



Schüssler product information

Textile processing for framing applications (using flat profile 4545, 14mm x3mm)

1. Calculation of material quantity needed for cutting

Beforehand stretch/stretch extensibility of the materials are to be calculated. Both length and width have to be counted as the stretch behaviour is often differing in length- and cross direction:

Put for example 2x2m of the required material plain to the ground. One side is to be fixed (e.g. by a tacker or simply and practical by your own weight: put the feet along to the edge), then at opposite side original width and length are to be marked. After this the material is to be drawn up to the point that no further extension is possible and then mark it again. If the material lengthened to, e.g. 4 cm, an extension of approx. 2% is achieved and can be re-calculated to the actual required measure of fabric. **Hence follow the formula in order to calculate the cuttings:**

Frame width (outer inner- edge) +2 x width of flat profile – stretch extension in cm = width

Frame length (outer inner-edge) +2x width of flat profile – stretch extension in cm = width

Stretch behaviour of the optimal Berger-Qualities for frame systems
(approx. indications – tested on unprinted fabrics, subject to self-tests!)

Attention: Post-shrinkage

A: Post-shrinkage UV

With UV-curable printing a time-delayed shrinkage is arising from colour drying. This is to be calculated beforehand.

B: Post-shrinkage DyeSublimation

In general, textiles shrink during the heat fixation in the calendar or in the inline-heat-fixation unit. Textiles with a higher stretch/elasticity factor in length-direction can shrink additionally after the heat-fixation-time - delayed up to a few days. This can cause deviations in dimensions for the installation of textiles in aluminium frames.

This post-shrinkage effect appears especially with calendars which are working with tension: the length-stretching of the textile caused by the calendar will relax (shrink back) within a few days. This means a textile's length elasticity before printing of 1% can have a post shrinkage of up to 1%, depending on the tension during the heat fixation!

Therefore Berger tries to avoid a length elasticity at its textile products for framing-applications (e.g. 4280/26, 4499/6, 4237/26, 4233/26, 4281/26, 4289/26). However the post shrinkage cannot be eliminated completely.



Textile processing for framing applications (using flat profile 4545, 14mm x3mm)

Berger article	Stretch behaviour in %	
	Extensibility lengthwise to the fabrics	Extensibility widthwise to the fabrics
Lighttex 4499	ca. 1,0%	ca. 0,3%
Lightbox 4290	ca. 1,5%	ca. 1,5%
Eco Display 4280	ca. 1%	ca. 0,5%
Micro backlight 270 FR + w 4233	ca. 1,5%	ca. 2,0%
Creasefree heavy satin 4102	ca. 1,0%	ca. 1,4%

Calculated for example:

Frame size (counted at outer inner-edge of the channel s. pict.2):1000mm x 2000mm, motif of the picture upright

Fabric used: Eco Display 4280/302cm upright printed 3 pictures in parallel, i.e. in this case fabric width is put also into width of frame.

stretch calculation width : 1000mm + 2% = 1020mm – i.e. stretch extension is 20mm

stretch calculation length: 2000mm + 1,5% = 2030mm – i.e. stretch extension is 30mm

Calculation of material quantity needed for cutting:

Cutting width: 1000mm + (2x14mm) 28mm – 20mm = 1008mm

Cutting length: 2000mm + (2x14mm) 28mm – 30mm = 1998mm

Important: Is the motif of the picture printed on a fabric width of 2m but to be clamped into the frame in upright position, the fabric width has to be calculated for the frame length and the fabric length for the frame width !!!

www.schuesslertextil.com

Gustav Schüssler GmbH & Co. KG: Kuhleshütte 84 | 47809 Krefeld | Germany | Telefon: +49 (0)21 51 65231-0 | Fax: +49 (0)21 51 65231-25

The information in this information sheet are based on findings obtained in practice. Because of the high number of factors which can have an effect during handling and application, customers tests will be required. A legally binding guarantee of specific properties is not to be inferred from our technical information. The information given here may be subject to be changed without notice. Schüssler has not prepared MSDS datasheets for this product which is not subject to the MSDS requirements.



Textile processing for framing applications (using flat profile 4545, 14mm x3mm)

2. Stitching on the flat profile

Position: The flat profile has to be under the fabric! So the feet of the sewing machine will move over the fabric.

Calculate width of flat profile + ½ flat profile thickness = art. 4545, e.g. $14\text{mm} + 1,5\text{mm} = 15,5\text{mm}$

Fit flat profile on the reverse side flush with the longitudinal edge, starting $15,5\text{mm}$ from the edge.

To be stitched on - acc. to the material - at spaces of abo. 2-4mm to the edge. If a fabric is fraying more do not stitch too close to the edge. For fabric which is not fraying, e.g. Eco flag 117 FR+w art. 3745, abo. 2mm would be enough.

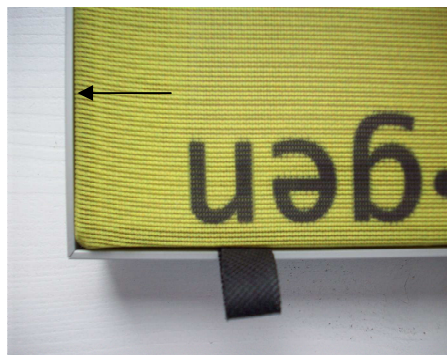
When processing/stitching on the flat profile or afterwards, a loop tape 4745 of abo. 25mm are to be attached at the bottom left corner, this is to tear at the profile smoothly when changing the pictures later on. (s. Picture 1+2)

3. Edges to be cut

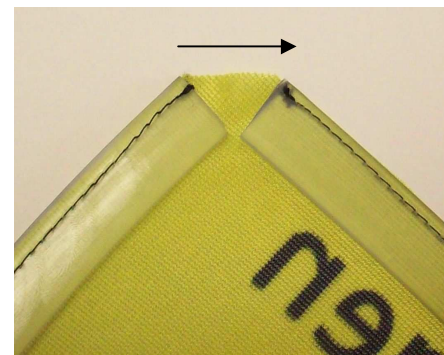
At the edges the exceeding fabric has to be cut in order to draw the fabric edges smoothly into the frame: Cut the exceeding fabric at the edge – from profile outer edge to profile outer edge in a straight line. (s. picture 3)



picture 1



picture 2



picture 3



Textile processing for framing applications (using flat profile 4545, 14mm x3mm)

4. Problems / solutions

The flat profile is somehow blocking up a smooth running under the foot of the sewing machine, a faulty seam is coming out or it cannot be proceeded:

1. An industrial sewing machine should be used. They have more power and are running through more evenly as just a normal sewing machine.
2. A Teflon sewing foot should be used, they are gliding over different materials. (important: the foot should be made from Teflon – not only coated!)
3. Recommendation for sewing thread and needles: PES-sewing thread No. 100, 70s or 80s sewing needles – not thicker than that

Fabrics with welts attached do not fit into the frame:

1. The chosen fabric is too thick. Normally our profile of aro. 14mmx3mm is fitting all standard frame systems (chain guide of profile in normal case aro. 14x3mm or 15x3mm). This problem may appear with fabrics of more than 300 g/qm. It should be pre-tested !!!
2. The profile is not properly produced, i.e. too small or there are not visible narrowings in the chain guide. If necessary pls. contact the manufacturer.