

# clear-PEP® series

## Applications of clear-PEP® panels



architecture  
design elements  
exhibition booths  
shop design  
stage setting  
interior design  
displays  
illuminated advertising  
dispenser  
point-of-Sales  
décor items

shelves  
luminaries  
illuminated ceilings  
furniture  
partitions  
sliding doors  
raised floors  
balustrade glazing  
facades  
canopies  
...and many more!

The range of applications for clear-PEP® panels is almost unlimited and we are constantly developing new solutions together with our customers.



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# clear-PEP® series






















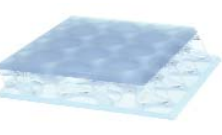













## The clear-PEP® panels

Our state-of-the-art gluing technology bonds our translucent thermoplastic PepCore™ honeycomb cores with different kind of top sheets resulting in panels with unique optical features.

The 5 types of the clear-PEP® series mainly differ in top sheet material and its structure, properties, dimensions and colors. You'll find all product details in this spec sheet or online at [www.blizzard-composite.com](http://www.blizzard-composite.com).

## Common properties

- innovative translucent optics
- unique light scattering with exceptional optical effects
- excellent thermal insulation
- high impact resistance
- outstanding stiffness
- easy to handle and process
- compatible with standard profile systems
- flat applications only

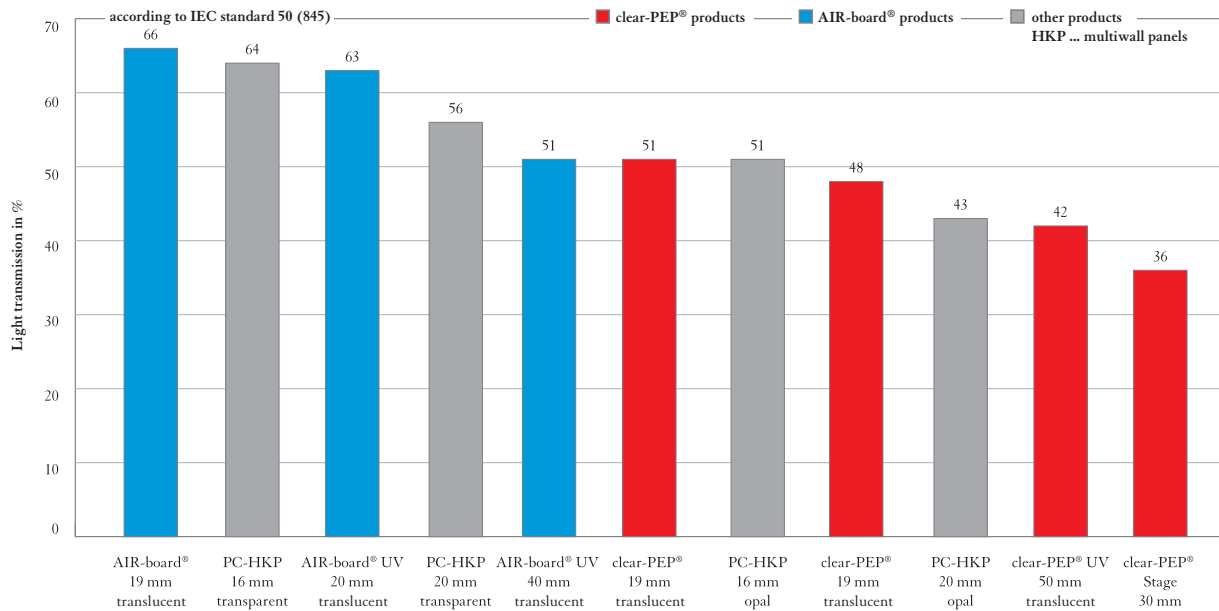
 <p>clear-PEP®</p>	<p>Highly transparent thermoplastic top sheets</p>	<p><b>Special properties</b></p> <ul style="list-style-type: none"> <li>– excellent bending strength</li> <li>– large variety of dimensions</li> <li>– only for interior applications</li> </ul>												
 <p>clear-PEP® UV</p>	<p>This panel has a wide variety of outdoor application possibilities due to the use of UV-protected top sheets and its unique optic.</p> <p>Highly transparent UV-protected thermoplastic top sheets.</p>	<p><b>Special properties</b></p> <ul style="list-style-type: none"> <li>– excellent UV and weather resistance</li> <li>– outstanding hail resistance</li> <li>– large variety of dimensions</li> </ul>												
 <p>clear-PEP® color</p>	<p>Translucent, colored acrylic top sheets available in</p> <table border="0" data-bbox="391 1263 806 1375"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>yellow (303)</td> <td>orange (478)</td> <td>dark red (502)</td> <td>light green (777)</td> <td>light blue (625)</td> <td>dark blue (627)</td> </tr> </table>							yellow (303)	orange (478)	dark red (502)	light green (777)	light blue (625)	dark blue (627)	<p><b>Special properties</b></p> <ul style="list-style-type: none"> <li>– interior and exterior applications</li> <li>– both sides usable</li> <li>– physiological unobjectionable</li> </ul>
														
yellow (303)	orange (478)	dark red (502)	light green (777)	light blue (625)	dark blue (627)									
 <p>clear-PEP® satin</p>	<p>Translucent, satin colored acrylic top sheets available in</p> <table border="0" data-bbox="391 1532 699 1644"> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>opal (27014)</td> <td>orange (15007)</td> <td>green (14032)</td> <td>blue (23074)</td> </tr> </table>					opal (27014)	orange (15007)	green (14032)	blue (23074)	<p><b>Special properties</b></p> <ul style="list-style-type: none"> <li>– velvety scratch resistant top surface</li> <li>– pleasant haptics</li> <li>– no visible fingerprints</li> <li>– interior and exterior applications</li> <li>– both sides usable</li> <li>– physiological unobjectionable</li> </ul>				
														
opal (27014)	orange (15007)	green (14032)	blue (23074)											
 <p>clear-PEP® Stage</p>	<p>The finished panel captivates through its interesting optical feature with an anti-slip outer surface and outstanding resistance to breakage.</p> <p>Translucent thermoplastic top sheets with structured surface.</p>	<p><b>Special properties</b></p> <ul style="list-style-type: none"> <li>– improved scratch resistance and anti-slip surface</li> <li>– low weight, but high stiffness properties</li> <li>– excellent UV and weather resistance</li> </ul>												

*We Expand Your Business.*

# clear-PEP® series

## Light transmission

Comparison of PC multiwall sheets (in short PC-HKP) with clear-PEP® and clear-PEP® UV



## Installation systems for all clear-PEP® panels

**Concealed plug connection system**  
This installation system is specially designed for standard aluminium exhibition booth profiles.

**Suitable for interior applications**

a ... support distance  
b ... panel length

**Visible clamping profile systems**  
This system is designed for standard clamping systems.

**Suitable for exterior applications**

clamping gap  
min. 20 mm

# clear-PEP® series

## Dimensions, mechanical and physical data

	Standard			Special max. *			Tolerances			Fire class DIN 4102	Coefficient of thermal expansion (1/K) DIN 51752-A	Service temperature (°C)
	Length (mm)	Width (mm)	Thickness (mm)	Length (mm)	Width (mm)	Thickness (mm)	Length (mm)	Width (mm)	Thickness (mm)			
clear-PEP®	2520	1020	16/19	6020	1200	80	+2/-2	+1/-2	+0/-1	B2 <sup>1</sup> , 1Y <sup>3</sup>	6,5x10 <sup>-5</sup>	-30 bis +80
clear-PEP® UV	2900	1200	20	6020	2020	80	+2/-2	+1/-2	+0/-1	B1 <sup>1</sup> , 1Y <sup>3</sup>	6,5x10 <sup>-5</sup>	-30 bis +80
clear-PEP® color	2900	1000	19	3020	2010	80	+2/-2	+1/-2	+/-10%	B2 <sup>1</sup>	7x10 <sup>-5</sup>	-30 bis +80
clear-PEP® satin	2900	1000	19	3020	2010	80	+2/-2	+1/-2	+/-10%	B2 <sup>1</sup>	7x10 <sup>-5</sup>	-30 bis +80
clear-PEP® Stage	2000	1000	40	3000	1200	50	+2/-2	+1/-2	+0/-1	B1 <sup>1</sup> , 2Y <sup>3</sup>	6,5x10 <sup>-5</sup>	-30 bis +80

\* with core joint – minimum order quantity per special dimension: 200 m<sup>2</sup>

	Weight per unit area (kg/m <sup>2</sup> )								Thermal insulation U-value (W/m <sup>2</sup> K)								Sound insulation Rw (dB)							
	16 mm	19 mm	20 mm	25 mm	30 mm	40 mm	50 mm	80 mm	16 mm	19 mm	20 mm	25 mm	30 mm	40 mm	50 mm	80 mm	16 mm	19 mm	20 mm	25 mm	30 mm	40 mm	50 mm	80 mm
clear-PEP®	6,1	6,1	-	6,1	7,3	8,5	8,5	8,5	3,2	2,9	-	2,5	2,2	1,8	1,5	1,0	22	22	-	22	23	24	24	24
clear-PEP® UV	9,7	-	9,7	9,7	9,7	10,9	10,9	10,9	3,3	-	2,9	2,5	2,2	1,8	1,5	1,1	24	-	24	24	25	26	26	26
clear-PEP® color	-	12,0	-	12,0	12,0	13,2	13,2	13,2	-	3,0	-	2,6	2,3	1,9	1,6	1,1	-	26	-	26	26	27	27	27
clear-PEP® satin	-	12,0	-	12,0	12,0	13,2	13,2	13,2	-	3,0	-	2,6	2,3	1,9	1,6	1,1	-	26	-	26	26	27	27	27
clear-PEP® Stage	-	-	-	-	9,7	10,9	10,9	-	-	-	-	-	2,2	1,8	1,5	-	-	-	-	-	k.A.	26	k.A.	-

	Modulus of elasticity (N/mm <sup>2</sup> )								Bending strength (N/mm <sup>2</sup> ) *								Bending stiffness (Nm <sup>2</sup> /m)							
	16 mm	19 mm	20 mm	25 mm	30 mm	40 mm	50 mm	80 mm	16 mm	19 mm	20 mm	25 mm	30 mm	40 mm	50 mm	80 mm	16 mm	19 mm	20 mm	25 mm	30 mm	40 mm	50 mm	80 mm
clear-PEP®	860	720	-	560	450	370	260	110	20	17	-	14	11	8	5	1	294	412	-	729	1013	1973	2708	4693
clear-PEP® UV	1400	-	1120	950	750	550	390	140	33	-	28	23	20	11	5	1	478	-	747	1237	1688	2933	4063	5973
clear-PEP® color	-	1450	-	1150	800	600	420	150	-	65	-	28	22	13	8	4	-	829	-	1497	1800	3200	4375	6400
clear-PEP® satin	-	1450	-	1150	800	600	420	150	-	65	-	28	22	13	8	4	-	829	-	1497	1800	3200	4375	6400
clear-PEP® Stage	-	-	-	-	810	590	440	-	-	-	-	-	4	3	3	-	-	-	-	-	1823	3147	4583	-

Values determined with the three-point bending test according to ISO 178: test sample width 80 mm / support distance 250 mm

	Compressive strength (N/mm <sup>2</sup> )							
	16 mm	19 mm	20 mm	25 mm	30 mm	40 mm	50 mm	80 mm
clear-PEP® Stage	-	-	-	-	3,0	2,8	1,0	-

	TSET-value (total solar energy transmittance)			
	0°*	30°*	45°*	60°*
clear-PEP® UV 20	0,62	0,58	0,55	0,43

\* Sun elevation angle

# clear-PEP<sup>®</sup> series

## Maximum support distances

for clear-PEP<sup>®</sup> UV, clear-PEP<sup>®</sup> color and clear-PEP<sup>®</sup> satin

clear-PEP <sup>®</sup> UV	Load in N/m <sup>2</sup>											
	600	800	1000	1200	1400	1600	1800	2000	2500	3000	3500	5000
16 mm	1650	1520	1430	1350	1300	1250	1210	1160	1100	1040	1000	890
20 mm	1900	1750	1640	1560	1500	1440	1390	1340	1260	1190	1140	1030
25 mm	2000	2000	1880	1780	1710	1640	1580	1540	1450	1370	1320	1200
30 mm	2000	2000	2000	2000	1940	1860	1810	1750	1640	1560	1500	1340
40 mm	2000	2000	2000	2000	2000	2000	2000	2000	1950	1850	1760	1600
50 mm	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	1830
80 mm	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
clear-PEP <sup>®</sup> color und clear-PEP <sup>®</sup> satin												
19 mm	2000	2000	1870	1780	1690	1640	1590	1540	1440	1380	-	-
25 mm	2000	2000	2000	2000	2000	1970	1910	1850	1730	1640	-	-
30 mm	2000	2000	2000	2000	2000	2000	2000	2000	1940	1860	-	-
40 mm	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	-	-
50 mm	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	-	-
80 mm	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	-	-

- data in mm
- calculated values based on the assumption of two sides clamped and safety factor 1.5
- load capacity values include the maximum force and the corresponding panel weight per m<sup>2</sup>
- minimum of 20 mm clamped on two sides
- 2000 mm - maximum support distance depending on available top layers

## Load capacity table

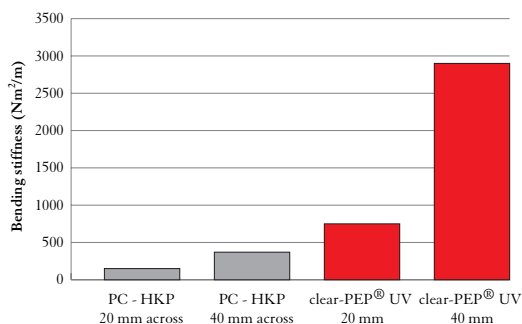
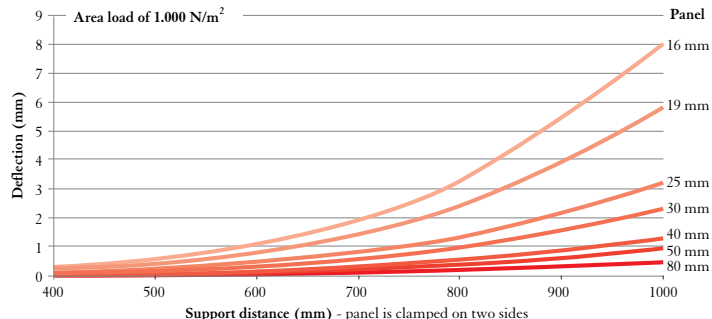
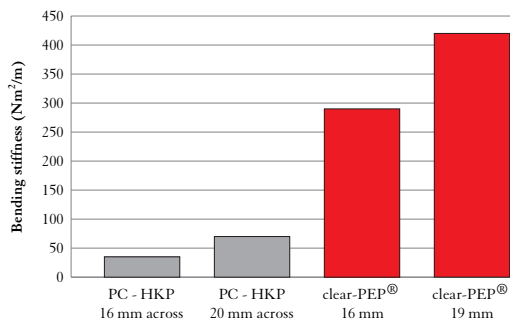
clear-PEP<sup>®</sup> Stage

	Support gap 500 mm			Support gap 750 mm			Support gap 1000 mm		
	30 mm	40 mm	50 mm	30 mm	40 mm	50 mm	30 mm	40 mm	50 mm
Deflection at a load of 2500 N/m <sup>2</sup> and two-sided support	1,0	0,6	0,4	4,7	2,6	1,7	14,5	8,1	5,1
Deflection at a load of 2500 N/m <sup>2</sup> and four-sided support	0,6	0,3	0,2	1,9	1,1	0,7	4,3	2,5	1,6
Deflection at a load of 3500 N/m <sup>2</sup> and two-sided support	1,4	0,8	0,5	6,6	3,7	2,4	-	11,3	7,2
Deflection at a load of 3500 N/m <sup>2</sup> and four-sided support	0,8	0,5	0,3	2,6	1,5	2,0	6,0	3,4	2,3
Deflection at a load of 5000 N/m <sup>2</sup> and two-sided support	2,0	1,1	0,8	9,4	5,3	3,4	-	-	-
Deflection at a load of 5000 N/m <sup>2</sup> and four-sided support	1,2	0,7	0,5	3,8	2,2	1,5	8,6	4,9	3,3

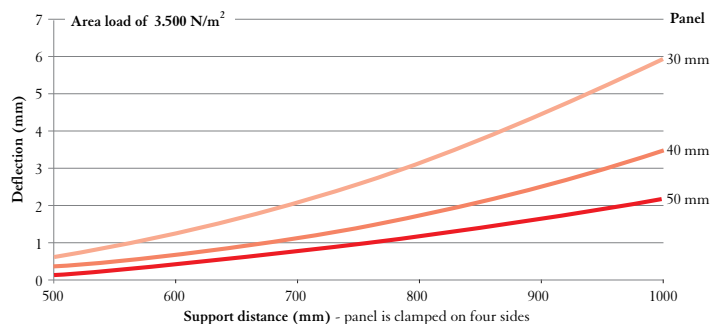
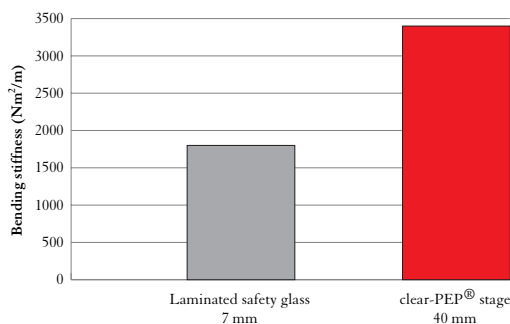
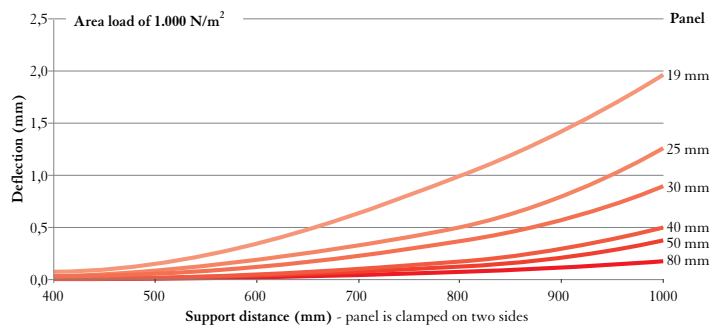
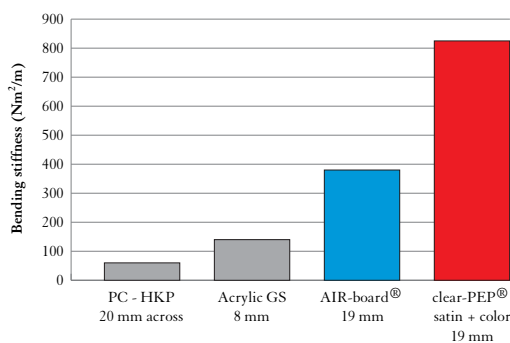
- Calculated data with safety factor  $\geq 2,0$

All statements and data correspond with our current know-how and are subject to changes. Though a legally binding assurance of certain characteristics or suitability of any product type for a special purpose can not be derived. Any indication is only a non-binding recommendation. Subject to changes.

## Angaben zur Belastung – Durchbiegung und Biegesteifigkeit



Please refer to the table on the left page for further details on load capacity of clear-PEP<sup>®</sup> UV.



The diagrams clearly show the essentially higher stiffness of clear-PEP<sup>®</sup> products assessed with other comparable products. PC-HKP = PC-multiwall panel.