

# TECHNICAL INFORMATION 1.1.1-3

PC co-ex translucent building elements (LBE)  
for elegant, decorative and noble facades

PC  
LBE



## DECO-COLOR

10 years material guarantee\*

German utility model DE 201 19 426/European patent pending

Outside with UV protection on all panels

**HEATBLOC**

remaining panel clear, or e.g. opal

PC 2540-4 structural width 500 thickness 40 mm U-value 1.45 W/m<sup>2</sup> K

**BICOLOR**

Inside

PC 2540-4 structural width 500 thickness 40 mm U-value 1.45 W/m<sup>2</sup> K

**Reflexa + Luna**

remaining panel transparent or opal

PC 2540-4 structural width 500 thickness 40 mm U-value 1.45 W/m<sup>2</sup> K

### Product description as 1.1.0

- A patented production process has made it possible to produce many interesting effects. The complete inner or outer wall is pigmented through.
- The **HEATBLOC** surface can reflect up to 60 % of the infrared reflection.
- **BICOLOR** can be used to produce a facade with differing appearance, depending on weather, viewing angle and daylight, with a 3D effect.
- A co-extruded UV protection layer on the outside safeguards the good material properties.
- 10 years works guarantee as per guarantee declaration
- The **Reflexa** surface consists of silver or gold metallic pigments for a reflective surface. But it is also translucent, and looks different during the day to during the night.
- The **Luna** version is completely new. This surface lights up slightly when it is completely dark. Interesting for special facade design or as interior design effect to be able to find the way in an emergency even if there is no light. There are no limits to the imagination.
- **Advantages: Day light - energy savings - safety - endless design scope for planning**

Technical data	PC COLOR 2540-3	PC.. BICOLOR 2540-4	PC HEATBLOC 2540-4	PC Reflexa 2540-4	PC Luna 2540-4	Unit
Structural width	500 ± 1%					mm
Thickness	40 ± 1%					mm
Weight max.	4,0	4,0	4,0	4,0	4,0	approx. Kg/m <sup>2</sup>
Delivery length as required	up to 11 m as normal transport and max. 22 m as special transport					
Soundproofing coefficient	22	22	22	22	22	approx. dB
U-value	1,45	1,45	1,45	1,45	1,45	W/m <sup>2</sup> K
E-module	2400					N/mm <sup>2</sup>
Expansion coefficient	0,065					mm/m°C
Fire behaviour	B1 or B2 depending on composition, please enquire					DIN 4102
Temperature resistance	130					° C
	short constant					
	minus 40 to plus 115					° C
Transmission	depends on corresponding configuration; please enquire - 0 - 65%					approx. %
Total energy transmittance <b>g-value</b>	depends on colouring as per expert report up to 0.12					
UV transmittance up to 380 nm	0					%
Joint permeability and driving rain resistance	values far below (approx. 90%) the DIN requirements					m <sup>3</sup> /h m <sup>2</sup>
Ball rebound safety	no damage caused by football, ahndball, tennis, medicine ball, hockey					
Puck safety	no breakages caused at 130 km/h					
Hailstorm behaviour	no breakages caused when pounded with 40 mm thick balls at 17 m/sec (61 km/h)					
Water vapour diffusion resistance	33					µd (m)

Tolerances: length: - 0 +(depending on length) to 15 mm, thickness: ± 1 %, curvature in web direction ± 0.5 % of length

1.1.1-05.6



**Application areas**

Glazing without joining profiles  
decorative facades

Shopping/culture centres  
industrial/commercial units  
tennis and sports halls  
agricultural and warehouse units  
facades etc.

Explosion-risk rooms  
Areas susceptible to hail

**Slight deviations in colour and transparency are possible through the different production processes.**

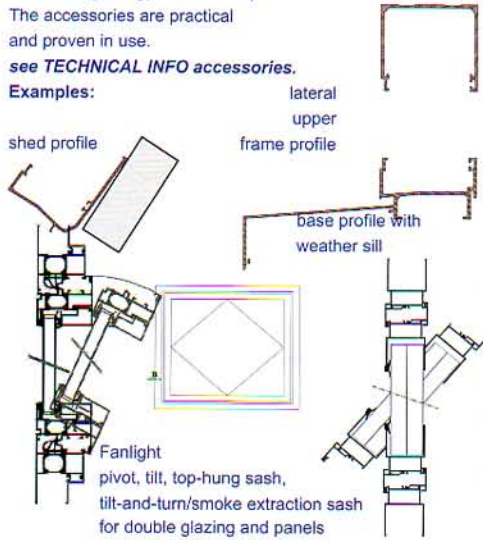
**B 1 quality - DIN 4102**

Article designation e.g.  
PC 1540-4 instead of 2540-4  
Use of a special low-flammability, low-burning PC mixture produces slight changes in transparency and colouring compared to the B2 quality.

**Frame system/accessories**

suitable frame systems  
for nearly every installation situation with EPDM dry seals and fanlights (also for double glazing) and shed flaps.  
The accessories are practical and proven in use.

see **TECHNICAL INFO accessories**.  
**Examples:**



**Fasteners**

Fasteners are used for **sliding** and safe **attachment** of the translucent building elements.

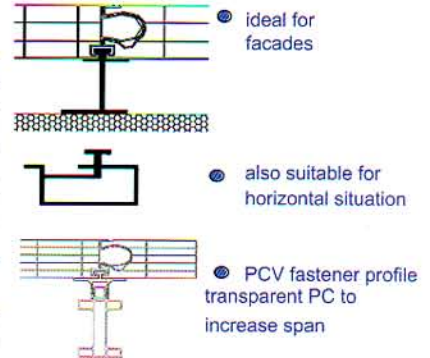
Various different types of fasteners can be used, depending on the situation and on the element.  
Stainless steel fastener for fastening to the inside.

**Flat fastener**

Ideal when fastening panels from the outside.  
The flat fastener provides a safe, gliding fastening and guarantees optimum spacing to the substructure.

**Continuous fasteners**

Other fastener transoms are available for larger widths or greater wind forces.  
See details on separate data sheet.



Design loads for buildings as per DIN 1055 T 4 - wall surfaces in KN/m <sup>2</sup>								
Height over ground	Dyn. Pressure N/m <sup>2</sup>	Wind speed		closed building			building open on one side	
		m/s	km/h	Normal area Pressure	Edge Suction	Edge Suction	Normal area Pressure+suction	Edge Pressure+suction
0 - 8 m	500	28,3	101,88	0,40	0,25	1,00	0,60	1,40
8 - 20 m	800	35,8	128,88	0,64	0,40	1,60	0,96	2,24
20- 100 m	1100	42,0	151,2	0,88	0,55	2,20	1,32	3,08

Permitted spans - post/beam clearance in m vertical surface				
Height above ground	Panel 40 mm thick for closed building			
	Single span		Multi span with fastener 2854	
	Normal area	Edge	Normal area	Edge
0 - 8 m	2,50	1,80	2,45	1,10
8 - 20 m	2,10	1,40	1,84	0,70
20 - 100 m	1,80	1,20	on request	

other spans also with continuous profile/anchor see data sheet 1.1.0.1

Roofing surfaces - sloping <sup>2)</sup>		Snow load N/m <sup>2</sup>							
for multi span, not at edges and corners		750		1000		1500		2000	
1 = height 0 - 8 m, 2= height 8 - 20 m		1	2	1	2	1	2	1	2
15°	Slope	2,40	1,85	2,05	1,85	1,60	1,60	1,25	1,25
30°	Slope	2,45	1,85	2,10	1,85	1,75	1,75	1,50	1,45
45°	Slope	2,45	1,85	2,45	1,85	2,45	1,85	2,25	1,85
60°	Slope	2,45	1,85	2,45	1,85	2,45	1,85	2,45	1,85

<sup>2)</sup> The values apply for a snow load of 750 N/m<sup>2</sup> and only in reference to pressure/suction load and temperature-related creep behaviour. Avoid formation of snow sacks.

**Tolerable spans**

The stated values apply only to closed buildings and on condition that the standard wind forces as per DIN 1055 T 4 are not exceeded.  
The span must be reduced for buildings near to the coast or other high-wind areas, for buildings open on one side and for overlarge doorways.

\* Important: far higher suction loads must be expected (<2 m or b/8) at the edges of buildings.

The stated spans only apply when using the specially frames and accessories system and when complying with the installation recommendations.