

The distinctive TRCore, for our clear-PEP[®] panels, is manufactured on our specially designed and patented core expander. The innovative characteristic of the open structure gives the lightweight panels not just a unique depth but also an extremely high rigidity.

The various types of panel in the clear-PEP[®] family differ in their facing sheet materials, cores, surface structures, physical properties, dimensions and colours.



Product description

Facing sheet on both sides	PMMA satin
Core	PC - TRCore honeycomb

*Standard colour: opal, grey; other colours on request

Properties

- innovative translucent optics
- unique 3D effects and light scattering
- excellent UV stability and resistance to weathering
- low weight
- easy processing
- compatibility with common mounting systems
- excellent rigidity

Dimensions

Format	Length [mm]	Width [mm]	Thickness [mm]
Standard	3020	1000	19
Special dimensions ^{1;2}	max. 3020	max. 2020	max. 80

¹ all panels over 3020 x 1500mm with core joint

² on request – minimum order per special size: 25 panels

Tolerances	Length [mm]	Width [mm]	Thickness [mm]
Cut to size	+2/-2	+1/-2	+0/-1

General physical properties

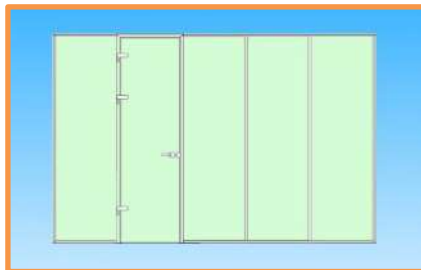
Coefficient of thermal expansion acc. to DIN 53752-A	Service temperature	Fire class		
[1/K]	[°C]	DIN 4102-1	BS 476 Part 7	EN 13501
7×10^{-5}	-30 bis +80	B2		

Thickness [mm]	Weight per unit area [kg/m ²]	Thermal insulation U-value [W/m ² K]	Sound insulation Rw[dB]	Bending stiffness* [Nm ²]
16	10,8	2,9	26	597
19	10,8	2,8	26	829
30	12,0	2,4	27	1800
40	12,0	2,1	27	3200
60	13,2	1,7	28	3750
80	13,2	1,4	28	6400

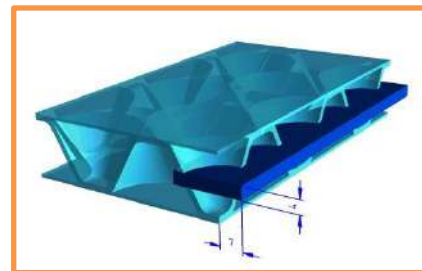
* per m panel width

Mounting systems for all clear-PEP[®] panels

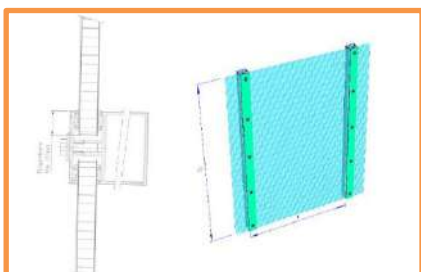
Profile system for dividing walls



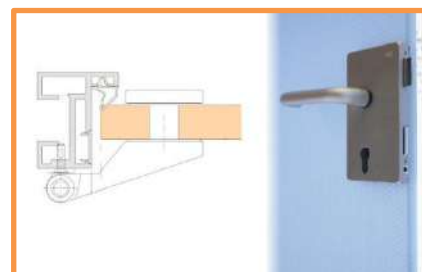
Tongue and groove joint



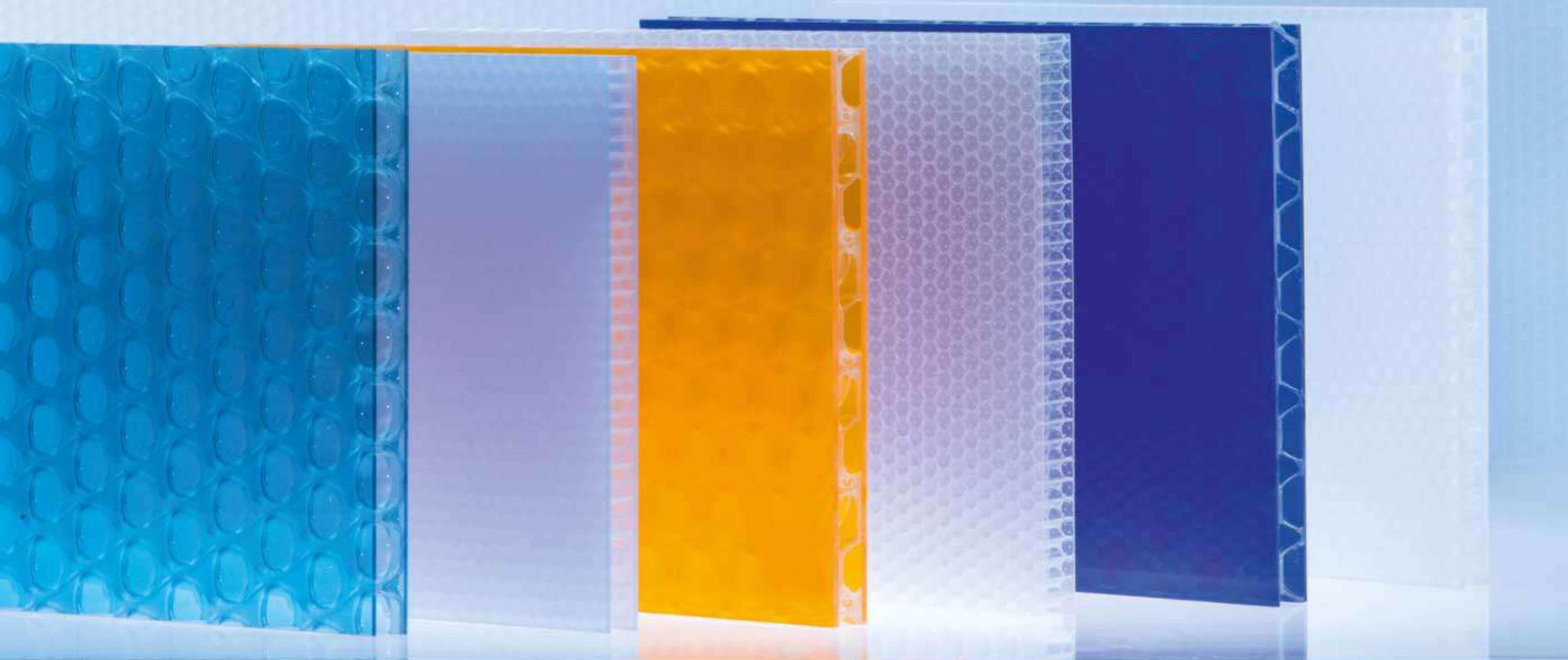
Profile system for glazing



Furniture for hinged doors



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design composite panels

Die jahrzehntelange Erfahrung in Klebtechnologie und Produktion von Wabenkernen aus hochwertigen Kunststoffen bildet die Basis für unsere Verbundpaneele. Die Kombination von höchster Qualität mit faszinierendem Design schafft vielfältige Möglichkeiten der innovativen Gestaltung. Prüfungen in unserem bestens ausgestatteten Labor und Ausgangskontrollen garantieren höchste Qualität unserer Produkte.

Besonders durch den Einsatz moderner Lichttechnologien kommen unsere transluzenten Wabenpaneele optimal zur Wirkung. Die **AIR-board®** und **clear-PEP®** Paneele haben unterschiedliche Kernstrukturen.

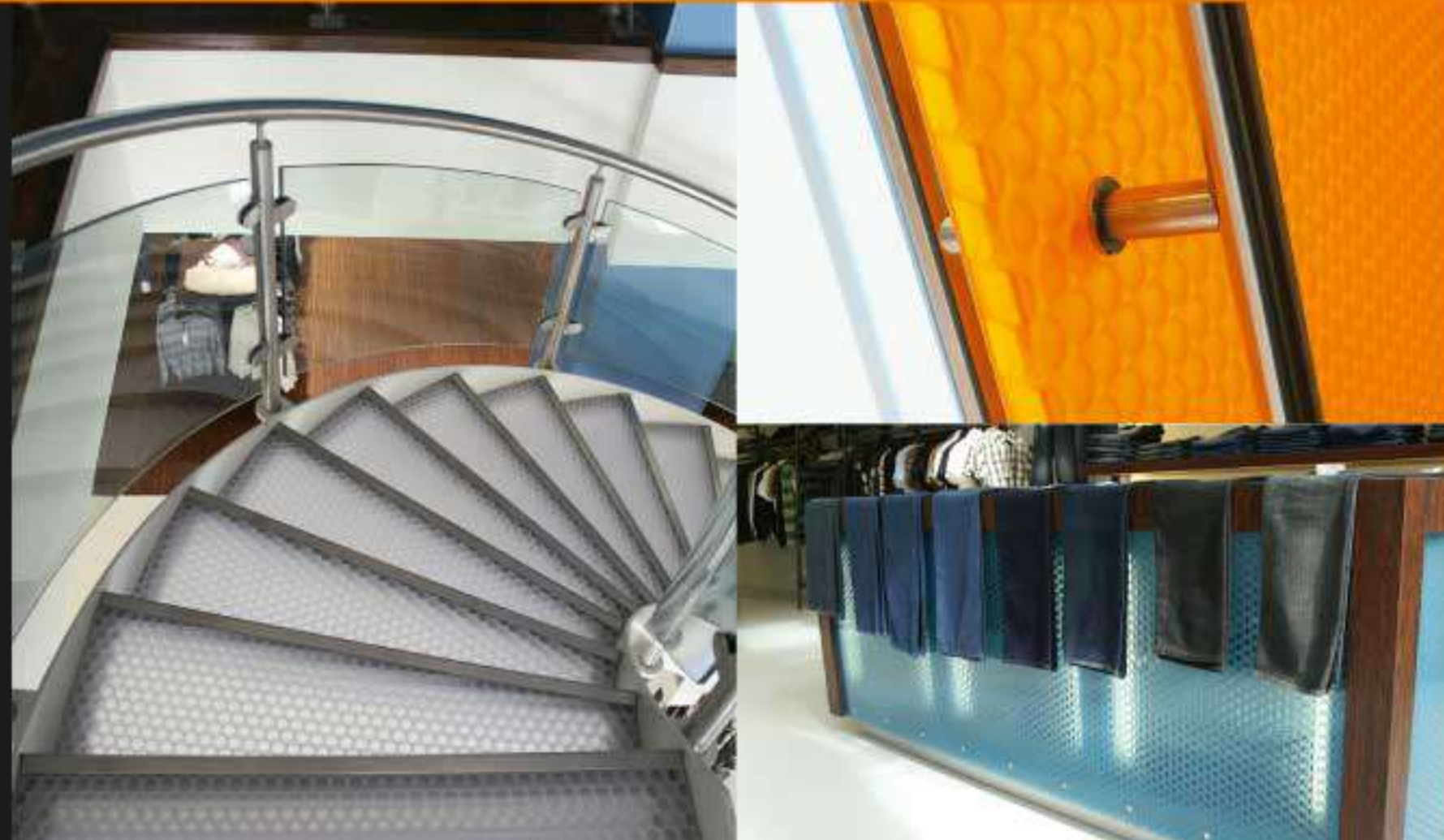
Over 15 years of experience in adhesive technology and production of TRlcore cores from high quality plastic is the basis for our composite panels. The combination of the highest technical quality with stunning designs creates numerous opportunities for innovative concepts. Quality testing in our well-equipped laboratory through to final inspection guarantees the highest quality of our products.

The use of advanced lighting technology is particularly suited to our panels to enhance their optical effect.

***AIR-board®** and **clear-PEP®** panels have different core structures.*


Features

- Excellent UV and weather resistance
- Innovative translucent optics
- Excellent light transmission
- Provides full or partial visibility/privacy
- Light weight
- Easy processing
- Compatible with standard fixing systems
- Excellent bending stiffness
- Unique 3D-effects and light scattering
- High impact and abuse resistance
- Patented core geometries
- Good thermal and sound insulation properties



Eigenschaften

- Ausgezeichnete UV Stabilität und Bewitterungsresistenz
- Innovative transluzente Optik
- Hohe Lichtdurchlässigkeit bei optimalem Sichtschutz
- Geringes Gewicht
- Leichte Verarbeitbarkeit
- Kompatibilität mit gängigen Befestigungs-Systemen
- Exzellente Steifigkeit
- Einzigartige 3D-Effekte und Lichtstreuung
- Hohe Schlagzähigkeit
- Patentierte Kerngeometrien
- Gute Wärme- und Schalldämmung



AIR-board®

Die Wabenkerne für unsere **AIR-board®** Paneele sind in verschiedenen Zellgrößen und Strukturen erhältlich. Erst durch das Verkleben der Kerne mit unterschiedlichsten Deckschichten entstehen Paneele mit einzigartigen Eigenschaften.

*The honeycomb cores in different sizes for our **AIR-board®** panels can be combined with various transparent or coloured facing sheets. The different layers and different core structures allow a variety of imaginative design options.*



clear-PEP®

Auf einer eigens entwickelten und patentierten Kernziehmaschine werden die unverkennbaren Wabenkerne für unsere **clear-PEP®** Paneele hergestellt. Die innovative Charakteristik der Lochstruktur verleiht dem Leichtbaupaneel nicht nur eine einzigartige Tiefenwirkung, sondern auch eine extrem hohe Steifigkeit.

*The distinctive TRCore, for our **clear-PEP®** panels, is manufactured on our specially designed and patented core expander. The innovative characteristic of the open structure gives the lightweight panels not just a unique depth but also an extremely high rigidity.*



AIR-board® & clear-PEP® panels

lagerware / stock items

AIR-board®

PRODUKT / PRODUCT



AIR-board® UV PC transparent

3020 x 1220 x 19 mm

Art-Nr. ABU019-30201



AIR-board® UV satin opal

3020 x 1000 x 19 mm

Art-Nr. ABSA19-20011



AIR-board® UV satin orange

3020 x 1000 x 19 mm

Art-Nr. ABSA19-20041

PRODUKT / PRODUCT



chaos AIR-board® UV satin clear

3020 x 1000 x 19 mm

Art-Nr. ABCS19-20001



AIR-board® acoustic

2500 x 1220 x 18 mm

Art-Nr. ABM018-00201

Zusätzlich zu unserem Lagerprogramm produzieren wir auch individuelle Paneele nach Kundenwunsch.

In addition to the range of stocked panels we also produce panels to customer requirements.

lagerware / stock items

clear-PEP®

PRODUKT / PRODUCT



clear-PEP® UV PC transparent
3020 x 1220 x 19 mm
Art-Nr. CPU019-30201



clear-PEP® UV PC color orange
3020 x 1000 x 19 mm
Art-Nr. CPC019-24781



clear-PEP® UV PC color light blue
3020 x 1000 x 19 mm
Art-Nr. CPC019-26251



clear-PEP® UV satin opal
3020 x 1000 x 19 mm
Art-Nr. CPSA19-20011

PRODUKT / PRODUCT



clear-PEP® UV satin grey
3020 x 1000 x 19 mm
Art-Nr. CPSA19-20061

NEU / NEW



clear-PEP® UV PC stage
2000 x 1000 x 40 mm
Art-Nr. CPS040-20001

BODENPANEEL
FLOOR / STAGE



clear-PEP® spy UV satin clear
3020 x 1000 x 19 mm
Art-Nr. CPSS19-20001

NEU / NEW



Die Möglichkeiten

Neben dem Standardprogramm bieten wir verschiedene Deckschichten, Dimensionen, Kernstrukturen, Farben und Materialkombinationen mit speziellen Eigenschaften an.

Kundenorientierung und Flexibilität erlauben es uns, individuelle Lösungen anzubieten.

The possibilities

In addition to the standard range we offer many different surface sheets, dimensions, core structures, colours and material combinations with special properties.

Customer orientation and flexibility allow us to offer customized solutions.



Farben/Colours

Alle Farben sind in satinierten/glänzenden Ausführungen lieferbar.

All colours in glossy or satin finishes are available.



Formen/Shapes

Individuelle Zuschnitte/Bohrungen/Ausfräsungen und Verformungen können nach Kundenanforderungen gefertigt werden.

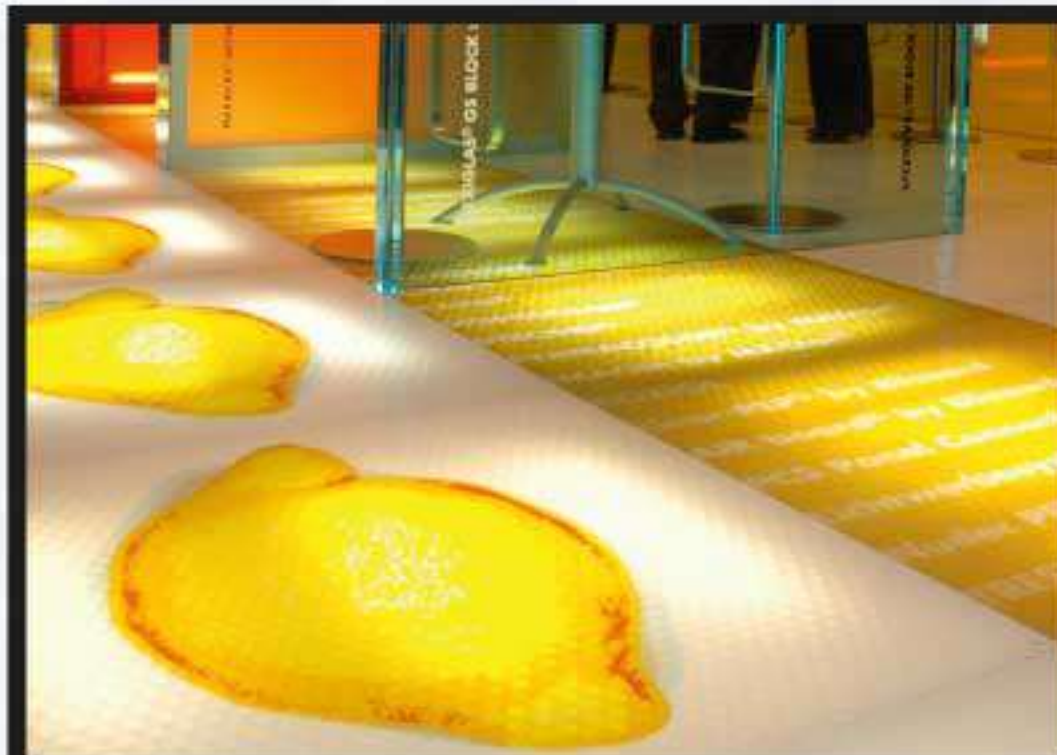
Cutting/drilling/bending/CNC milling according to customer's specifications.



Dimensionen / Dimensions

Paneelformate sind bis zu einer Größe von 7500 x 2500 mm möglich.

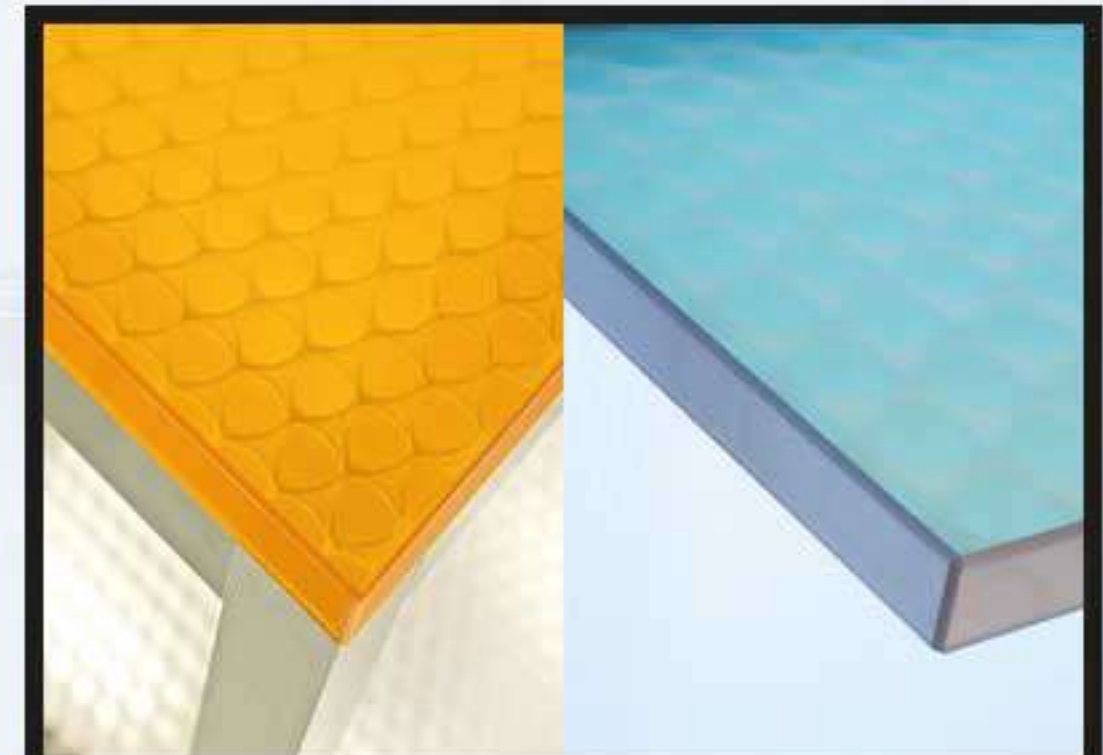
Panel sizes up to 7500 x 2500 mm.



Aufdruck / Printing

Beliebige Grafiken/Logos können mit Hilfe von Digitaldruck auf die Paneele aufgedruckt werden.

Any graphics/logos can be printed on the panels with digital print.



Kantenlösung / Edge banding

Kantenlösungen für den Innen- und Außenbereich.

Edge banding options for interior and exterior applications.

Mit unseren Systemlösungen präsentieren wir maßgeschneiderte Konzepte für Innenausbau und Fassadengestaltung. Spezielle Profilsysteme ermöglichen Raumabtrennungen und Wandgestaltungen, Dreh- und Schiebetürkonzepte, Beschattungssysteme und vieles mehr mit hohem Designanspruch.



Wandsysteme / wall systems

Vollwertige Wandsysteme, integrierte Türen und Profilsysteme werden montagefertig geliefert.

Complete wall systems, integrated doors and profile systems are delivered ready for assembly.



Türsysteme / door systems

Individuelle Dreh- & Schiebetüren werden als Komplettlösung mit passenden Beschlagsystemen angeboten.

Customized hinged & sliding doors together with the appropriate mounting systems.



Stellwandsysteme / partition walls

Temporäre oder permanente Stellwände für Raumteiler, Messestände, Ausstellungen, Kongresse, Büros, Foyers etc.

Temporary or permanent partition walls for applications such as exhibition booths, congresses, offices, foyers etc.

With our system solutions we present bespoke concepts for interior and external applications. Special profile systems offer room partitions, decorative walls, swing and sliding doors, shading systems and many other possibilities for requirements with a higher level of design.



Fassaden/facades

Witterungsresistente Paneele aus UV-geschützten Materialien mit hohen thermischen Isolationswerten kommen speziell bei Hinterleuchtung und Sonneneinstrahlung optisch perfekt zur Geltung.

The weather-resistant panels from UV-resistant materials with outstanding thermal insulation values are at their best when illuminated from the rear or with sunlight.



Beschattungssysteme/shading systems

Witterungsresistente Paneele aus UV-geschützten Materialien setzen optische Akzente in der Außenfassade und bringen Schatten und Komfort.

The weather-resistant panels from UV-resistant materials are providing a distinct look to a building's exterior while providing shade and increased comfort.

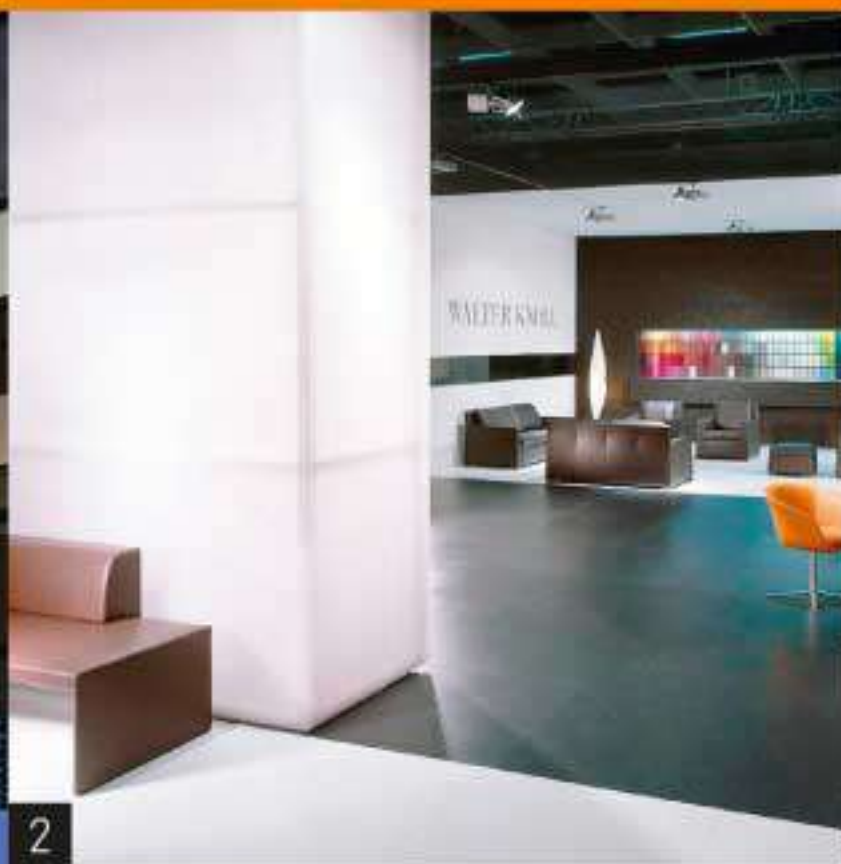


Akustiksysteme/acoustic systems

Die speziell entwickelten Akustikpaneele für Decke/Wand und Trennwände dienen zur Verbesserung der Raumakustik und der Schallabsorption.

The specially developed acoustic panels for ceilings, walls and partitions are used to improve the room acoustics and sound absorption.

anwendungen / applications



Anwendungsmöglichkeiten von **AIR-board®**- und **clear-PEP®**-Paneelen: Architektur, Messestände, Ladenbau, Bühnenkulissen, Innenausbau, Displays, Lichtwerbung, Schaufensterdekorationen, Regale, Leuchtkörper, Lichtdecken, Design-Möbel, Trennwände, Schiebetüren, Doppelböden, Geländerverglasungen, Fassadenelemente, Vordächer u. v. m.
 Application possibilities for **AIR-board®**- and **clear-PEP®**-panels: architecture, exhibition booths, shop design, stage setting, interior design, displays, illuminated advertising, shop window decorations, shelves, luminaries, illuminated ceilings, furniture, partitions, sliding doors, raised floors, balcony panels, facades, canopies and much more!



6



5



2



2



3



1



1



3

- 1 Shopdesign, Ladenbau, Bar
 - 2 Messebau, Bühnenbau
 - 3 Museen
 - 4 Designmöbel
 - 5 Sanitäranwendungen
 - 6 Hotel- und Wellnesseinrichtungen
 - 7 Aussenfasaden
-
- 1 Shop design/bars
 - 2 Exhibition booths
 - 3 Museums
 - 4 Designer furniture
 - 5 Sanitary applications
 - 6 Health spa and hotels
 - 7 External facades



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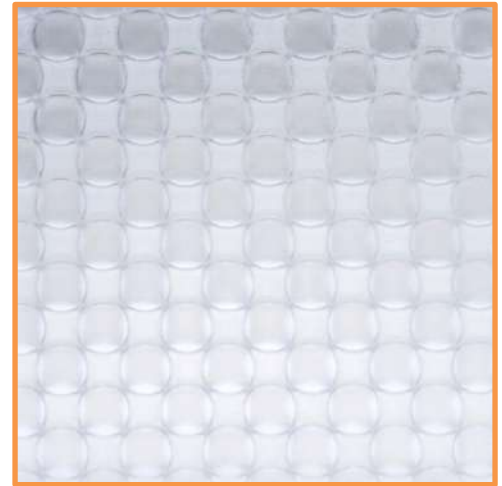


NBB - Die Agentur | Bilder: Nikolaus Faustauer, Maximilian Muzzinas, Michael Huber, mada GmbH, Archiv Design Composite GmbH



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The various types of panel in the clear-PEP[®] family differ in their facing sheet materials, cores, surface structures, physical properties, dimensions and colours.



Product description

Facing sheet on both sides	PMMA satin*
Core	PC - TRCore spy honeycomb

*Standard colour: clear; other colours on request

Properties

- innovative translucent optics
- unique 3D effects and light scattering
- excellent UV stability and resistance to weathering
- low weight
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¹ all panels over 3020 x 1500mm with core joint

² on request - minimum order per special size: 25 panels

Tolerances	Length [mm]	Width [mm]	Thickness [mm]
Cut to size	+2/-2	+1/-2	+0/-1

General physical properties

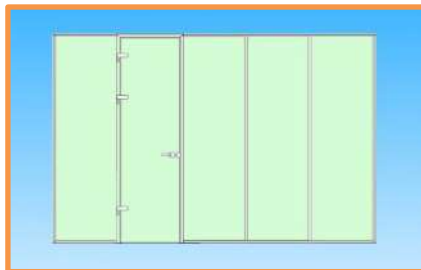
Coefficient of thermal expansion acc. to DIN 53752-A	Service temperature	Fire class		
[1/K]	[°C]	DIN 4102-1	BS 476 Part 7	EN 13501
7×10^{-5}	-30 bis +80	B2		

Thickness [mm]	Weight per unit area [kg/m ²]	Thermal insulation U-value [W/m ² K]	Sound insulation Rw [dB]	Bending stiffness* [Nm ²]
16	10,8	2,9	26	597
19	10,8	2,8	26	829
30	12,0	2,4	27	1800
40	12,0	2,1	27	3200
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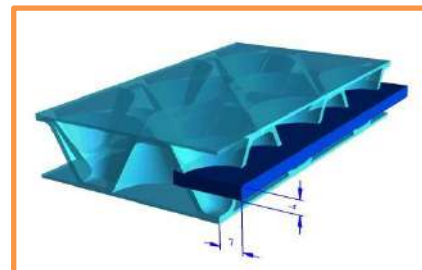
* per m panel width

Mounting systems for all clear-PEP[®] panels

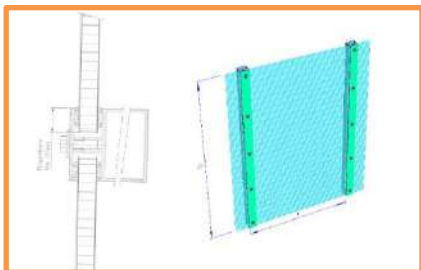
Profile system for dividing walls



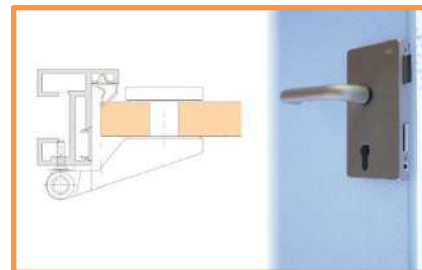
Tongue and groove joint



Profile system for glazing













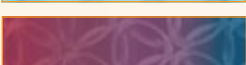



Furniture for hinged doors



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clear-PEP® panels

Color	Top sheets	Dimensions	clear-PEP®	clear-PEP® spy
	PC transparent	2550 x 1050 x 16	CP0016-25501*	
	PC transparent	2550 x 1050 x 19	CP0019-25501*	
	UV PC transparent	3020 x 1220 x 19	CPU019-30201*	CPUS19-30201
	UV PC color orange	3020 x 1000 x 19	CPC019-24781*	CPCS19-24781
	UV PC color green	3020 x 1000 x 19	CPC019-27771*	CPCS19-27771
	UV PC color light blue	3020 x 1000 x 19	CPC019-26251*	CPCS19-26251
	UV PC color dark blue	3020 x 1000 x 19	CPC019-26271*	CPCS19-26271
	UV satin clear	3020 x 1000 x 19	CPSA19-20001*	CPSS19-20001
	UV satin opal	3020 x 1000 x 19	CPSA19-20011*	CPSS19-20011
	UV satin orange	3020 x 1000 x 19	CPSA19-20041*	CPSS19-20041
	UV satin glass green	3020 x 1000 x 19	CPSA19-20021*	CPSS19-20021
	UV satin ice blue	3020 x 1000 x 19	CPSA19-20031*	CPSS19-20031
	radiant	2420 x 1200 x 19	CPR019-24201	CPRS19-24201
	UV PC stage	2000 x 1000 x 40	CPS040-20001*	

*stock items, delivery time for other panels on request

Installation systems for all AIR-board® & clear-PEP® panels

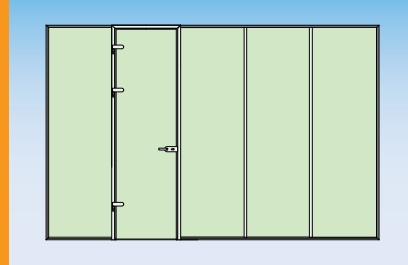
Profile system for raised floor



Profile system for installing clear-PEP® UV PC stage - panels as raised floor; appropriate for backlighting.

Appropriate for interior applications

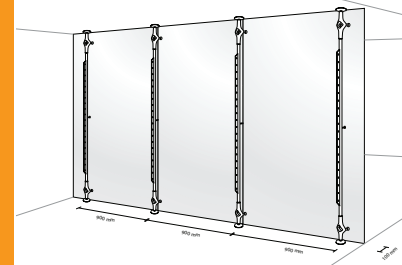
Profile system for partition walls



Profile system for partition walls in different variations, including swing- and sliding doors.

Appropriate for interior applications

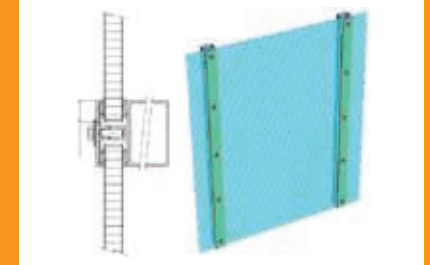
Profile system for partition walls



Profile system for partition walls with open panel joints; completion with swing-, sliding doors and shelves on request.

Appropriate for interior applications

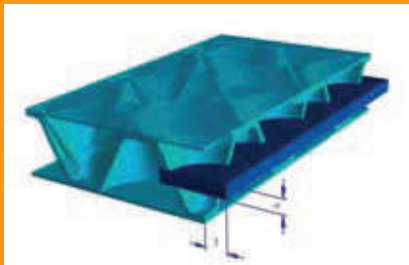
Visible clamping profile system



Example of a typical aluminium fixing system for exterior glazing; compatible for all AIR-board® & clear-PEP® Panels.

Appropriate for exterior applications

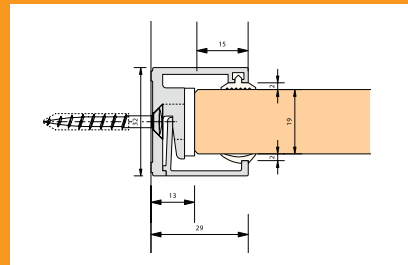
Tongue & groove connection



Tongue & groove connection for panel joints without profiles; specially designed for standard aluminium booth construction profiles.

Appropriate for interior applications

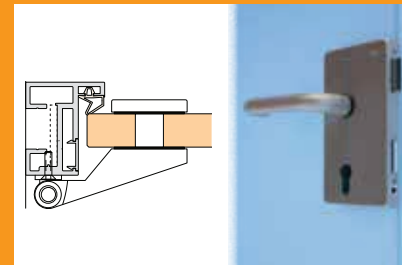
Profile system for partition walls



Slim profile system for fixed partitions; compatible with all 16 and 19 mm AIR-board® & clear-PEP® panels.

Appropriate for interior applications

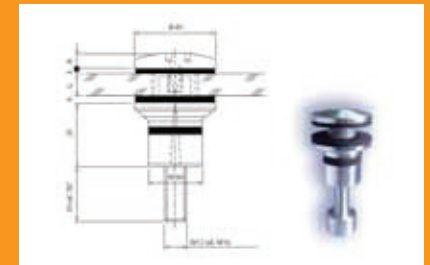
Fittings for swing doors



Fittings for swing door system appropriate for frameless 19 mm AIR-board® & clear-PEP® panels.

Appropriate for interior applications

Point fixing system



Our panels with sealed edge banding are suitable for curtain walls by using all available (spider) point fixed systems.

Appropriate for exterior applications

Important advices concerning exterior applications: Panel edges have to be protected against penetrating moisture. In case of horizontal installation: angle for installation $\geq 5^\circ$.



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 www.allplastics.com.au

1. Introduction

Our standard lightweight panels respectively any customized panel demand not only a great deal of the modern Design Composite production equipment, but also a comprehensive know-how of processing and handling by our customers.

Following instructions and suggestions should assist you to handle Design Composite lightweight panels according to their properties.

2. Metal cutting processing of Design Composite panels

2.1 General

In principle the selection of the cutting tool depends on the type of top sheet material.

Note: In general we recommend to wear protective gloves and safety glasses during mechanical processing with the panels.

2.2 Drilling

Any conventional metal drill bit (HSS spiral bit) can be used. Panels without metallic top sheets should be drilled with high drill speed (50 – 10 m/min, but little feed speed). We recommend an advance drill if the hole diameter is more than 5 mm.

Due to the thermal expansion of any thermoplastic top sheet a hole diameter of minimum 2 mm bigger than the screw diameter is imperatively required.

Lubrication is useful during drilling in order to achieve an optimum drill surface.

2.3 Sawing

Sandwich panels can generally be cut with standard workshop equipment (e.g. work table or hand circular saw, compass and band saw). Carbide tipped saw blades with a large number of crown teeth together with high cutting speed and little feed speed produce optimum results.

When drilling a support could prevent detachment of the lower top sheet.

Cutting thermoplastic sheets (e.g. clear-PEP®, clear-PEP® color, AIR-board®, AIR-board® satin) require special saw blades in order to avoid bursting of edges.

Recommendation: Leitz HW circular saw blade for NE-metal neg. HW 300x3.2x30, Z96, FZ / TZ.

For further information look up www.leitz.org

Cutting with laser and/or water-jet is not possible!

2.4 Milling

Sandwich panels can be milled with cemented carbide (CC) milling tools.

Note: high cutting speed (15.000 – 25.000 R/min) combined with little feed speed produces optimum results.


2.5 Grinding

Grinding is used to adjust minor top surface defects or rough cutting edges. High grinding speed with little feed speed is recommended too. The requested roughness can be adjusted with the grit size of the sandpaper. Tape speed of 10 m/s is suggested.

2.6 Burnishing

Manual polishing can either be done with a soft cloth or with a suitable felt together with a polishing paste.

Larger surfaces should be polished with a face-polishing machine that is equipped with a cloth of felt or lambskin soaked with polishing paste.

	Material Safety Data Sheet Product Lines clear-PEP® and AIR-board®	MSDS 0102 Ch.- Nr.: 01 page: 1 von 2
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1. Trade names of products concerned:

clear-PEP® PC
clear-PEP® UV PC
clear-PEP® UV PC color
clear-PEP® UV PC stage

AIR-board® PC
AIR-board® UV PC
AIR-board® UV PC color
color AIR-board® UV PC
metal AIR-board® UV PC

2. Composition / Indication to parts:

Chemical characterisation:

Polycarbonate panels bonded with a drawn TRICore or honeycomb Polycarbonate core

Dangerous substances:

By bonding with Polyurethane adhesives Isocyanathe can be released, however they are chemically bonded in adhesive reacted out (approx. 48 hours after processing).

3. Possible dangers:

unknown

4. First Aid actions:

inhale:
skin contact:
swallow up:
eye contact with PC-swarf:

not applicable
not applicable
not applicable
irrigation with water or commercial eye irrigations

5. Actions against fire:

Suitable extinguishing agents:
Unsuitable extinguishing agents:
At fire following will be released:
Other decomposition products at thermal decomposition:

water, powder, foam, carbon dioxide
unknown
Carbon Dioxide, water vapour

Further information:

Carbon Monoxide and other organic monomers in small quantity
combustion residues are to be disposed according to local regulations

6. Actions at unintended release:

not applicable

7. Handling and storage:

handling:
storage:

no information
in delivery package in dry rooms, according to local fire-directions

These indications are based on our state of knowledge and experience at date of issue, but they do not bear the meaning of assurance of characteristics. It is not allowed to change nor to translate into other products. Copying in unchanged status is allowed.



Material Safety Data Sheet
Product Lines
clear-PEP® and AIR-board®

MSDS **0102**
Ch.- Nr.: 01
page: 2 von 2

8. Exposition limitation and personal protective equipment:

Parts with limit value to be observed – not applicable

Personal protective equipment:

breathing protection

not necessary

eye protection

at mechanical processing – protective goggles

ear protection

at mechanical processing – ear protection

9. Physical and chemical characteristics:

form:

non-detachable

colour:

according to customer's request

smell:

neutral

change of condition:

non

ignition temperature:

over 200° C

solubility in water:

unsolubly

10. Stability and reactivity:

no change of condition at usage according to determination

11. Information on toxicology:

no acute toxicity

12. Information on ecology:

Information on elimination:

no datas available

Behaviour in environment

compartments:

not water endangering, environment neutral

13. Information on disposal:

According to local magisterial directives

14. Information on transport:

no labelling liability for dangerous goods-law according to EEC-law

15. Instructions:

labelling according to EEC-law:

no labelling liability

national regulations:

not subject of dangerous goods-regulation

16. Others:

information for usage of this MSDS please find in the footer

These indications are based on our state of knowledge and experience at date of issue, but they do not bear the meaning of assurance of characteristics. It is not allowed to change nor to translate into other products. Copying in unchanged status is allowed.



TEST CERTIFICATE

according to the results of the determination of the anti-slip properties of floor coverings in workrooms and fields of activities with slip danger

Tested material: **Plastics floor covering**
Signification: MAKROLIFE GRAIN 35; CHAIRMAT
Work size: 1000 x 500 x 1,8 mm
Colour: Transparent
Surface description: GRAIN 35, TEXTURED
(unprofiled, fine grained structured)

Producer / Supplier: **ARLA PLAST AB**
Västanavägen
5930 Borensberg
SWEDEN

Customer: **ARLA PLAST AB** / **MKS Kunststoffe e.K**
Västanavägen / **Pastor-Klein-Straße 17**
5930 Borensberg / **56073 Koblenz**
SWEDEN / **GERMANY**

Test ordering: 11 December 2007

Certificate number: 95350701.001

Sampling: Sent by the customer to the research institute

Standard of determination: **DIN 51130 and leaflet BGR 181 respectively**
"Testing of floor coverings; determination of the anti-slip properties; workrooms and fields of activities with slip danger; walking method - ramp test"

Result: **Average total acceptance angle = 8,4°**

Assessment: **Classification group = R 9**



Großburgwedel, 26 May 2008
Schu/Pp

SÄUREFLIESNER-VEREINIGUNG E. V.
RESEARCH AND ADVISORY INSTITUTE
FOR WALL AND FLOOR COVERINGS
Managing Director

Dr.-Ing. E. H. Nolting

The result is related to the tested material.
The report is given for 5 years (beginning data of delivery report).
Publication and reproduction of this report is only allowed in unabridged form.

Säurefließner-Vereinigung e. V.

Untersuchungs- und Beratungsinstitut für Wand- und Bodenbeläge

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