



SEMITRANSSPARENT



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	485 ± 5 %
Yarn/cm	Internal method	Warp: 22 Fill: 15
Yarn diameter (mm)	Internal method	0.30
Openness factor (%)		3 %
Thickness (mm)		0.65 ± 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	5.8 (Warp)/ 4.5 (Weft)
Breaking resistance (daN/5cm)	EN ISO 13934-1:1999	186 (Warp)/ 122 (Weft)
Stretch (%)	EN ISO 13934-1:1999	23.5 % (Warp)/ 19 % (Weft)
Corrosion in saline environment neutral fog	EN ISO 112-017:92 ISO 9227:90	Without changes in surface (max.nevel)
Odour test	PV-3900	3 Pass
Fire classification	DIN 4102 EN 13501-1:2007 EN 13773:2003 UNI 9177 NFPA 701 C.A.C. Title 19 CAN/ULC-S109-03	B1 Bs2d0 Class 1 Classe 1 Pass Pass Pass
Wheelmark	IMO Res.MSC.307(88)-(2010 FTP Code) and IMO MSC/Circ.1102	Pass
Roll size		Width 250-300* cm, Lenght 23.5 m
Recycled content		2 % Pre-consumer
Antimicrobial activity	ASTM 2180-01	Microorganism Growth Inhibition
Printable		Yes



Vertical blinds



Roller blinds



Panel blinds



Skylight blinds

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

SUN CONTROL PROPERTIES

Colour	THERMAL FACTORS						OPTICAL FACTORS								
	Fabric		Fabric+Glazing												
	% T _s	% R _s	G _{TOT} internal Glazing C		G _{TOT} internal Glazing D		% T _v	% R _v	% T _{au,n-n}	% T _{au,n-diff}	% T _{uv}	Glare Control	Night Privacy	Visual Contact	Daylight Utilisation
		G _{TOT}	Class	G _{TOT}	Class						Class	Class	Class	Class	
White	19	70	0.32	2	0.23	2	15	81	3	12	4	1	2	1	2
White Linen	18	66	0.33	2	0.23	2	14	75	3	11	3	1	2	1	2
White Pearl	16	61	0.34	2	0.24	2	12	70	3	9	4	1	2	1	2
Linen	24	55	0.36	1	0.24	2	20	62	5	15	5	1	2	1	2
White Sand	15	56	0.35	1	0.24	2	10	62	3	7	3	1	2	1	2
White Grey	11	45	0.38	1	0.25	2	9	53	4	5	4	1	2	1	1
White Ebony	7	40	0.40	1	0.25	2	6	48	2	4	3	1	2	2	1
Mint	19	53	0.36	1	0.24	2	14	58	3	11	3	1	2	1	2
Cinder	12	42	0.39	1	0.25	2	8	44	3	5	3	1	2	1	1
Pebble	9	33	0.42	1	0.26	2	5	35	3	2.5	3	2	2	2	1
Slate	4	13	0.47	1	0.27	2	3	14	3	0.4	3	3	2	2	1
Ebony Grey	3	7	0.49	1	0.28	2	3	7	3	0.4	3	3	2	2	1
Ebony Bronze	3	5	0.49	1	0.28	2	3	5	3	0.3	3	3	2	2	1
Ebony	3	4	0.50	0	0.28	2	3	4	2	0.3	3	3	2	2	1

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

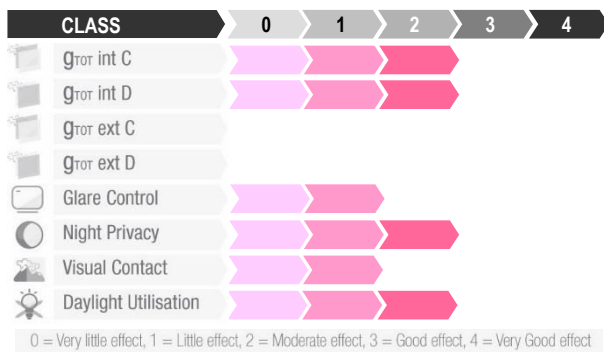
Calculations of g_{TOT} are according to EN 13363-1, with 10% frame area

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

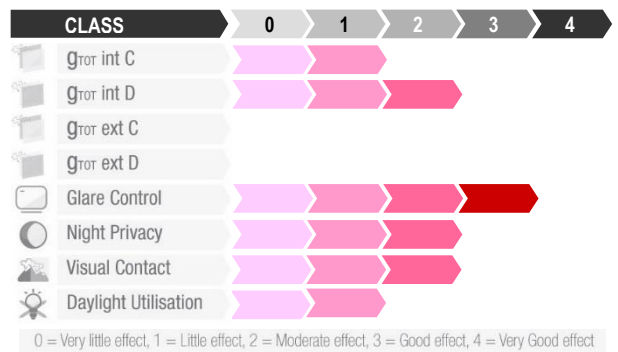
Data of g_{TOT} are given using standard Glazing C and D. though any other combination may be calculated under request

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:

White, White Linen, White Pearl



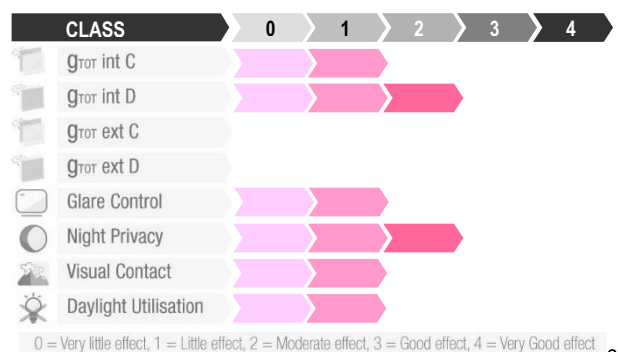
Ebony Bronze, Ebony Grey, Slate



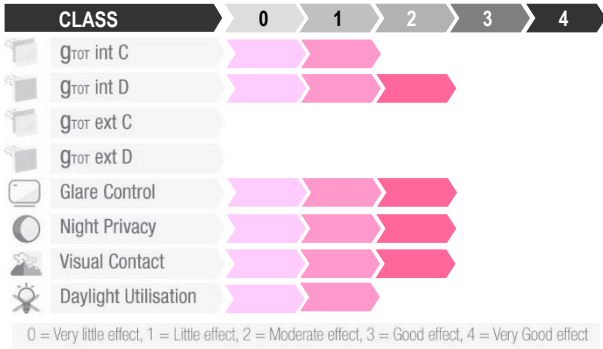
Linen, Mint, White Sand



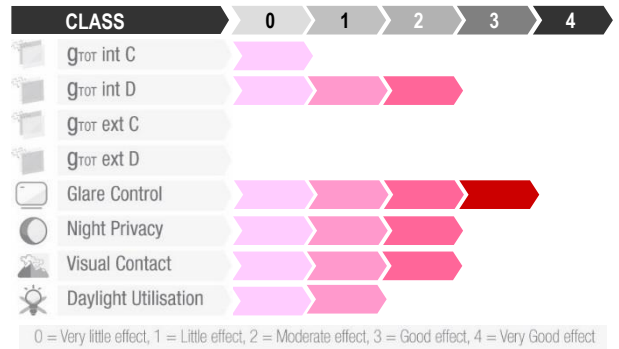
White Grey, Cinder



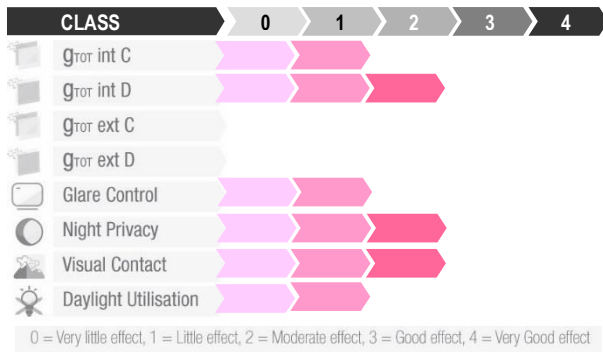
Pebble



Ebony



White Ebony



All specifications are based on average values and may deviate. The values are given for guidance and are not contractual.

Subject to technical modifications

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

- **Phthalate-free**
- **Greenguard Gold** low VOC emission

Manufacturing properties

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

Maintenance

- Periodic maintenance: remove dust with vacuum cleaner, dry cloth or compressed air
- 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.
- 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



vertisol
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ISO 9001:2015 and
ISO 14001:2015
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Contact vertisol@vertisol.es for technical support