

## PLEXDESK Properties

### Features table

MAIN FEATURES				Indicative values				
	STANDARDS			UNIT	PLEXDESK	CN	PLEXDESK	EX
	ISO	NF	Others		Thickness mm	Value obtained	Thickness mm	Value obtained

#### GENERAL PROPERTIES

24h water absorption	62	T 51002	DIN 53495	%	4	0,30	4	0,30
Water absorption at 8 days	62	T 51002	DIN 53495	%	4	0,50	4	0,50
Maximum water absorption by immersione a 1200 ore			Internal	%	3	1,75	3	1,75
Density	1183	T 51063	DIN 53479			1,19		1,19

#### MECHANICAL PROPERTIES

Poisson coefficient at 20° C						0,39		0,39
Tensile test at 23° C	527	T 51034	DIN 53455					
Tensile strength (at break)	-2/1A/5			MPa	4	76	4	74
Tensile elastic modulus				MPa	4	3300	4	3300
Elongation at break				%	4	6	4	5
Tensile test at -20° C	527	T 51304	DIN 53455					
Tensile strength (at break)	-2/1A/5			MPa	4	102		
Tensile elastic modulus				%	4	5		
Tensile test at 80° C	527	T51304	DIN 53455					
Tensile strength (at break)	-2/1A/5			MPa	4	24		
Tensile elastic modulus				%	4	22		
Flexural test at 23° C	178*	T51001	DIN 53452					
Flexural strength				MPa	4	130	4	120
Flexural elastic modulus				%	4	3250	4	3250
Charpy impact resistance (without notch)	179/2D	T 51035	DIN 53453	Kj/m <sup>2</sup>	4	12	4	10
Izod impact resistance (with notch)	180/1A		ASTM D256A	Kj/m <sup>2</sup>	4	1,4	4	1,3
Rockwell hardness, M scale	2039		ASTM D785			100		95
Shore hardness, D scale	868	T 51109				60-70		80
Compressive strength	684	T 51101	DIN 53454	MPa	4	130	4	110
Dynamic torsional modulus			DIN 53445	MPa		1700		1700

#### OPTICAL PROPERTIES

Total transmittance	T 51068	DIN 5036						
Thickness 3 mm				%	3	92	3	92
Thickness 5 mm				%	5	92	5	92
Thickness 8 mm				%			8	92
Thickness 10 mm				%	10	92		
Refractive index	T 51064	DIN 53491				1,492		1,492

MAIN FEATURES				Indicative values				
	STANDARDS			UNIT	PLEXDESK		EX	
	ISO	NF	Others		Thickness mm	Value obtained	Thickness mm	Value obtained
<b>ELECTRIC PROPERTIES</b>								
Dielectric strength		C 26225	DIN 53481	KV/mm		20 to 25		20 to 25
Volume resistivity		C 26215	DIN 53482	Ohm.cm		> 10 <sup>15</sup>		> 10 <sup>15</sup>
Dielectric constant		C 26230	DIN 53483					
at 50 Hz						3,7		3,7
at 0,1 MHz						2,6		2,6
<b>THERMAL PROPERTIES</b>								
Linear expansion coefficient	EN 2155-1	T 51251	DIN 52328	mm/m/°C		0,065		0,065
Thermal conductivity			DIN 52612	W/m/°C		0,17		0,19
Specific heat			ASTM C 351	J/g/°C		1,32		1,32
Coefficient K of thermal insulation			DIN 4701					
Thickness 3 mm				W/m <sup>2</sup> /°C	3	5,4	3	5,4
Thickness 5 mm				W/m <sup>2</sup> /°C	5	5,1	5	5,1
Thickness 10 mm				W/m <sup>2</sup> /°C	10	4,5	10	4,5
Vicat B 10/10 softening temperature (annealed specimen)	306	T 51021	DIN 53460	°C		115		105
HDT (annealed specimen) 1,8 N/mm	75/A	T 51005	DIN 53461	°C		109		102
Maximum operating temperature				°C		85		80
Heating oven temperature				°C		130-190		140-175
Maximum heating temperature				°C		200		180
Maximum linear shrinkage after heating thickness ≥ 3 mm				%		2		3
Maximum linear shrinkage after heating thickness < 3 mm				%		2		6
Maximum surface temperature for infrared panels			°C		220		210	
<b>FIRE BEHAVIOR</b>								
Auto-ignition temperature				°C		approx.450		approx.450
Euroclass class			EN 13501			E		E
Fire behavior (radiant heat source)		P 92501			3	M4		M4
Tests for flammable materials		P 92505			3	non-drip		drips
Fire behavior			DIN 4102			B2		B2
Fire behavior			BS 476 Pt.7			class 3		class 4
Fire behavior			UL 94			HB		HB
Oxygen index			ASTM 2863 77	%		18		18
Chlorine rate				%		0		0
Chlorine rate				%		< 0,02		< 0,02

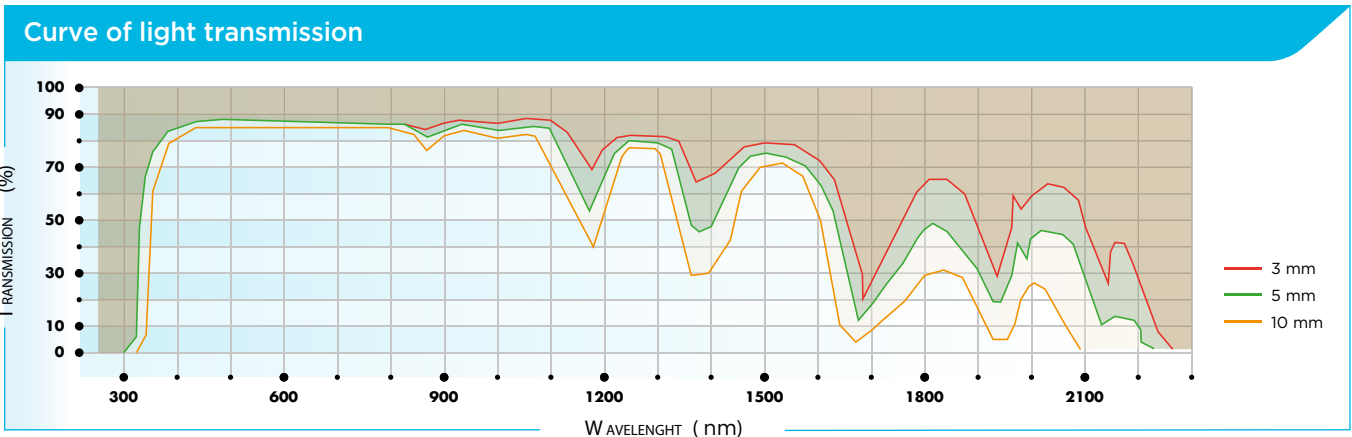
## PLEXDESK Properties

### Other properties

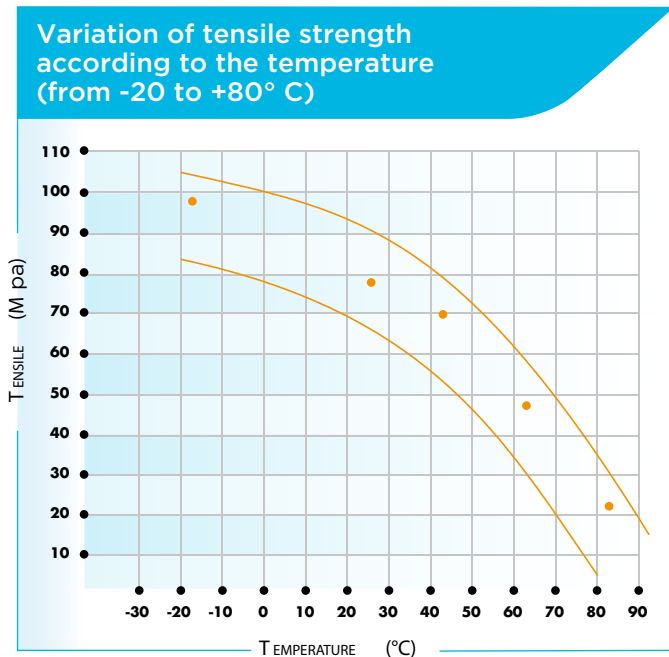
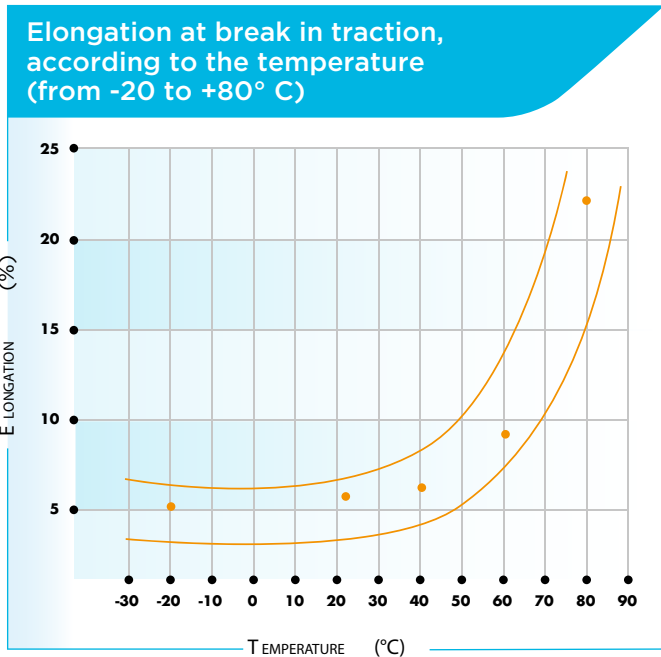
#### OPTICAL PROPERTIES

PLEXDESK has a very high transparency, greater than 92% in the visible field (380 ÷ 780 nm).  
The transmission curves have a measurement between 370 nm and 740 nm.

Synthetic table	
Application	Features (TL in % - Wavelength in nanometers)
Protection of artworks in museums	- Filter / Filtration / U.V. rays - TL < 1% from 200 to 370 nm
Infrared detection systems (remote controls, cameras, ecc.)	- Filter / Filtration / of visible wavelengths and transmission of near infrared rays (NIR) - TL ± 90% of U.V. rays (325-380 nm)
Photographic plates	- Filter / Filtration / white light to protect photographic films - TL < 5% from 250 to 570 nm



#### MECHANICAL PROPERTIES

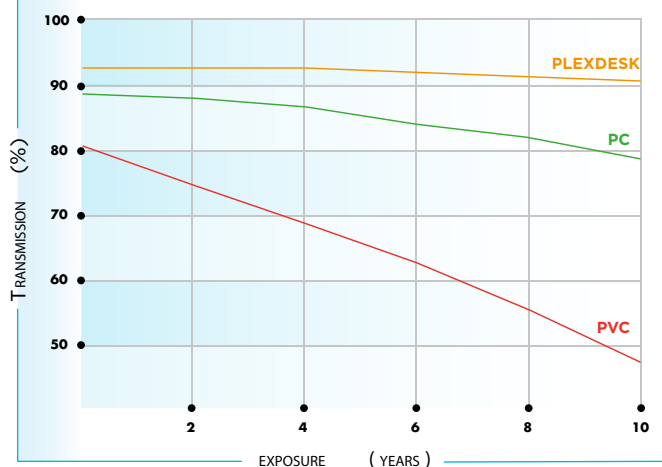


Measurements performed according to ISO 140 standard  
(C.S.T.B. report n° 32 468 - September 1991)

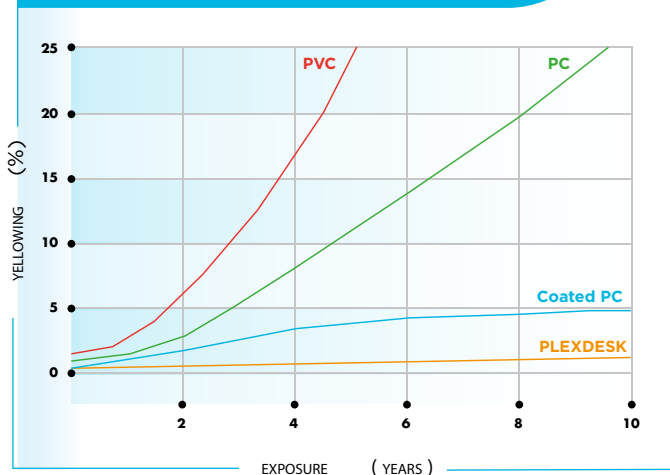
## NATURAL AGING BEHAVIOR

Measurements performed in the climatic conditions of Central Europe.

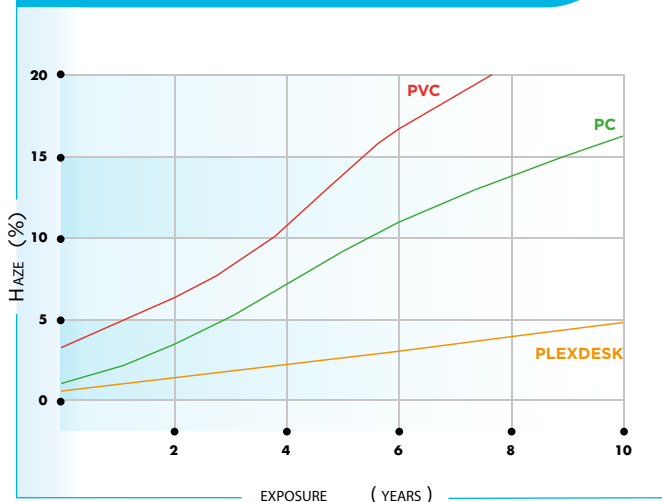
Variation of light transmission, according to the severe weather exposure time



Variation of the Yellow / yellowing index / according to the severe weather exposure time



Variation in diffusion, according to the severe weather exposure time



## General informations

### PROTECTIVE FILM

#### The protective film

The PLEXDESK slabs are protected on both sides by a polyethylene film. The marking is applied on the upper film. With the sole exception of some products, for which specific information is available, the upper side is considered the side of use.

It is recommended to avoid the storage of the slabs outside, as the protective film could be damaged by exposure to sunlight and severe weather, thus making it difficult to remove.

## HOW TO CLEAN PLEXDESK

---

### To use



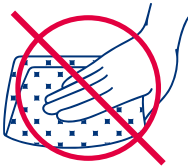
Clean soft cloth or sponge



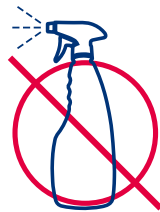
Mild soap or detergent and lukewarm water or anti-static cleaner (to prevent attracting dust)

---

### To avoid



Gritty cloth



Window cleaning fluids, benzene, concentrated alcohol and solvents

---

### Why?



Scratches  
(optical properties loss)



Crazing  
(micro cracks => lower protection)

**Rinse and dry with a damp cloth or chamois**