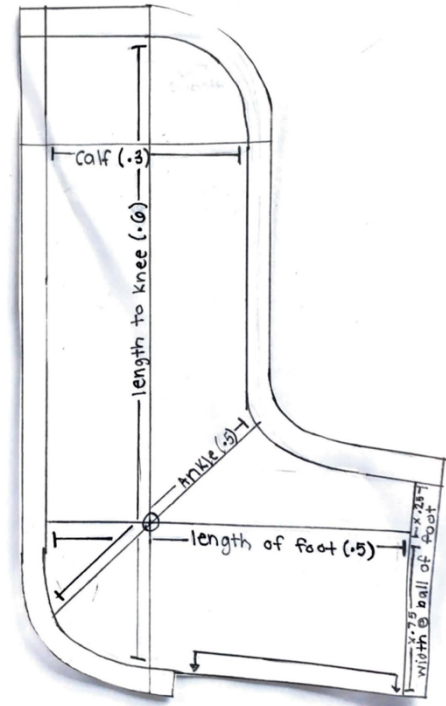
Written By: Move To Learn Innovation Lab

<p> TOOLS:</p> <ul style="list-style-type: none">• Sewing Machine• Hand Needles• Fabric Scissors• Fabric Chalk• Straight Cut Aviation Scissors	<p> PARTS:</p> <ul style="list-style-type: none">• Sewing Pins• Velcro Parts• Marine Vinyl• Thread
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Pattern Development

Measurements Needed from the Wearer:

- Calf circumference
- Length from heel to knee
- Ankle circumference
- Length of foot from heel to toe
- Circumference of the foot at the ball of the foot



See the image above for guidance while drafting the pattern.

1. Length to knee
 - Multiply length from heel to knee by .6 for more support that is higher on the calf, or by .5 for slightly less support at mid-calf. Use this measure to draft the length to knee line.
2. Length of foot
 - half of length of foot from heel to toe
 - Divide that amount with $\frac{1}{4}$ of it being towards the heel past the length to knee line and $\frac{3}{4}$ of it towards the toes on the other side of the line.
3. Diagonal heel/ankle
 - Multiply ankle circumference measurement by .5
 - Distribute equally on both side of the cross section created by the length to knee and length to foot line.
4. Calf
 - Draw a straight line up from both sides of the ankle/heel line and then draw a horizontal line 1" from the top (calf line). Check the length of the calf line it should equal about calf measurement multiplied by .3
 - This doesn't have to be exact, but make sure it is within a half inch of the target. If the calf line needs to be increased or reduced, adjust from the front side of the calf line.
5. Width at ball of foot is the ball of foot measurement
 - Divide that amount between the length of foot line with $\frac{3}{4}$ of it being towards the bottom of the foot past the length of foot line and $\frac{1}{4}$ of it towards the top of the foot.
6. Smooth SAS shape to create smooth transitions between lines, use the reference image above as guidance for the shape.
7. Add $\frac{1}{4}$ " seam allowance all around, except under the foot, which should be cut on the fold (start this around the length of knee line – see image above).

Construction

Step 1 Option 1 — Prepare your pattern pieces



Draft the SAS pattern as described above. See page 3.

Lay out the pattern on material folded such that it is two layers thick, aligning the foot of the pattern with the fold. Pin to secure and mark the pattern shape. Cut one piece from Neoprene and one on Ponte de Roma (figure 1).

Figure 1. (Left to Right) The pattern, neoprene, ponte-de-roma

Step 1 Option 2 — Chalk and Trace: Prepare your pattern pieces

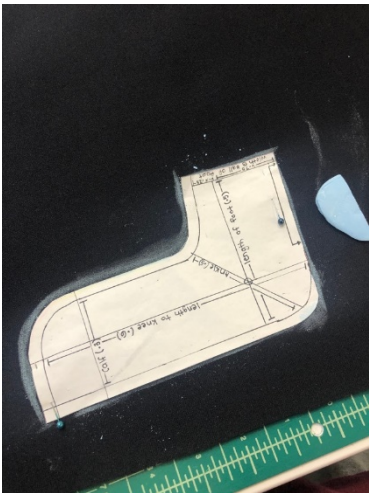


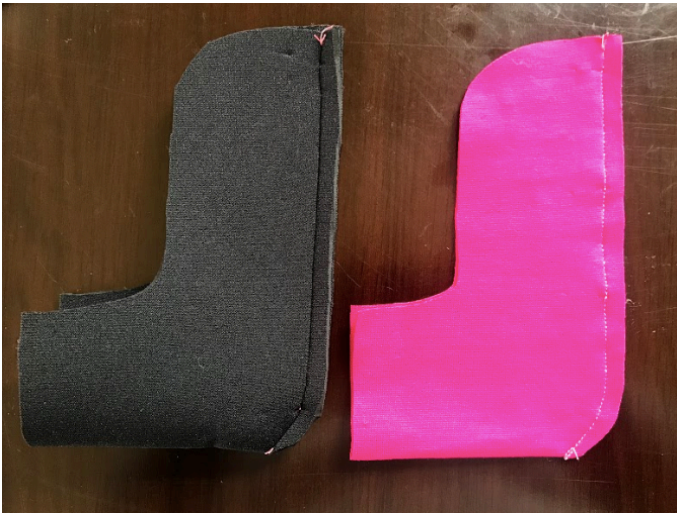
Figure 2: Pattern traced with chalk.



Figure 3: Pattern mirrored and chalk.

Alternatively, chalk the pattern on unfolded material and mirror on other side (figure 2 and figure 3)

Step 2 Part a — Stitch Back of Leg Seam



Using a walking foot and a denim needle, stitch back of the leg seam on each piece with $\frac{1}{4}$ " seam (figure 4).

Figure 4. Neoprene and Ponte de Roma: Back of the leg seam stitched

Step 2 Part b — Stitch Back of Leg Seam



Stitch a $\frac{1}{4}$ " seam line (figure 5).

1. Ponte de Roma: 2.5-3.0 stitch length
2. Neoprene: 4.0-4.5 stitch length

Note: It is recommended to test both the neoprene and Pont de Roma fabric on your machine before stitch the actual pieces to ensure stitch length and tension are appropriate for your machine.

Figure 6. Ponte De Roma seam allowance reduced.

Step 3 — Trim to Reduce Bulk



Trim neoprene seam allowance at the heel to reduce bulk. Further reduce bulk by trimming the neoprene on an angle. (figure 7).

Figure 7. Neoprene piece with seam allowance trimmed.

Step 4 — Pin Pieces Together



Figure 8. Neoprene and Ponte de Rome Fabric pieces pinned together. See video



Figure 9. Elastic sandwiched between fabric pieces.

Pin neoprene and outer fabric pieces together with seams on the outside (figure 8). Between the two pieces, sandwich 1” elastic on one side. Smallest length elastic should be on the toes, largest on the leg opening, middle size at the middle (Figure 9). ([video](#))

Step 5 — Stitch the Front and Back Pieces Together



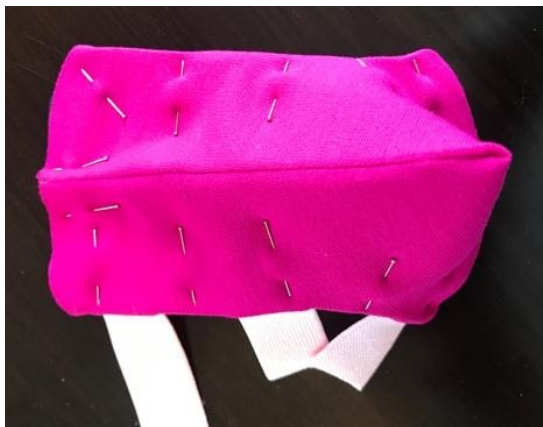
Stitch pieces together leaving $\frac{1}{4}$ " seam allowance. Leave top open (all other edges sewn). (Figure 10).

Step 6 — Reduce Bulk

Like in Step 3, trim seam allowance to reduce bulk. Trim neoprene at an angle to reduce more bulk.

Step 7 — Flip Pieces Right Side Out

Flip pieces inward so seam allowances are on the inside. Pin the inside and outside together. Outside fabric will need to stretch over the neoprene. ([video](#))



Step 8 — Stitch Tunnels

Stitch tunnels through both layers. The first 2 tunnels should be about $\frac{3}{8}$ " wide and the larger tunnel for feeler gauges should be about $\frac{5}{8}$ " wide. Alter based on the amount of tunnels and supports used.



Step 9 — Embellish



Stitch on any embellishments on the center back seam to match the user's taste.

Step 10 — Attach the Wrap Elastic



Stitch waistband elastic under the 1" elastic or on the opposite side and at an angle as shown (elastic should attach on the outside of the foot). If making two braces make sure the elastic is stitched in on opposite sides, so they wrap around the foot correctly. Trim excess elastic.

Step 11 — Prepare the Wrap Elastic with Velcro



Fold the raw edge of the elastic up $\frac{1}{4}$ " and stitch the loops side (rough side) of Velcro to the wrapping elastic with a zig zag stitch.

Stitch the fluffy side of the velcro $\frac{1}{2}$ " from the top edge. Stitch along the existing tunnel stitching lines so the supports can still slide in.

Step 12 — Coat the Feeler Gauge Supports for Safety



Measure the tunnel lengths on the SAS and cut the corset wire and feeler gauges to those measurement minus $\frac{1}{2}$ " using the Straight Cut Aviation Scissors.

Follow all instructions given with the Plastidip, Coat the corset wire and rounded edges of the feeler gauges three times on each end.

Coat the cut edges of the feeler gauges four times.

Following the instructions provided by Plastidip. Once the supports are dry insert the supports into the SAS tunnels.

Step 13 — Finish the Top Edge

Hand stitch fold-over elastic to the top edge to finish the top edge of the SAS.

Step 14 — Hand Sew Tunnels

Hand sew a line of straight running stitches above each support tunnel to ensure support stays in place during wear.

Step 15 — Sew Horizontal Elastic Pieces



Hand sew the horizontal 1" elastic pieces to the opposite side of the brace.

Final Product:

