Green Shape Standard

Calculation of material efficiency

Applicable document 03

The calculation is performed according to the following methodology:

The material efficiency of an individual fabric is determined using mini markers from the cut layer image.

All main fabrics and linings are taken into account at the time of salesman sample production in sample size.

The weighted average material efficiency per product is calculated as a percentage from the consumption of all main materials and linings according to the bill of materials, the fabric width, and the respective material efficiency per fabric.

This is done using the following formula:

Step 1:
Calculation of gross fabric consumption per fabric used (including offcuts):
Fabric width (m) x fabric consumption (length in m) = fabric consumption (m^2)

Step 2:
Total of all calculated gross fabric consumption:
Fabric consumption 1 (m^2) + fabric consumption 2 (m^2) + fabric consumption n (m^2) = total fabric consumption (m^2)

Step 3:
Calculation of net fabric consumption per fabric used:
Material consumption (m^2) x Material efficiency (%) = Net material consumption (m^2)

Step 4:
Sum of all calculated net fabric consumption:
Net fabric consumption 1 (m^2) + Net fabric consumption 2 (m^2) + Net fabric consumption n (m^2) = Total net fabric consumption (m^2)

Step 5:
Ratio of net total material consumption to total material consumption:
Net total material consumption (m^2) ./. Total material consumption (m^2) = Weighted material efficiency (%)

This also applies when a knitted fabric is used and cut alongside other fabrics.

For pure knitwear products (fully fashion), a material efficiency of 100% is assumed.