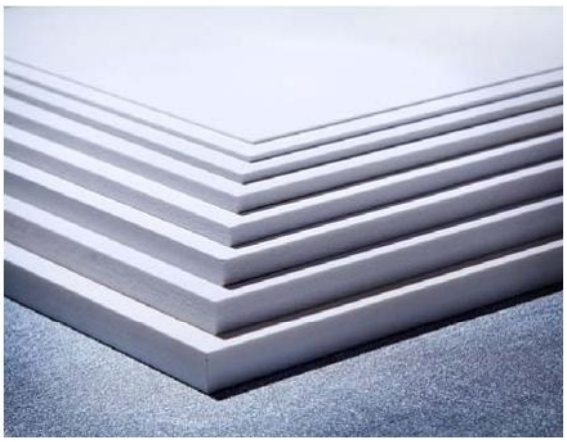
Libero Smartwood Board/Ply

PVC Celuka Foam Sheet is a waterproof, lightweight, expanded rigid plastic sheet material that is used for a variety of applications including furnitures like kitchen and bathroom cabinets, interior decoration, exhibit booths, advertising signs and displays, prototypes, model making, and much, much more. It can be easily sawed, stamped, punched, die cut, sanded, drilled, screwed, nailed, or riveted. It can be bonded together by using PVC adhesives. Its properties include excellent impact resistance, very low water absorption and high corrosion resistance



PRODUCT RANGE

Length	2440mm, 3050mm, 3600mm, 4800mm, 5490mm, length can be customized	
Width	1220mm,	1560mm
Thickness	3-30mm,	5-18mm
Density	0.45-0.9g/cm3,	0.52-0.9g/cm3
Finished	Smooth, Mat and texture	Smooth
Available colors	White, Black, Grey, Red, Yellow, Blue, Green	White

TOLERANCES

Range (based on thickness)	Thickness	Length	Width	Rectangularity
⩽12mm	±0.2mm	+5mm	+3mm	+5mm
>12mm	±0.5mm			

MAIN FEATURES

1. Waterproof
2. Light Weight， Easy to fabricate
3. Uniform fine & close cell structure
4. Low Flammability
5.Non Corrosive, good resistance to UV & weathering

APPLICATIONS

Furniture, kitchen & bathroom cabinet

Advertising Signs, billboards, displays, exhibition stands

Architecture, indoor and outdoor decoration

Interior scaleboard for boat & ship, vehicle, train

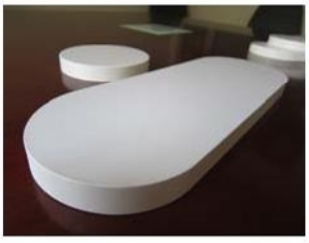
TIPS:

1. What is the best density board is good for making kitchen cabinets and cupboards?

The densities 0.5-0.65g/cm^3 are suitable for the furniture making, the price and quality demand will cause the different chooses, the higher the density, the better the quality, the higher the price.

2. How can we do the edge?

There is various edge banding in the market, all are suitable for PVC Foam Board, such as PVC, aluminum, acrylic, you could choose according to your project, here are some pictures with different kinds of banding:



PVC edge banding

Aluminium edge banding

PVC Free Foam sheet

PVC Free foam sheet also call Closed-cell PVC foamboard is a lightweight rigid material used primarily in the manufacture of signs and displays. It is considered robust for outdoor use, being immune to rain and resistant to wind and sunlight.furniture, especially for the cabinet in kitchen & bathroom, advertising, traffic and transit, industry, etc.

PRODUCT RANGE

Length	2440mm, 3050mm, 3600mm, 4800mm, 5490mm, length can be customized		
Width	1220mm	1560mm	2050mm
Thickness	1-25.4mm	1-18mm	1-10mm
Density	0.45-0.9g/cm3,	0.45-0.9g/cm3,	0.45-0.9g/cm3,
Finished	Mat		
Avaiable colors	White, Black, Grey, Red, Yellow, Blue, Green		

Note: The tolerance of the PVC Free Foam sheet is the same as PVC Celuka Foam sheet.

APPLICATIONS

Advertising Signs, billboards, displays, exhibition stands		
Advertising Letter making		

		Digital Printing, Silk-screen printing

TIPS:

1. Can we do painting on PVC foam sheet? Special painting material needed?

Yes, you can paint it into any patterns according to your market requirement.
The paint oil is different fromt the one for wood using, but it is easy to find since this material is getting popular. Please kinldy note that the board could not be painted under high temperature.

2. What is the suitable using temperature of PVC Foam Sheet?

-10℃ ~ 60℃ is the suitable temperature for using, the sheet will get soft and twist under long time higher temperature environment.

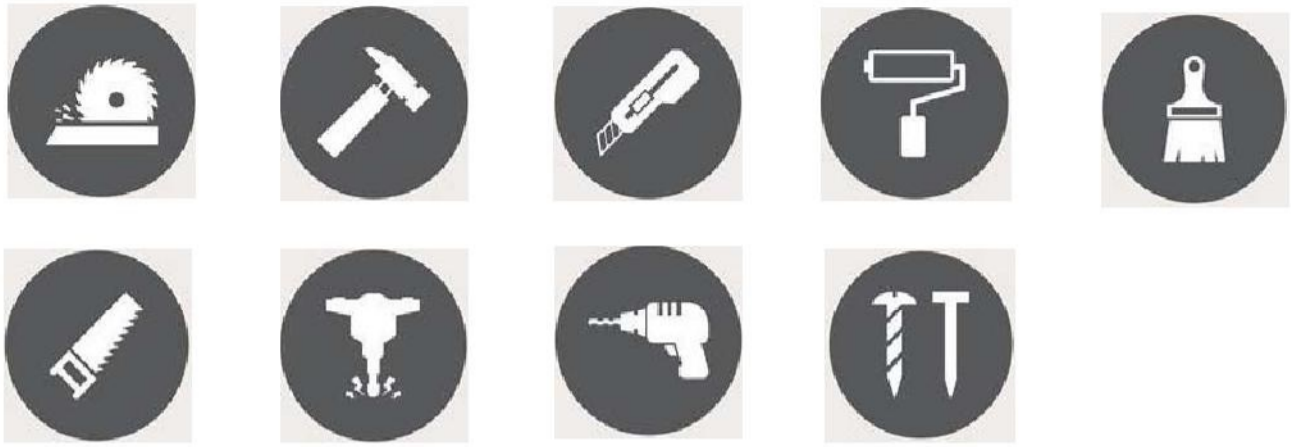
3. What is it behaviour in fire?

PVC is a flame-retardant thermoplastic, it extinguishes itself after the source of the flame has been removed.
In accordance to DIN 4102, our product can be classified as flame-retardant material group B1.

4. Can we laminate other materials on the PVC Foam sheet? How to laminate?

Yes, it's easy to laminate other materials on the PVC Foam sheet, such as PVC film, acrylic, HPL, etc.
Special glue and cold pressure is engouh for the laminating.

YOU CAN PERFORM



PVC Co-extruded Foam sheet

Comparing with PVC Celuka Foam sheet, PVC Co-extruded has smoother and shinier surface, and its hardness is better than Celuka, which is benfitial for some application that needs very very hard and shiny surface, such as table top, interior decoration for boat & ship, vehicle and train.

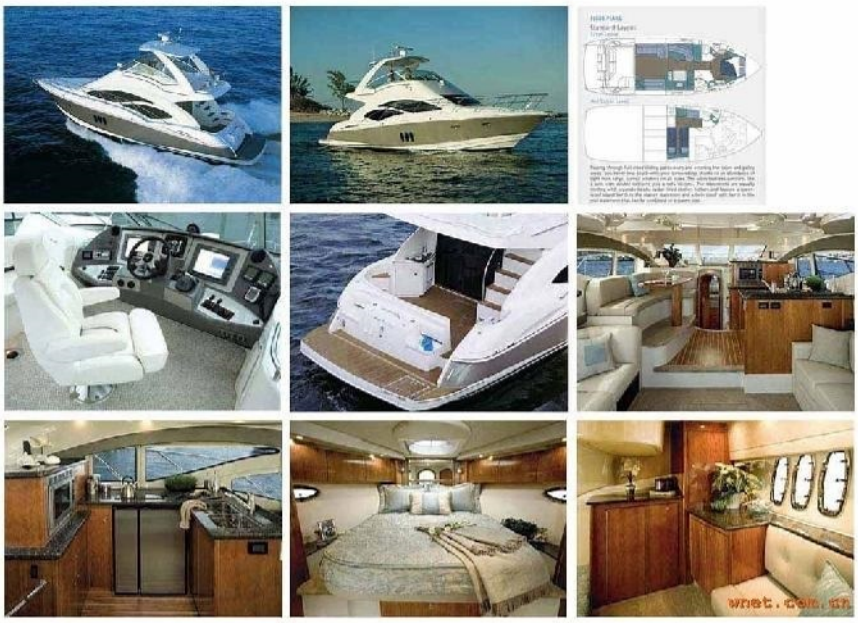
PRODUCT RANGE

Length	2440mm, 3050mm, 3600mm, 4800mm, 5490mm, length can be customized
Width	1220mm,
Thickness	3-25mm,
Density	0.45-0.9g/cm3,
Finished	Smooth and shiny
Avaiable colors	White and colors

Note: The tolerance of the PVC Free Foam sheet is the same as PVC Foam sheet.

APPLICATION

1. Interior scale board for Yacht & Cruise ship, vehicle, train



Because of the light-weight, Water-proof property and good surface hardness, PVC Co-extruded foam sheet is popular using as the interior decroation for Yacht, Cruise ship, vehicle and train.

2. Funiture, cabinet,table top

TIPS:

What make PVC Foam Sheet so popular nowadays? Why it is better than plywood and MDF?

Libero Smartwood Board	Plywood or MDF
	
Waterproof, perfect material in moisture environment	Bending and deforming in moisture environment
Resistant to weathering, rotting, shock and abrasion	Easy to get rot and abrasion
Odourless, no formaldehyde or any harmful material release	It contains formaldehyde and other smelly odour
Smooth and glossy surface make it easy to paint and printing	It needs to do the bottom painting
It can be thermoformable in certain temperature	No thermoformable
Versatility, long-term cost-effectiveness	Short service life

What is the different between PVC Celuka and PVC Co-extruded? Which kind should I choose?

1. Hardness & Stiffness: Under the same thickness and thickness, the hardness of co-extruded is better than Celuka

2. Nail Holding Strength: Under the same condition is Almost the same

3. Surface: Co-extruded is more shiny and glossy than Celuka

4. Price: Depend on the formulation

Conclusion: if you are looking for the material resistance of scratch and with more shiny surface, PVC Co-extruded will be your best choice.

PACKING & LOADING

There are three kinds of packing way, the loading quantity are different.

	Packing	Loading
Advantage: Loading with the most quantity and the least packing cost **Disadvantage:** Need manpower to do the loading and unloading		
Advantage: Loading with more quantity compare with Pallet pacing. **Disadvantage:** Need manpower to do the loading and unloading		
Advantage: The goods could be well protected, and it does not need manpower to load or unload it. **Disadvantage:** The cost is higher, and it could not load as much as other packings.		

PRODUCTION & WAREHOUSE

MECHANICAL FEATURES

PROPERTY	TEST METHOD (ASTM D)	CONDITION	VALUE (Based on 15mm)	UNIT
Tensile Strength at Yield	ASTM D 638	Specimen: Type I Speed: 10mm/min	10MPa	1,450psi
Elongation at Break		Specimen: Type I Speed: 10mm/min	10	%
Tensile Modulus		Specimen: Type V Speed: 1mm/min	700	Mpa
Flexural Strength	ASTM D 790	27mm×12.91mm×3.77mm Speed: 1.6mm/min Span: 59mm	12.6MPa	1,827psi
Flexural Modulus			460MPa	66,700psi
Impact Strenght	ASTM D6110-06	With:6.65mm;Depth:12.86mm Heating rate:120℃/h Load:0.455Mpa	15	J/m
Charpy Impact Strenght	ASTM D256		27.7	KJ/M2

PHYSICAL FEATURES

PROPERTY	TEST METHOD (ASTM D)	CONDITION	VALUE (Based on 15mm)	UNIT
Specific Gravity	ASTM D 792		0.6	g/cm3
Water Absorption	ASTM D 570	76.2mm×25.4mm Drying: 50℃，24hrs; Immersion: 25℃，24hrs	0.37	%
Shore D Hardness	ASTM D 2240	Type D	74	D

THERMAL FEATURES

PROPERTY	TEST METHOD (ASTM D)	CONDITION	VALUE (Based on 15mm)	UNIT
Heat Deflection Temperature	ASTM D648-07 Method B	Width:6.65mm; Depth:13.07mm Heating rate:120℃/h; Load:1.82MPa	61.4	℃
		Width:6.65mm; Depth:12.86mm Heating rate:120℃/h; Load:0.455MPa	70.9	℃
Heat Distortion Temperature (under load at 264 psi)	ASTM D 648		120	℃
Coefficient of linear Expansion	ASTM D 696		2.9×10^{-5}	in/in/℉
Thermal Conductivity	ASTM D 177		0.06	W/m℃K

Note: The above test results are based on the 15mm PVC Foam Sheet in 0.6g/cm3.