Exercise 5

Calculate the GSM of the fabric.

GSM (g/m2) is mass of the textile fabric for specific area.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Measurement | Number of warp in 1cm | Number of weft in 1cm | Number of warp in 1 meter | Number of weft in 1 meter | Warp crimp% | Weft Crimp % |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |

Step 1

Mark a box on fabric with dimension 10cmX10cm

Step 2

Cut the sample

Step 3

Count number of warps and number of weft in 1cm, do it two times for each.

(if you can not find which one is warp, the warp mostly has less crimp than weft,)

Step 4

Measure crimp

Crimp%= change in length /original length \*100

Step 5

Measure the GSM of the fabric

EXAMPLE (considering Count as 18tex)( example for warp only)

= (number of warps/meter)/1000 x (100+ crimp%)/100 x tex )

= (2800)/1000 x (102.5 \*18)/100

= 51.5 g

**Fabric weight =warp weight + Weft weight**

Total fabric weight = g/m2

**Consider warp and weft tex as 40 tex ( this is for teaching purpose), take sample from teacher and calculate GSM.**

Step 6

Measure the GSM of real fabric on weight machine, Teacher can show you how samples GSM can be measured on a weighing scale.