

## MAKING THE FELT SAMPLE

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The best way to find out the felting properties of a fleece is to make a test sample. Felting is done in two stages; felting and fulling. Read all of the following instructions before beginning to felt.

### Materials and Equipment:

Bubble wrap, approximately 12" x 18" (small bubbles)

Permanent marker

20 grams (3/4 ounce) of carded fleece you wish to sample.

Mosquito net, a piece approximately 12" x 18".

Cellulose sponge (O'Cello is one brand.)

Warm soapy water (Swish a bar of Olive Oil or Glycerin soap in a quart of warm water until the water looks milky.)

Rolling bar (15" – 24" length of PVC pipe, or wooden closet pole)

Strips of cotton lycra cloth (about 1 inch wide and 18" long.)

Vinegar

### PROCESS:

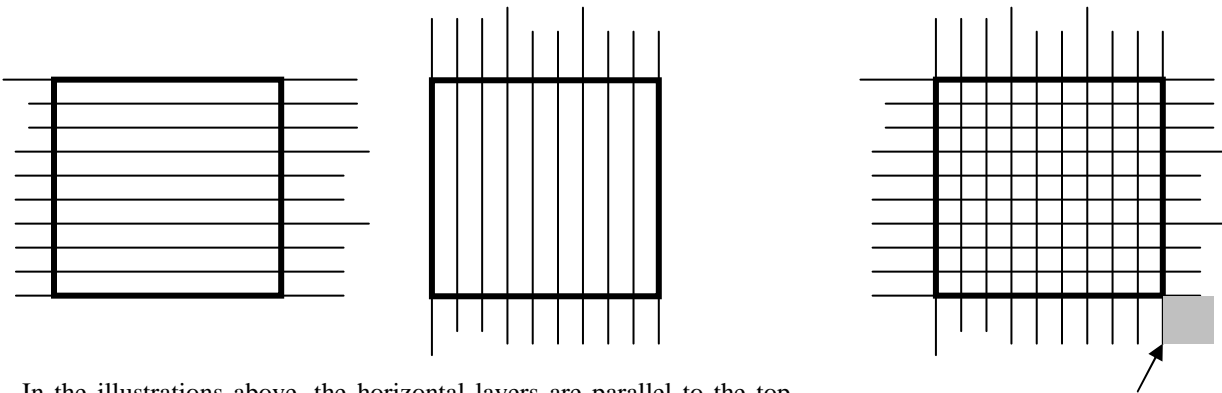
#### Stage One: Felting

1. Mark a 25 cm. (10 inch) square in the center of a piece of bubble wrap, approximately 12" x 18". Mark it on the non-bubble side using a permanent marker.

2. Weigh 20 grams (3/4 ounce) of carded fleece. Lay out the first layer on the bubble side of the bubble wrap following the marks you made. Follow the Parallel and Perpendicular Rule as you lay this out. (See below.) This is your "before shrinkage" measurement and it needs to be accurate so that you will be able to figure the % of shrinkage correctly. The layer needs to be thin so that the fibers can travel easily past each other. It is much better to have many thin layers of wool than to have a couple of thick layers. (If the fleece was carded with hand cards, the batt will be thicker on one side than the other. In order to keep the layers of fleece even, hand carded batts should be laid down so that the thin part of one is overlapped by the thick part of another.)

#### The Parallel/Perpendicular Rule

This rule states that if the fleece is lying parallel to the template's edge, it should not go over that edge. It should only come up to it. If the fleece is perpendicular to the edge, it can go over it. The fiber ends can extend a distance which is approximately one half of the length of the fiber itself. In this way, the edge fibers will be well caught into the felt body and a strong seam will be created. But there won't be too much bulk that could cause an area of unevenness at the felt join.



In the illustrations above, the horizontal layers are parallel to the top and bottom, but perpendicular to the sides. The vertical layers of fiber are parallel to the side edges of the template but perpendicular at the top and bottom. The third illustration shows both layers together, with the open square that occurs at the corners by following this rule.

*Open area in the corner where bulk is eliminated by following this rule*

3. Lay the next layer at a right angle to the first one. Continue with the other layers. Be sure to cross each layer perpendicular to the previous one, and to keep the piece measuring 25 cm. (10 inches) square.
4. Keep a waterproof ruler or tape measure near the work area. Note the time you begin and end the felting so that you will have a record of the length of time it takes to make your fleece into felt. The time will differ from fleece to fleece.
5. Cover the wool stack with mosquito netting. Wet a cellulose sponge in soapy water and press it down on the stack. This will wet out the fibers and remove the air. Add more soapy water as necessary to thoroughly wet and compress the fleece, but do not add so much liquid that the piece is floating.
6. After the piece is entirely wet, lift the net and fold the edge over until the original measurement is correct. (Do not fold the fiber under because lifting the wet mass can cause it to distort. Fold the fiber up.) If the piece is too narrow, stretch it until it is the correct measurement. A folded edge is stronger and more even than an unfolded one. Reapply the net. Record your starting time.
7. Rub the wool with your hands in a gentle, back and forth motion. Apply little pressure at first and as the piece hardens you can increase it. Push straight down as you rub. Do not stretch the piece as you push on it. It helps to move your hands from the edge of the piece toward the middle. Try to maintain the 25 cm. (10 inch) square. You can add soap to your hands to help them slide easily over the net, but do not get the felt too soapy. The excess suds can act as a cushion and keep the fibers from getting in contact with each other. You must have contact before felting can occur. If you do get too many suds, use a towel to blot some of them off.
8. Continue rubbing the piece until this side is tangled enough to form a solid mass. To test for this, gently rub your fingers over the surface of the felt. If fibers move, you must replace the net and continue to rub. If the fibers stay in place, carefully turn the felt over and rub the new side until its fibers are also holding together well.

**PINCH TEST:** To make certain that the sheet of felt is ready for the next stage, do the pinch test. Pinch some of the fiber between your fingers and pull it up. If the felt lifts off the table in one solid piece, it is ready for the next stage. If the fibers pull up separately, the felt is not hard enough yet. You must continue rubbing the sample until it is hard enough to lift in a solid mass.

### **Stage Two: Fulling**

9. Roll the net-covered felt and bubble wrap around a felting bar. Tie it in a couple of places with strips of cotton lycra fabric. Roll it back and forth about 20 times. Then unroll the felt and turn it so that it can be rolled from a different direction. The felt will shrink in the direction that it is rolled, so that you must keep turning it in order to keep it square. Eventually, the piece will stop shrinking. You will know that you have reached this point when the sample does not stretch when you pull it. This stage takes about 15 minutes or so. Remember to record your ending time so that you have some feeling for the length of time that particular fleece takes until it felts.
10. Rinse the soap out of the felt. You should never leave the soap in the felt, because the alkaline will cause the fiber to begin to deteriorate. Soak the sample in a vinegar-water solution for 15 minutes and then rinse again. Wring the felt in a towel to help remove some of the water and lay it out flat to dry. You may need to block it slightly to get it back into square.
11. Measure the felt and record the dimensions. These measurements, along with the beginning measurements will be used to calculate the fleece's shrinkage.

TO FIGURE % OF SHRINKAGE:

MEASUREMENT BEFORE FELTING = A                      A - B X 100 = % OF SHRINKAGE  
 MEASUREMENT AFTER FELTING = B