



VISUAL CONTACT OUTSIDE



COLD-CUT, CRUSH-CUT OR
ULTRASONIC



FLAME RETARDANT



MANUFACTURED IN THE EU
REACH COMPLIANT



IMO CERTIFIED



PHthalate-FREE



INDOOR AIR QUALITY CERTIFIED



ENVIRONMENTAL PRODUCT
DECLARATION AVAILABLE

TECHNICAL PROPERTIES

Fabric Characteristic	Standard	
Composition		80 % PVC + 20 % PES
Weight (g/m ²)	EN 12127	400 ± 5 %
Yarn/cm	Internal method	Warp: 17 Weft: 16
Yarn diameter (mm)	Internal method	0.30
Openness factor (%)		10 %
Thickness (mm)	Internal method	0.53 ± 5 %
Light fastness (grey scale level)	EN ISO 105 B06-2002 (interior) EN ISO 105 B03:1994 (exterior) EN ISO 105 B04:1998 (exterior) EN ISO 4892-2 (exterior)	5 / 5 4 / 5 White
Light fastness (blue scale level)	EN ISO 105 B02:2002 (interior)	8 / 8 7 / 8 white
Tearing resistance (daN)	EN ISO 13937-3:2001	Warp: 4.8 Weft: 5.2
Breaking resistance (daN/5cm)	EN ISO 13934-1:1999	Warp: 145 Weft: 127
Stretch (%)	EN ISO 13934-1:1999	Warp: 21 % Weft: 23 %
Corrosion in saline environment neutral fog	EN ISO 112-017:92 ISO 9227:90	Without changes in surface (max.level)
Odour test	PV-3900	3 Pass
Fire classification	DIN 4102 EN 13501-1:2007 EN 13773:2003 NFPA 701 CAN/ULC-S109-03	B1 Bs2d0 Class 1 Pass Pass
Wheelmark	IMO Res.MSC.307(88)-(2010 FTP Code) and IMO MSC/Circ.1102	Pass
Roll size		Width 250-300* cm, Length 27.5 m
Recycled content		2 % Pre-consumer
Antimicrobial activity	ASTM 2180-01 and ASTM G21-09	Microorganism Growth Inhibition
Printable		Yes

*please contact our sales department for available colours in this width



Vertical blinds



Roller blinds



Panel blinds



Skylight blinds

SUN CONTROL PROPERTIES

Colour	THERMAL FACTORS						OPTICAL FACTORS								
	Fabric		Fabric+Glazing				% T _v	% R _v	% T _{au,n-n}	% T _{au,n-diff}	% T _{uv}	Glare Control	Night Privacy	Visual Contact	Daylight Utilisation
	% T _s	% R _s	G _{TOT} internal Glazing C		G _{TOT} internal Glazing D										
		G _{TOT}	Class	G _{TOT}	Class						Class	Class	Class	Class	
White	25	64	0.34	2	0.24	2	22	73	10	12	11	0	1	2	2
White Linen	27	58	0.35	1	0.24	2	23	67	10	13	11	0	1	2	2
White Pearl	23	54	0.36	1	0.24	2	19	60	10	9	11	0	1	2	2
Linen	28	52	0.37	1	0.25	2	24	59	10	14	11	0	1	2	2
Pearl Linen	25	48	0.38	1	0.25	2	20	53	10	10	10	0	1	2	2
Linen Sand	25	42	0.40	1	0.25	2	19	44	11	8	12	0	0	3	2
Pearl	22	43	0.39	1	0.25	2	18	47	10	8	10	0	1	2	2
White Grey	16	36	0.41	1	0.26	2	15	42	11	4	11	0	0	4	2
Mint	26	49	0.38	1	0.25	2	21	54	10	11	11	0	0	3	2
Cinder	21	38	0.41	1	0.26	2	17	41	11	6	12	0	0	3	2
Pebble	17	31	0.43	1	0.26	2	14	33	11	3	11	0	0	4	2
Slate	12	12	0.48	1	0.27	2	12	13	11	1	12	0	0	4	1
Pearl Sand	20	37	0.41	1	0.26	2	15	39	10	5	11	0	1	2	2
Pearl Grey	16	26	0.44	1	0.26	2	14	29	11	3	11	0	0	4	2
Grey	13	14	0.47	1	0.27	2	12	24	11	1	11	0	0	4	2
Bronze	11	7	0.49	1	0.28	2	11	7	10.5	0.5	11	0	0	4	2
Ebony Grey	10	8	0.49	1	0.28	2	10	9	9	1	10	1	1	3	2
Ebony Bronze	11	5	0.50	0	0.28	2	11	5	10.5	0.5	11	0	0	4	2
Ebony	11	3	0.50	0	0.28	2	11	3	10.5	0.5	11	0	0	4	2

Data measured according to EN 410:2011 and EN 14500:2008

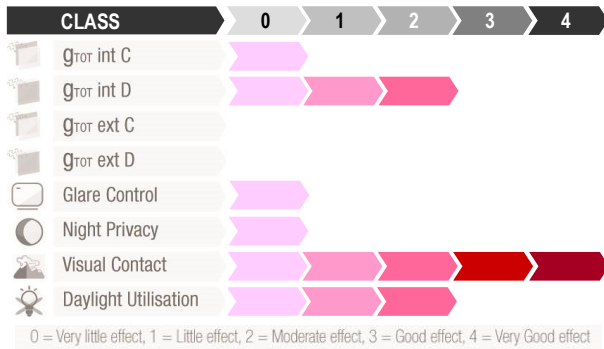
Calculations of g_{TOT} are according to EN 13363-1, with 10 % frame area

Classification of thermal and visual characteristics according to EN 14501:2005

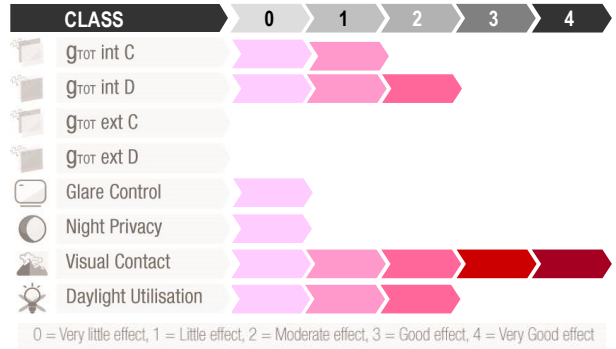
Data of g_{TOT} are given using standard Glazing C and D. though any other combination may be calculated under request

V.E.S.T. diagrams (Vertisol Efficiency Scale Table), based on standard EN 14501 have been developed by Vertisol as a useful tool in the selection of the right shading for each situation:

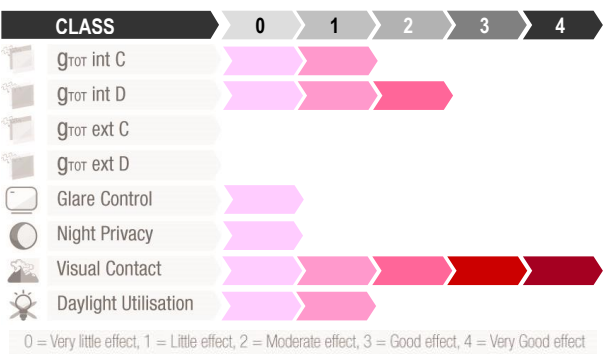
Ebony Bronze, Ebony



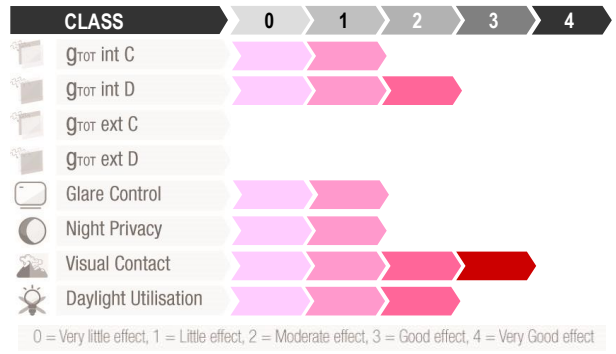
Bronze, Grey, Pearl Grey, White Grey, Pebble



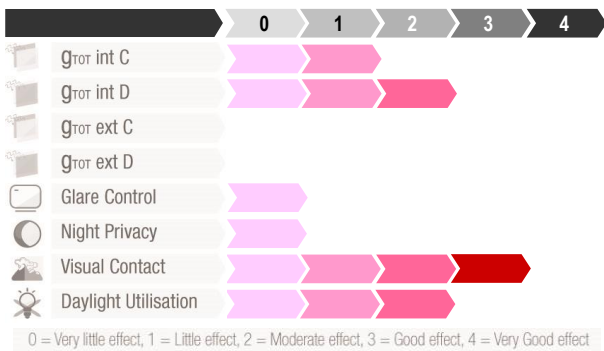
Slate



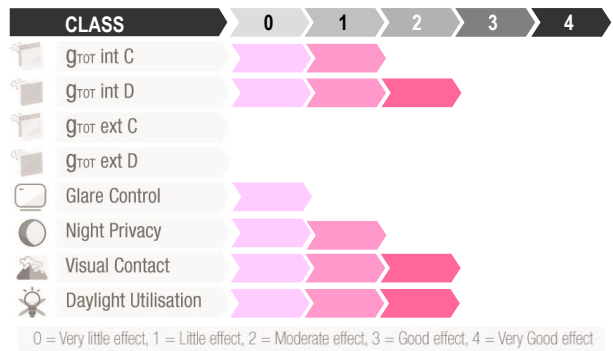
Ebony Grey



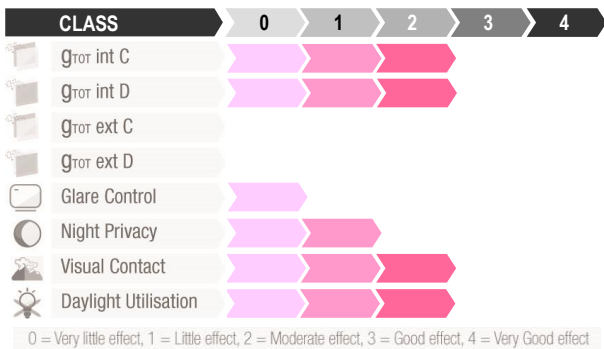
Mint, Cinder



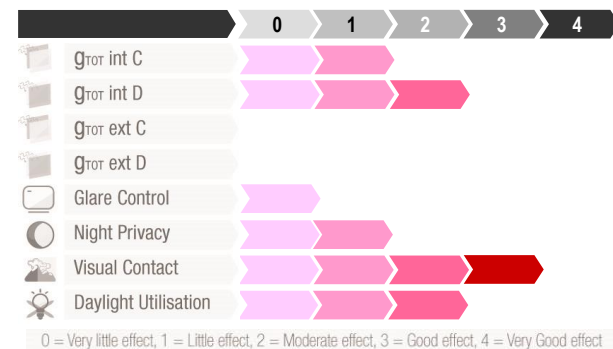
Linen, Pearl, White Linen, White Pearl, Pearl Linen, Pearl Sand



White



Linen Sand



*All specifications are based on average values and may deviate. The values are given for guidance and are not contractual.
Subject to technical modification*

Thermal and visual properties

European Standard **EN 14501** states the properties that shall be taken into account when comparing solar protection devices. It also specifies the corresponding parameters and classifications to quantify its properties of **thermal and visual comfort**. Five performance classes are specified:

Class	Influence on thermal or visual comfort				
	0	1	2	3	4
	very little effect	little effect	moderate effect	good effect	very good effect

- %Ts**
($\tau_{e, n-h}$) Normal/hemispherical **solar** transmittance. Ratio of the **total** transmitted flux to the directional incident global radiation, from 280 nm to 2500 nm (including UV and IR part of the solar spectrum).
- %Rs**
($\rho_{e, n-h}$) Normal-hemispherical **solar** reflectance. Ratio of the **total** reflected flux to the directional incident global radiation, from 280 nm to 2500 nm (including UV and IR part of the solar spectrum).
- g_{tot}** Total energy transmittance of the shading device combined with the glazing employed. It can be calculated according to EN 13363-1 (simplified method) or EN 13363-2 (ISO 15099, detailed method).

Most common standard glazing used un calculation (EN 14501):
Glazing Standard C: Double glazing low-e filled with argon 4-16-4.
Glazing Standard D: Reflective double low-e glazing filled with argon 4-12-4.
- %Tv**
($\tau_{v, n-h}$) Normal/hemispherical **light** transmittance. Ratio of the **visual** transmitted flux to the directional incident global radiation, from 380 nm to 780 nm. The total transmitted light is the sum of the direct transmittance through the fabric and the light diffused by it.
- %Rv**
($\rho_{v, n-h}$) Normal/hemispherical **light** reflectance. Ratio of the **visual** reflected flux to the directional incident global radiation, from 380 nm to 780 nm.
- $\tau_{v, n-n}$** Normal/normal light transmittance (direct). Its value is frequently close to the openness factor.
- $\tau_{v, n-dif}$** Normal/diffuse light transmittance.
- τ_{UV}** Ultra-Violet transmittance, From 280 to 380 nm.
- %OF** Openness coefficient. Ratio between the area of the openings and the total area of the fabric. It can be approximated by $\tau_{v, n-n}$

Environmental & health properties

- o **Phthalate-free**
- o **Lead-free and Bisphenol A-free**
- o **Free** of substances on the REACH SVHC list
- o **Greenguard Gold** low VOC emission

Manufacturing properties

- o Always store rolls horizontally
- o Cold-cut, crush-cut or ultrasonic
- o Welding: Thermo or ultrasonic
- o Manufacturing direction: Blinds can be manufactured 'drop to length' or railroaded.
- o BUT dot not place blinds manufactured in different directions in the same area, as this difference ↓ → will be spotted
- o Manufacture panel blinds only 'drop to length' ↓

Maintenance

- o Periodic maintenance: remove dust with vacuum cleaner, dry cloth or compressed air
- o In case of accumulated dirt, it can be cleaned using a sponge or soft brush dipped in soapy water or spray cleaner. In both cases the fabric should be rinsed, leaving the curtain to dry open.
- o Under no circumstances should solvents or abrasives that could damage the fabric coating be used, so care should be taken to avoid paint, varnish or ink stains



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ISO 9001:2015 and
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