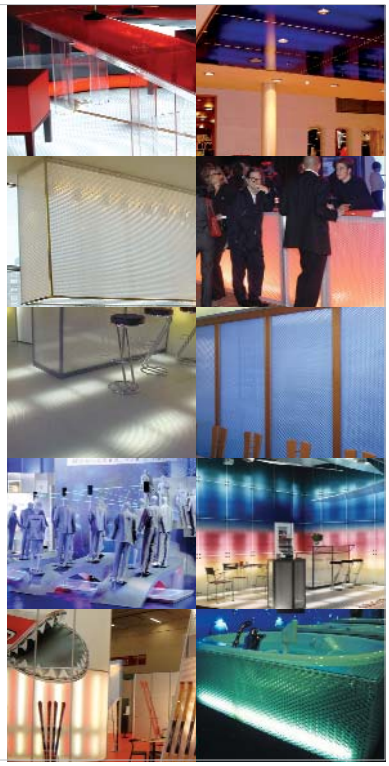
clear-PEP® series

Applications of clear-PEP® panels

architecture	shelves
design elements	luminaries
exhibition booths	illuminated ceilings
shop design	furniture
stage setting	partitions
interior design	sliding doors
displays	raised floors
illuminated advertising	balustrade glazing
dispenser	facades
point-of-Sales	canopies
décor items	…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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AIR-board® series

Common properties

– innovative translucent optics
– excellent light transmission
– outstanding thermal insulation
– easy to handle and process
– flat applications only
– light weight

AIR-board®

Highly transparent thermoplastic top sheets

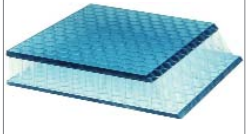
Special properties
– high impact resistance
– excellent bending strength
– large variety of dimensions
– compatible with standard profile systems
– only for interior applications

AIR-board® UV

This panel with its unique optic has a wide variety of outdoor application possibilities due to special top sheets.

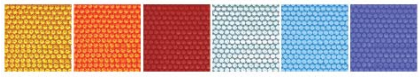
Highly transparent UV-protected thermoplastic top sheets.

Special properties
– excellent UV and weather resistance
– high impact and hail resistance
– easy to install
– compatible with standard profile systems
– large variety of dimensions



AIR-board® color

Translucent, colored acrylic top sheets available in



Special properties
– unique light scattering
– excellent stiffness
– interior and exterior applications
– both sides usable
– physiological unobjectionable

AIR-board® satin

Translucent, satin colored acrylic top sheets available in

Special properties
– outstanding light scattering
– velvety scratch resistant top surface
– no visible fingerprints and pleasant haptics
– excellent stiffness
– interior and exterior applications
– both sides usable
– physiological unobjectionable

Applications of AIR-board® panels

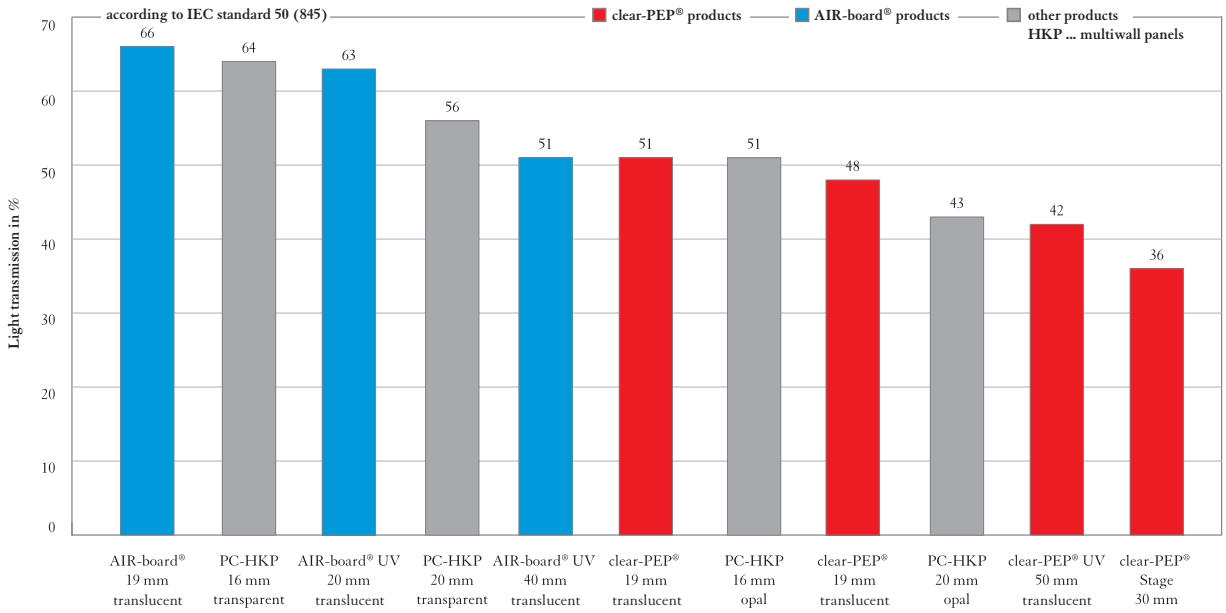
architecture
design elements
exhibition booths
shop design
stage setting
interior design
displays
illuminated advertising
dispenser
point-of-Sales
décor items

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

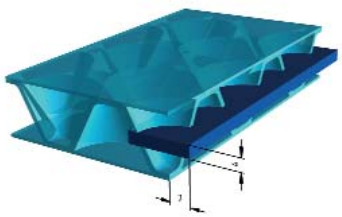
The range of applications for AIR-board® panels is almost unlimited and we are constantly developing new solutions together with our customers.

Light transmission

Comparison of PC multiwall sheets (in short PC-HKP) with **AIR®-board** and **AIR®-board UV**

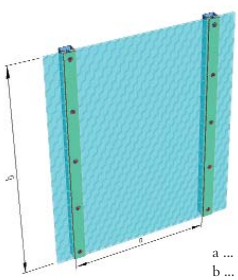


Installation systems for all AIR-board® panels

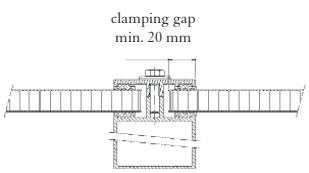


Visible clamping profile system
This installation system is specially designed for standard aluminium exhibition booth profiles.

Suitable for interior applications



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



Suitable for exterior applications

Dimensions, mechanical and physical data

	Standard				Special max. *				Tolerances							
	Length (mm)	Width (mm)	Thickness (mm)		Length (mm)	Width (mm)	Thickness (mm)		Length (mm)	Width (mm)	Thickness (mm)		Fire class [1] DIN 4102 [2] ÖNORM B 3800 [3] BS 476 Part 7	Coefficient of thermal expansion (1/K) lt. DIN 53752-A	Service temperature (°C)
AIR-board®	2550	1050	12/16/19		6020	1200	80		+/-10**	+/-10**	+0/-1		B1[1], 1Y[3]	$6{,}5 \times 10^{-5}$	-30 bis +80
AIR-board® UV	2900	1200	20		6020	2020	80		+2/-2	+1/-2	+0/-1		B1[1], 1Y[3]	$6{,}5 \times 10^{-5}$	-30 bis +80
AIR-board® color	2900	1000	19		3020	2010	80		+2/-2	+1/-2	+/-10%		B2[1]	7×10^{-5}	-30 bis +80
AIR-board® satin	2900	1000	19		3020	2010	80		+2/-2	+1/-2	+/-10%		B2[1]	7×10^{-5}	-30 bis +80

* with core joint – minimum order quantity per special dimension: 200 m²
** untrimmed

	Weight per unit area (kg/m²)										Thermal insulation U-value (W/m²K)										Sound insulation Rw (dB)									
	12 mm	16 mm	19 mm	20 mm	25 mm	30 mm	40 mm	50 mm	80 mm		12 mm	16 mm	19 mm	20 mm	25 mm	30 mm	40 mm	50 mm	80 mm		12 mm	16 mm	19 mm	20 mm	25 mm	30 mm	40 mm	50 mm	80 mm	
AIR-board®	3,1	3,4	3,6	-	4,0	4,4	5,1	5,8	-		2,9	2,5	2,2	-	1,8	1,6	1,3	1,0	-		19	19	19	-	19	20	20	20	-	
AIR-board® UV	-	5,6	-	5,9	6,3	6,6	7,3	8,0	10,1		-	2,6	-	2,2	1,9	1,6	1,3	1,1	0,7		-	21	-	21	21	22	22	22	23	
AIR-board® color	-	-	8,0	-	8,4	8,8	9,5	10,2	12,3		-	-	2,4	-	2,0	1,7	1,3	1,1	0,7		-	-	23	-	23	23	24	24	25	
AIR-board® satin	-	-	8,0	-	8,4	8,8	9,5	10,2	12,3		-	-	2,4	-	2,0	1,7	1,3	1,1	0,7		-	-	23	-	23	23	24	24	25	

	Modulus of elasticity (N/mm²)										Bending strength (N/mm²) *										Bending stiffness (Nm²/m)									
	12 mm	16 mm	19 mm	20 mm	25 mm	30 mm	40 mm	50 mm	80 mm		12 mm	16 mm	19 mm	20 mm	25 mm	30 mm	40 mm	50 mm	80 mm		12 mm	16 mm	19 mm	20 mm	25 mm	30 mm	40 mm	50 mm	80 mm	
AIR-board®	1000	780	670	-	510	430	330	260	-		7	6	5	-	4	3	2	2	-		144	266	383	-	664	968	1760	2708	-	
AIR-board® UV	-	1300	-	1100	890	750	560	450	260		-	5	-	4	4	3	2	2	1		-	444	-	733	1159	1688	2987	4688	11093	
AIR-board® color	-	-	1250	-	900	760	570	460	270		-	-	5	-	3	3	2	2	1		-	-	714	-	1172	1710	3040	4792	11520	
AIR-board® satin	-	-	1250	-	900	760	570	460	270		-	-	5	-	3	3	2	2	1		-	-	714	-	1172	1710	3040	4792	11520	

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

	TSET-value (total solar energy transmittance)			
	0° *	30° *	45° *	60° *
AIR-board® UV 20	0,72	0,67	0,61	0,52

* Sun elevation angle

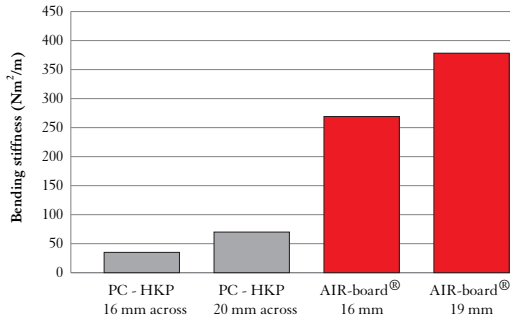
Maximum support distances
for AIR-board® UV, AIR-board® color and AIR-board® satin

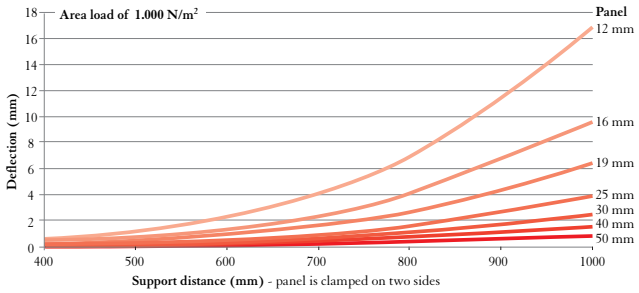
AIR-board® UV	Load in N/m² 600	800	1000	1200	1400	1600	1800	2000	2500	3000
16 mm	1620	1480	1390	1230	1270	-	-	-	-	-
20 mm	1860	1720	1620	1530	1460	1410	1360	-	-	-
25 mm	2000	1980	1860	1760	1680	1620	1560	1520	-	-
30 mm	2000	2000	2000	1970	1880	1820	1760	1710	-	-
40 mm	2000	2000	2000	2000	2000	2000	2000	2000	1910	-
50 mm	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
80 mm	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
AIR-board® color AIR-board® satin										
19 mm	2000	1980	1860	1760	1680	1620	1570	-	-	-
25 mm	2000	2000	2000	2000	2000	1940	1870	1820	-	-
30 mm	2000	2000	2000	2000	2000	2000	2000	2000	-	-
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 m²
– minimum of 20 mm clamped on two sides
– 2000 mm – maximum support distance depending on available top layers

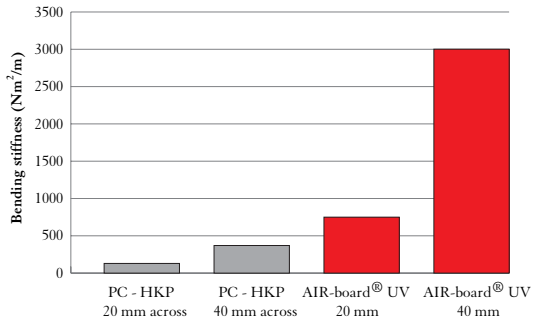
Details on load – deflection and bending stiffness

AIR-board®



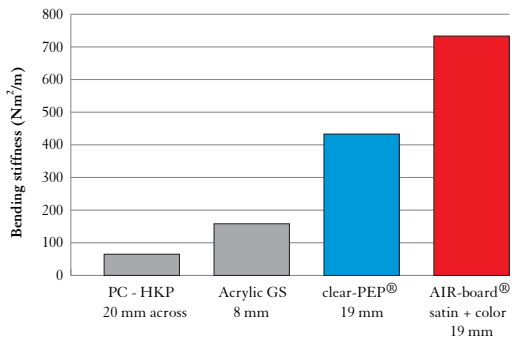


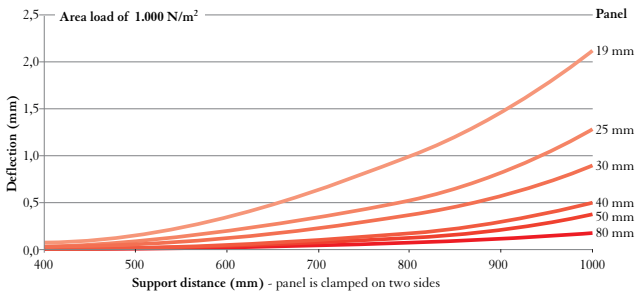
AIR-board® UV



Please refer to the table on the left page for further details on load capacity of AIR-board® UV.

AIR-board® color + satin





The diagrams clearly show the essentially higher stiffness of AIR-board® products assessed with other comparable products.
PC-HKP = PC-multiwall panel.

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.

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

clear-PEP®

Highly transparent thermoplastic top sheets

Special properties
– excellent bending strength
– large variety of dimensions
– only for interior applications

clear-PEP® UV

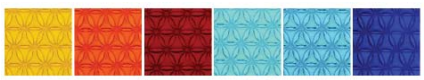
This panel has a wide variety of outdoor application possibilities due to the use of UV-protected top sheets and its unique optic.

Highly transparent UV-protected thermoplastic top sheets.

Special properties
– excellent UV and weather resistance
– outstanding hail resistance
– large variety of dimensions

clear-PEP® color

Translucent, colored acrylic top sheets available in

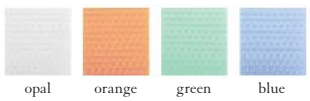


yellow (303) | orange (478) | dark red (502) | light green (777) | light blue (625) | dark blue (627)

Special properties
– interior and exterior applications
– both sides usable
– physiological unobjectionable

clear-PEP® satin

Translucent, satin colored acrylic top sheets available in



opal (27014) | orange (15007) | green (14032) | blue (23074)

Special properties
– velvety scratch resistant top surface
– pleasant haptics
– no visible fingerprints
– interior and exterior applications
– both sides usable
– physiological unobjectionable

clear-PEP® Stage

The finished panel captivates through its interesting optical feature with an anti-slip outer surface and outstanding resistance to breakage.

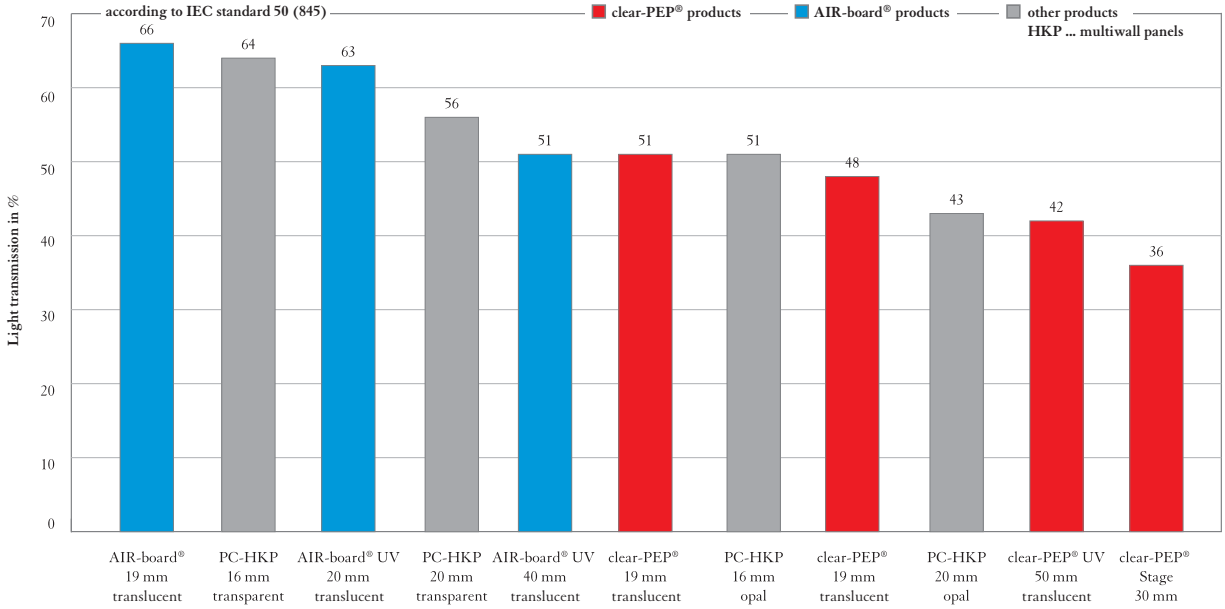
Translucent thermoplastic top sheets with structured surface.

Special properties
– improved scratch resistance and anti-slip surface
– low weight, but high stiffness properties
– excellent UV and weather resistance

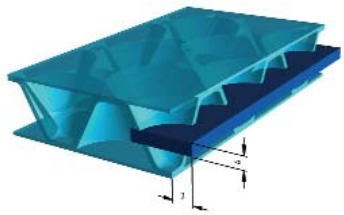
We Expand Your Business.

Light transmission

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

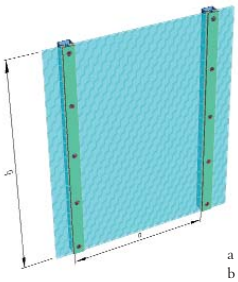


Installation systems for all clear-PEP® panels

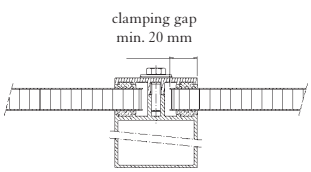


Concealed plug connection system
This installation system is specially designed for standard aluminium exhibition booth profiles.

Suitable for interior applications



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



Suitable for exterior applications

Dimensions, mechanical and physical data

	Standard				Special max. *				Tolerances							
	Length (mm)	Width (mm)	Thickness (mm)		Length (mm)	Width (mm)	Thickness (mm)		Length (mm)	Width (mm)	Thickness (mm)		Fire class [1] DIN 4102 - [2] ÖNORM B 3800 - [3] BS 476 Part 7	Coefficient of thermal expansion (1/K) lt. DIN 53752-A	Service temperature (°C)
clear-PEP®	2520	1020	16/19		6020	1200	80		+2/-2	+1/-2	+0/-1		B2[1], 1Y[3]	$6{,}5x10^{-5}$	-30 bis +80
clear-PEP® UV	2900	1200	20		6020	2020	80		+2/-2	+1/-2	+0/-1		B1[2], 1Y[3]	$6{,}5x10^{-5}$	-30 bis +80
clear-PEP® color	2900	1000	19		3020	2010	80		+2/-2	+1/-2	+/-10%		B2[1]	$7x10^{-5}$	-30 bis +80
clear-PEP® satin	2900	1000	19		3020	2010	80		+2/-2	+1/-2	+/-10%		B2[1]	$7x10^{-5}$	-30 bis +80
clear-PEP® Stage	2000	1000	40		3000	1200	50		+2/-2	+1/-2	+0/-1		B1[2], 2Y[3]	$6{,}5x10^{-5}$	-30 bis +80

* with core joint – minimum order quantity per special dimension: 200 m²

	Weight per unit area (kg/m²)									Thermal insulation U-value (W/m²K)									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/mm²)									Bending strength (N/mm²) *									Bending stiffness (Nm²/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/mm²)							
	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

Maximum support distances
for clear-PEP® UV, clear-PEP® color and clear-PEP® satin

clear-PEP® UV	Load in N/m² 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® color und clear-PEP® 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	-	-

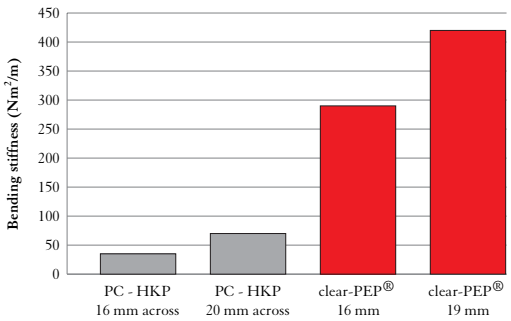
– data in mm
– calculated values based on the assumption of two sides clamped and safety factor 1.5
– load capacity values include the maximum force and the corresponding panel weight per m²
– minimum of 20 mm clamped on two sides
– 2000 mm – maximum support distance depending on available top layers

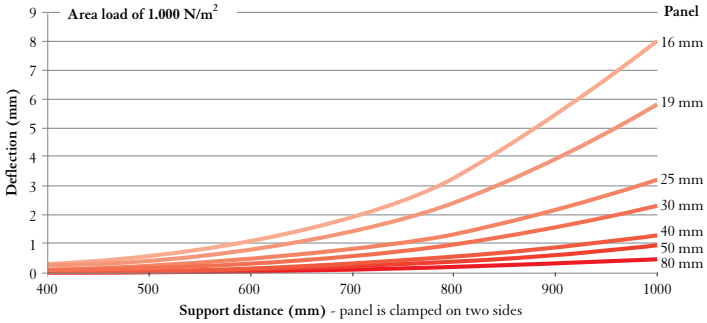
Load capacity table
clear-PEP® Stage

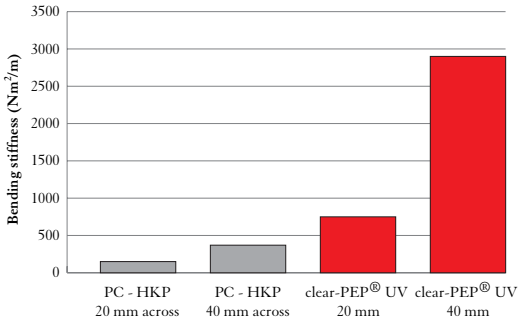
	Support gap 500 mm 30 mm	40 mm	50 mm	Support gap 750 mm 30 mm	40 mm	50 mm	Support gap 1000 mm 30 mm	40 mm	50 mm
Deflection at a load of 2500 N/m² and two-sided support	1,0	0,6	0,4	4,7	2,6	1,7	14,5	8,1	5,1
Deflection at a load of 2500 N/m² and four-sided support	0,6	0,3	0,2	1,9	1,1	0,7	4,3	2,5	1,6
Deflection at a load of 3500 N/m² 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/m² 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/m² and two-sided support	2,0	1,1	0,8	9,4	5,3	3,4	-	-	-
Deflection at a load of 5000 N/m² 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 ≥ 2,0

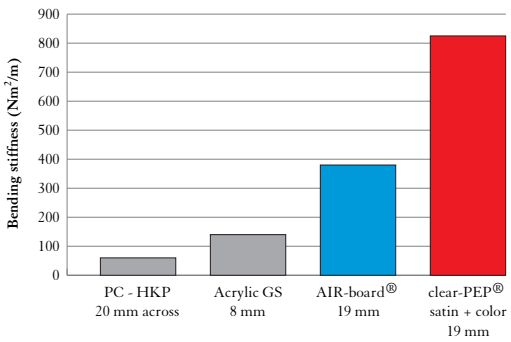
Angaben zur Belastung – Durchbiegung und Biegesteifigkeit

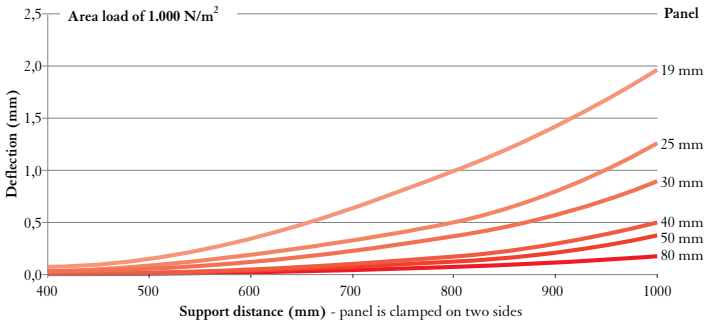


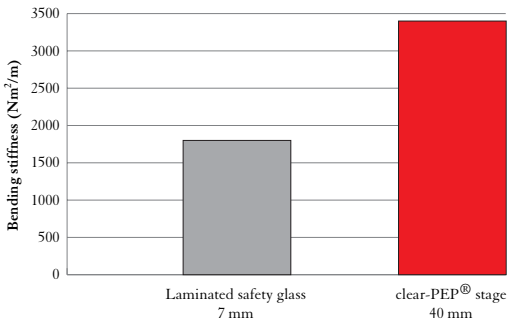


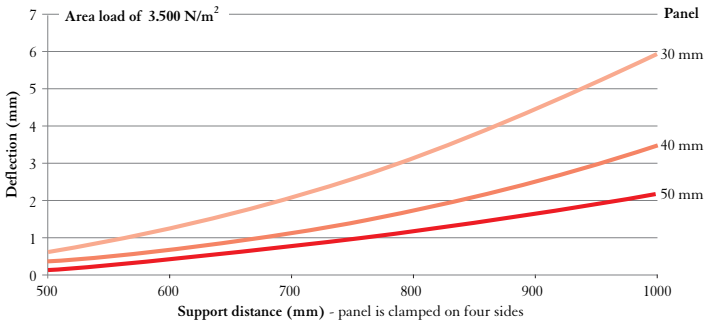


Please refer to the table on the left page for further details on load capacity of clear-PEP® UV.









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