



**COLINES®**

# Bubble Guard® technology multi-purpose alveolar sheet Applications



# Bubble Guard®

Multi-purpose  
alveolar sheet

- Packaging
- Logistic
- Automotive
- Building/Construction
- Furniture
- Printing

## market: general packaging

Application: pallet (prototyping)

Market made of million of pcs./year

Already in use for;

Food industry chain (i.e. fresh and frozen)

Pharmaceutical industry chain

Chemical industry chain

- Easy to clean.
- Can be washed.
- No bacteria/fungus growth.
- Does not deteriorate in open environment.
- Very stable for stacking (strong structure)
- Very lightweight (2,5 kg vs. 9,5 kg wooden)
- 100% recyclable
- Customizable
- Cost effective solution

### Typical specs

Board type:  
laminated

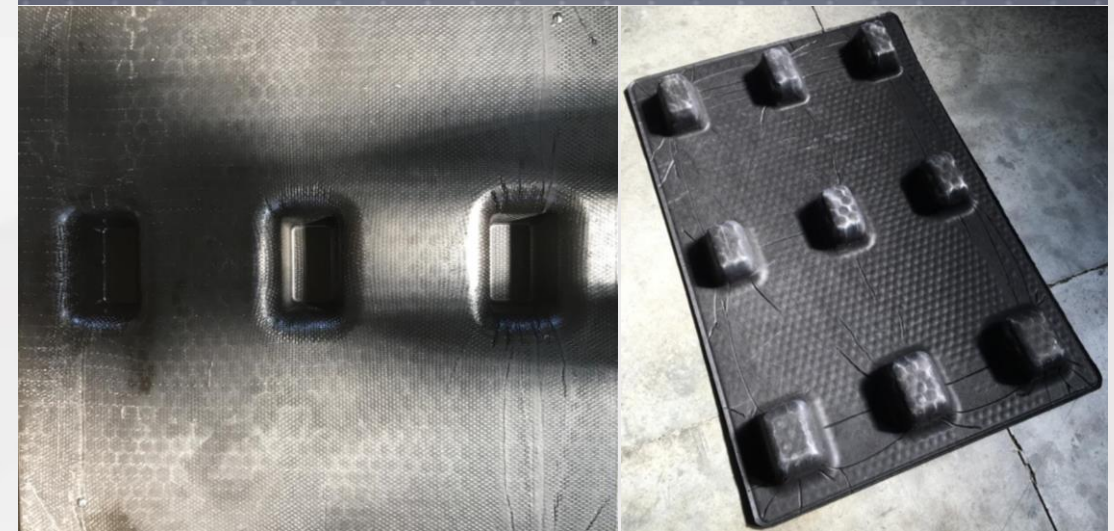
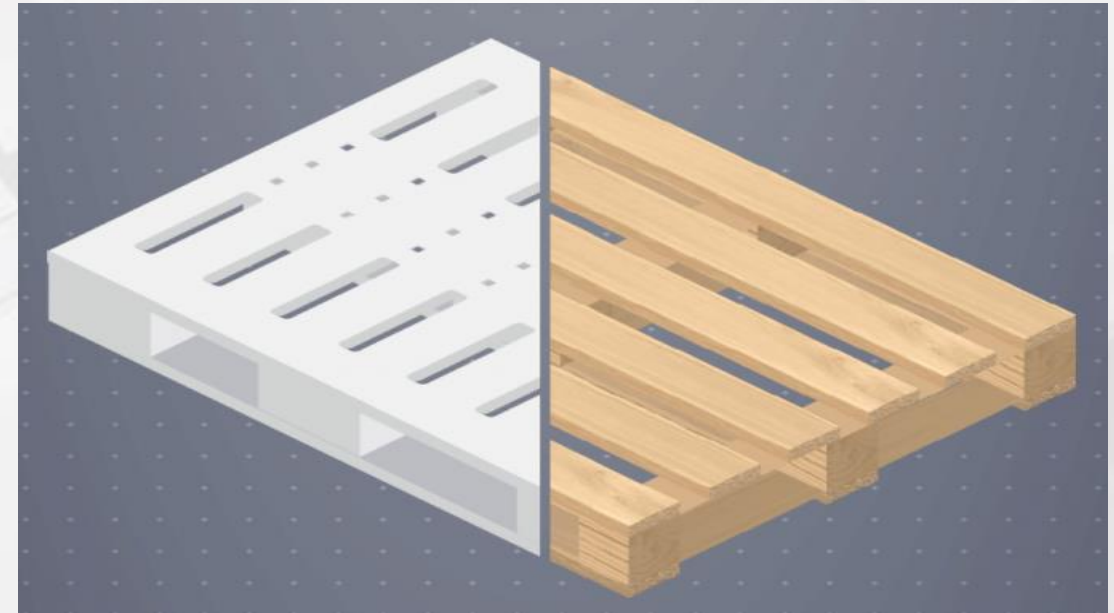
Size:  
1200x800 mm  
1200x1000 mm  
others size as per  
pallet market

Thickness:  
10-18 mm

Gsm:  
2500 – 5000

### Conversion

Thermoforming



## market: flexible packaging

Application: side panelling

### Typical specs

Board type:

plain

Size:

300x340 mm

500x540 mm

600x640 mm

800x840 mm

1000x1040 mm

Thickness:

16-18 mm

Gsm:

4000-5000

### Conversion

Die-cutting

Edge-bending

Transportation of semi-finished or finished products in rolls form, to the following conversion and/or to the final usage.

Side panels keeps and sustain the vertical pressure generated by sustained reels.

Food and medical markets require particle-free side supports (including plastic cores for the reels).

- Very light weight compared to other solutions
- Can be washed – No bacteria/fungus growth
- Can be reused
- 100% recyclable
- Easily printable and customizable by colors.
- Permits stackability.



## market: steel packaging

Applications: coils, interlayers, corner protection

Honeycomb structural material is extremely strong and ideal for heavy packaging. The presence of such texture in the composition of a multi-layer PP board provides 3D load distribution as well as different surface finish in inner/outer layers for better material handling and protection.

Perfect for metal coils, pipes, sheets and bars.

- Produced in roll and sheet forms.
- In-line lamination with non-woven.
- Printable/customizable with different color
- Low density/high thickness interlayers (compression load)
- Protection of coils outer surface (hits and shocks)
- Protection from metal and plastic straps (pressure, scrapes, etc)
- Protection from dust, stains and other external agents (insects, etc)
- Handling and packaging of pipes, bars, profiles and other long items
- 3D load distribution with damper properties
- Ultra-violet rays resistant and anticorrosion features

### Typical specs

#### Board type:

Plain and Laminated

#### Thickness:

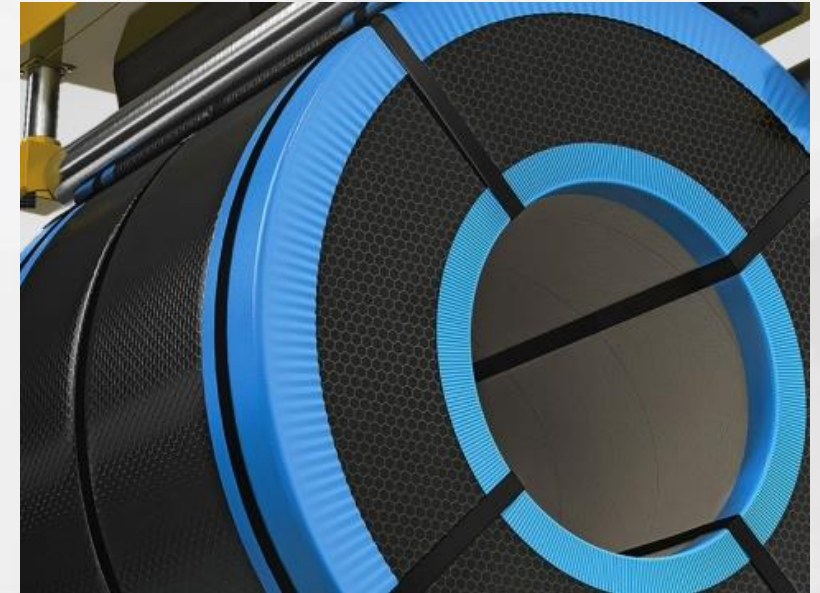
3-18 mm

#### Gsm:

500-3000

### Conversion

Die-cutting



## market: beverage/glass industry

Applications: Interlayers

### Typical specs

Board type:

Plain

Thickness:

2-12 mm

Gsm:

200-3000

### Conversion

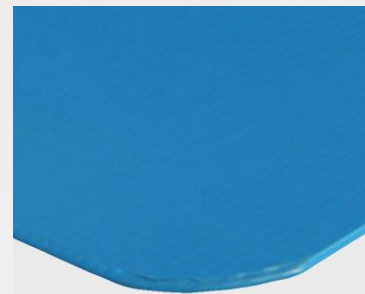
Rounded corners

Sealed edges

- 3D load distribution with damper properties.
- Can be reused
- 100% waterproof and washable.
- Resistant to chemicals.
- No bacteria growth.

Compared to hollow profile:

- Lower thickness thanks to better board structure
- 10% more of interlayers in each pallet.
- Specific surface finish for antiskid features
- Best pallet stability
- Customizable with different colors



## market: packaging

Applications: logistic collapsible boxes

Massively used in many semi-finished product chain.

I.e. automotive industry use collapsible boxes as standard

- Cost-effective
- Compactable
- Made to measure
- Reusable
- Resistant
- Eco-friendly
- Outstanding stackability
- Magnum sleeve possible (2 tons stackability)

Market made by million of pieces per year with increasing demand in most industrial sectors. (+20% in last 3 years).

### Typical specs

Board type:

Plain

Thickness:

10-15 mm

Gsm:

2000-5000

### Conversion

Printing

Creasing

Welding



## market: automotive

Applications: interior car parts

Interior car parts with in-line lamination of carpets and fabrics.

- Perfect substitute of Woodstock and masonite.
- 40% less heavy than competitive products.
- Outstanding mechanical values (compression and bending).
- Damper properties (i.e. back of the seat with improved safety and shock absorption).
- 100% recyclable.
- Versatile in conversion
- Low cost tooling
- Rapid Prototyping
- Improved acoustic performance

### Typical specs

Board type:

Plain and  
Laminated

Thickness:

4-8 mm

Gsm:

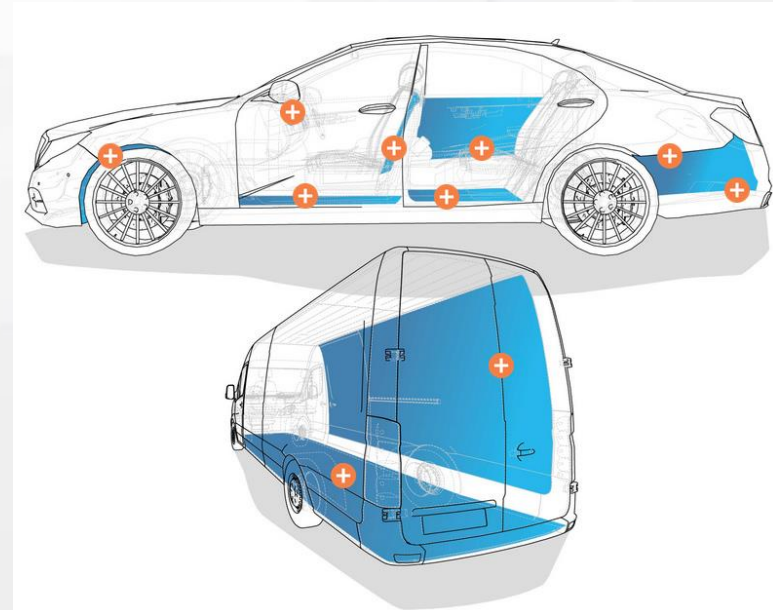
500-2000

### Conversion

Thermoforming

Cold die-cutting

Hot die-cutting





## market: automotive

Applications: flooring / heavy loading

### Typical specs

Board type:

Plain and  
Laminated

Thickness:

8-20 mm

Gsm:

2000-5000

### Conversion

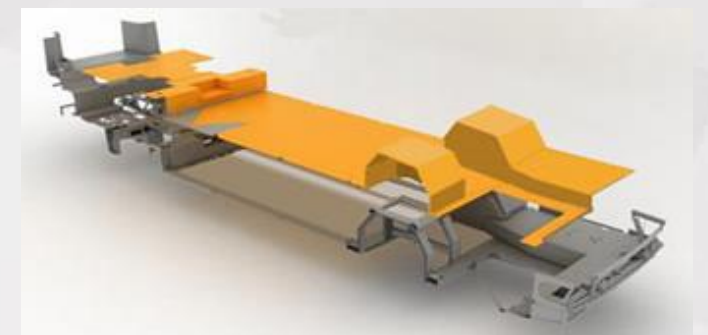
Thermoforming

Die-cutting

Edge bending

Flooring, heavy loading parts with in-line lamination of carpets, fabrics and foil/elastomers for improved antiskid features.

- Increasing demand for high thickness board (18-20 mm)
- More than 40% less heavy than competitive products.
- Superior dimensional stability thanks to double thermoformed walls and mineral charged raw materials
- 100% recyclable.
- Non-cracking
- Washable
- Resistant (UV, chemicals, bacteria, etc)



## market: building / construction

Applications: porta cabins

- Durable pre-decorated rigid paneling
- Ideal for permanent as well as temporary structures
- Lightweight (handling and transport cost)
- 100% waterproof
- Chemical Resistant (easy to clean and maintain)
- Different surface finish (matt, cement, wood, etc)
- Fire retardant
- Ease of workability
- Perfect for site offices
- Security cabins
- Modular partitions
- Movable toilets,
- Exhibition stands
- Information kiosks
- Garden toolsheds

### Typical specs

Board type:

Plain and  
Laminated

Thickness:

5-20 mm

Gsm:

500-5000

### Conversion

Printing

Edge bending



## market: building / construction

Applications: false ceilings

- Many possible lamination for endless design
- Customizable with printing or pattern on the surface
- 100% waterproof
- Excellent aesthetic value
- Very Lightweight: 0.37 kg vs. 2.23 kg of gypsum tyle
- Low thermal conductivity
- Saving on energy costs
- Excellent acoustic properties
- Fire retardant
- No bacteria growth
- Suitable for Electrical Fittings
- No Sagging
- Easy Fixing (conventional system)

### Typical specs

Board type:

Plain and  
Laminated

Size:

2'x2'

8'x4'

Thickness:

3-5 mm

Gsm:

500-1200

### Conversion

Die-cutting



## market: building / construction

Applications: wall covering, wall panneling, partitions, antiskid flooring

### Typical specs

Board type:

Laminated

Size:

8'x4'

Thickness:

3-5-10-18 mm

Gsm:

700

1600

2800

5000

### Conversion

Edge bending

- Many possible lamination for endless design
- Customizable with printing or pattern on both surfaces
- Can be glued on Block wall (5 mm board) or Plastered wall (3 mm board)
- Can be used with conventional frame for Plaster boards
- Excellent Sound Absorption and Thermal Insulation
- Very low thermal conductivity
- Fast and easy installation with eco-friendly adhesive
- Termite resistant
- Impact, Scratch and Tear resistant
- Fire Retardant
- Chemical Resistant (easy to clean and maintain)
- 100% waterproof



## market: building / construction

Applications: stone reinforcement

Perfect base for applying natural stones to panels increasing the overall thickness.

- Thickness of the slabs can be minimized
- Material weight reduction
- Improved cost reduction
- can be also used with any natural or engineered stone or porcelain material
- Increased mechanical properties
- Works as material reinforcement
- 100% waterproof
- No bacteria growth
- In-line lamination with fabrics for improved slab installation



### Typical specs

#### Board type:

Plain and Laminated

#### Thickness:

12-18 mm

#### Gsm:

3000-5000

### Conversion

Edge bending

## market: building / construction

Applications: shuttering

### Typical specs

Board type:

Plain or  
Laminated

Size:

8'x4'

Thickness:

15-20 mm

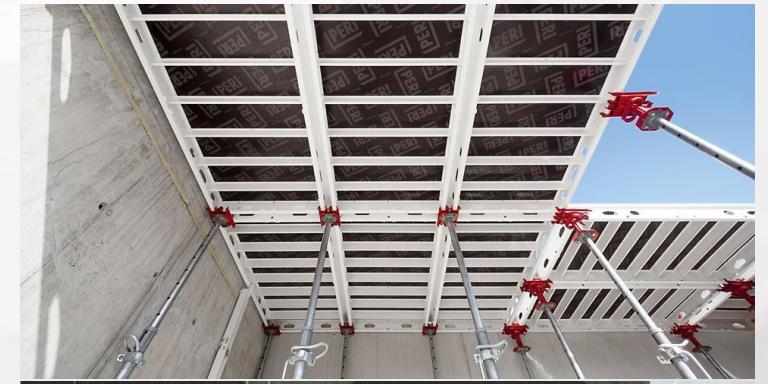
Gsm:

4000-5000

### Conversion

Edge bending

- Long life : minimum 100 times reuse. Both sides usable
- Gives Mirror Finish to concrete surfaces
- Save on plastering cost
- Lighter in weight:11 kg vs 45 kg of 18 mm Plywood
- Quick and easy installation
- No need of molding oil to release the board
- Washable and waterproof
- Thermal Shock Resistant
- High Salvage value as 100% PP (even recycled)
- Compatible with conventional systems



## market: building / construction

Applications: permanent frameworks

- In-line lamination with fabrics for improved concrete casting and levelling.
- Outstanding insulation from external agents.
- Time and cost saving (no disarming operation)
- Extremely lightweight if compared to traditional system
- Easy to cut to size
- Particularly suitable for wetlands.
- Waterproof

### Typical specs

Board type:

Laminated

Thickness:

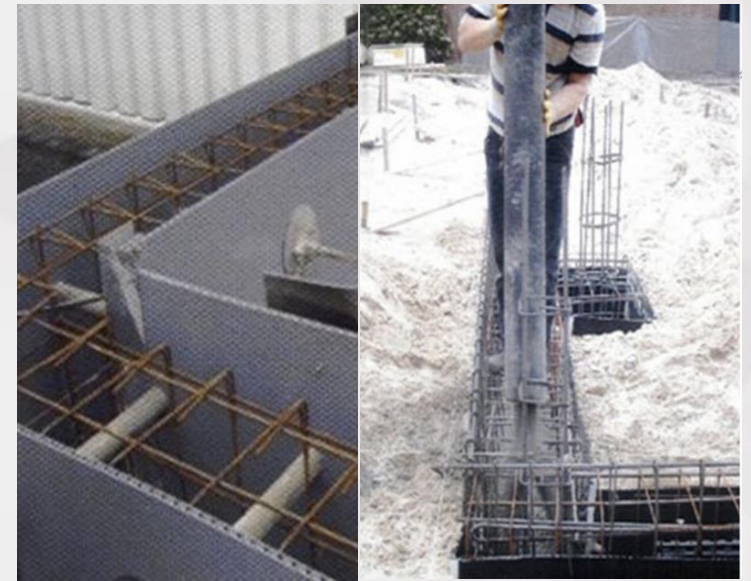
10 mm

Gsm:

3000

### Conversion

None



## market: building / construction

Applications: floor protection

- Perfect protection during construction or renovation
- Onsite floor protection
- Safeguard expensive flooring from scratches, spillage and falling materials.
- Protection of tiles/marble during material transit
- Produced in roll of sheet forms.
- Easy to apply – No special labour required
- High impact resistance
- Keeps workspace clean
- Waterproof
- Reusable
- Time and cost saving
- Easy to cut to size
- Customizable (different color and logo print)

### Typical specs

Board type:

Plain

Size:

6'x4'

Thickness:

2-3 mm

Gsm:

200-500

### Conversion

None





## market: building / construction

Applications: site fencing

### Typical specs

Board type:

Plain

Size:

8'x4'

9'x4'

10'x4'

Thickness:

4-8 mm

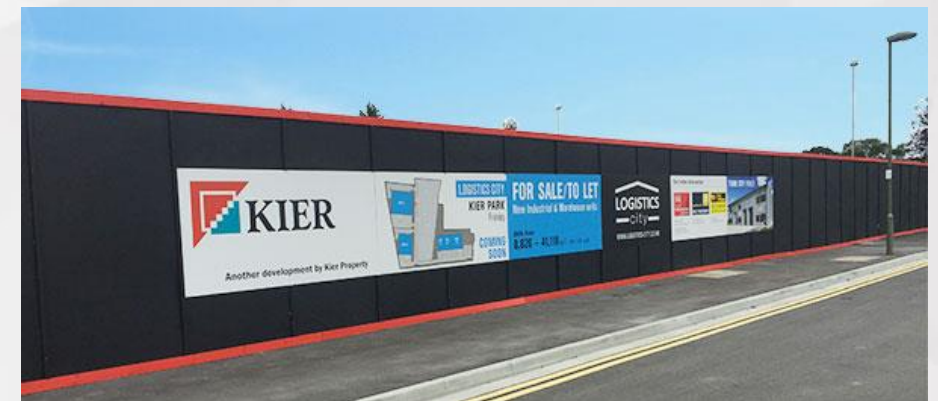
Gsm:

1000-2000

- Very light-weight
- Tested at 50-60° (Dubai)
- Reusable
- Termite-proof
- Corona treated, printable (two side printing)
- Stickers compatible
- Can sustain all weather conditions
- Salvage value
- Maximum visual impact

### Conversion

Edge bending



## market: furniture

Applications: cabinet, doors, panels

- Many possible lamination for endless design
- Customizable with printing or pattern on the surface
- 100% waterproof
- Resistant to chemicals (easy clean)
- Fire retardant
  
- Back panels
- Side panels
- Working table
- Dividers
- Load platform

### Typical specs

Board type:

Plain

Thickness:

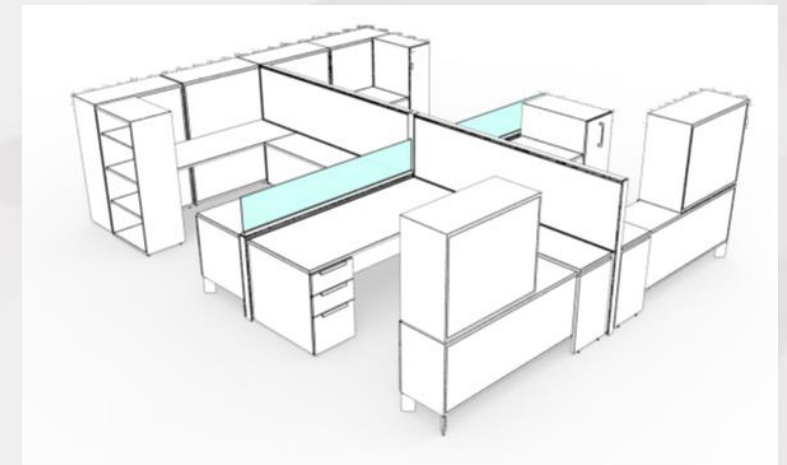
10-18 mm

Gsm:

200-5000

### Conversion

Edge bending



## market: advertising

Applications: printing panels

Stiff, lightweight and strong in both dimensions.

Unique surface smoothness (also possible full-matt)

Can be used for indoor and outdoor applications.

Double-side printable.

Corona treated, optimal solution for printing.

Easy to convert

Resistance to: water, heavy weather conditions, oils and chemicals

100% recyclable

Anti-UV

Antistatic

Flame retardant

### Typical specs

Board type:

Plain

Size:

1220x2440

1530x3050

2050x3050

Thickness:

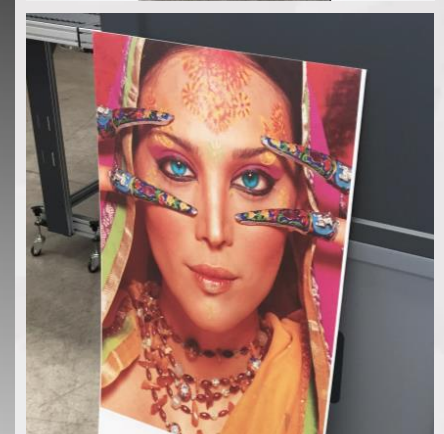
2-5-8-15 mm

Gsm:

450-3000

### Conversion

None



**Thank you for your attention.**

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