

Thermo



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The items and qualities summarized by Englisch Dekor under the term "Thermo" positively influence the room climate and also ensure a reduction in energy consumption – thus sustainably lowering CO₂ levels. Here, on the one hand, solar radiation can be minimized with "technical" fabrics, or a temperature balance in the room can be created via the natural properties.

One such "natural item" is the complete Lana series – the natural properties of the wool and the dense weave provide a decorative "barrier" that helps keep the warmth in the room in winter and effectively keeps the heat out in summer. This product is truly an all-rounder, whose area of use ranges from furniture to curtains to panels, is recycled and thus absolutely environmentally friendly and an acoustic masterpiece!

Much more technical and yet as easy to process as any conventional fabric – are our different variants of the "Solar Reflecting Fraction". These fabrics – whether sheer, curtain or dimout – have a solar radiation reflecting backside. This is created over the entire surface as an independent unit using a special weaving technique with glossy threads and is not subsequently applied via an environmentally harmful coating.

Untersuchungsergebnis:

(1) Lichtbereich

UV-Bereich

Codierung Prüfstelle	Licht- Transmissions- grad	Licht- Reflexions- grad	Licht- Absorptions- grad	UV- Transmissions- grad
	$T_{v,B}$	$\rho_{v,B}$	$\alpha_{v,B}$	T_{UV}
P0706_11_1	0,2105	0,6668	0,1227	0,1535

(2) Solarbereich

Codierung Prüfstelle	Solar- Transmissionsgrad	Solar- Reflexionsgrad	Solar- Absorptionsgrad
	$\tau_{s,B}$	$\rho_{s,B}$	$\alpha_{s,B}$
P0706_11_1	0,2079	0,6728	0,1193

(3) Gesamtenergiedurchlassgrad g_t und Abminderungsfaktor F_c

Codierung Prüfstelle	Gesamt- energiedurchlassgrad	Abminderungsfaktor
	g_t	F_c
P0706_11_1	0,36	0,52

Anmerkung:

F_c und g_t - Werte gültig für folgende Annahmen laut Norm DIN EN 13363 -1:

- Zweifachverglasung mit Wärmeschutzbeschichtung mit Wärmedurchlassgrad $U = 1,6 \text{ W/m}^2\text{K}$ und Gesamtenergiedurchlassgrad $g = 0,70$
- Sonnenschutz innenliegend, geschlossen

There are 3 test factors:

- **Transmission** – goes through – the smaller the value, the more effective
- **Reflexion** – is thrown back – the larger the value, the more effective
- **Absorption** – is absorbed – the smaller the value, the more effective
- These 3 factors added together result in 100 % or 1.

The reflection degree of these articles is on average 55 %, i.e. with full window surface radiation and with closed curtains, more than half of the solar energy (Solar - visible light, UV and infrared radiation) is radiated back and not let into the room. Decisive factors are also the total energy transmittance g_t and the reduction factor F_c .

g_t -value - how many percentages of the incident sunlight are reduced by the fabric – in our case 36 % pass through the fabric into the room – 64 % of energy is reflected or absorbed. The lower the value, the more optimal the sun protection effect!

F_c -value - the reduction factor is tested according to DIN 14501 ($G = 0.59$ $UG = 1.2W/M^2$) and indicates how many % of the incident sunlight is let into the room through the fabric. In our case – with an F_c -value of 0.52, 52 % of the original sunlight is directed into the room interior and 48 % is "warded off" (absorbed and reflected) – the smaller the value, the more efficient the item.