



ISO 14001 登錄證書  
編號：6X0E003-00號



ISO 9002 登錄證書  
編號：6X0Y001-03號



# 南亞硬殼發泡板

## NAN YA INTEGRAL SKIN-FOAM SHEETS



南亞塑膠工業股份有限公司  
NAN YA PLASTICS CORPORATION

# 南亞硬殼發泡板 NAN YA INTEGRAL SKIN-FOAM SHEETS

PVC為研究與發展歷史皆十分悠久的合成材質，並且能在各項應用中使用而不受限制，多年來南亞致力發展這些材質，特別是從硬質PVC來製造高品質的板材。近年來，南亞已製造 "Integral Skin-foam Sheets—舒美硬殼發泡板"，是根據內漲法發泡之原理，由硬質PVC製造的發泡板，其特性為多用途之應用，且實際應用經驗已證明其品質之優異。

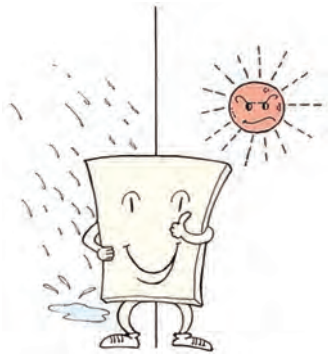
本公司硬殼發泡板符合歐盟RoHS規範，不含鉛、汞、鎘、六價鉻、多溴聯苯(PBDE)等6種有害物質，客戶可以安心使用。

PVC is one of the oldest and most developed synthetic materials, suitable for an almost unlimited variety of applications. For many years, Nan Ya Plastics Corp. have dedicated themselves to developing these materials, in particular to manufacturing high-quality profiles and sheeting from rigid PVC.

For a few years now, Nan Ya have offered a PVC foam sheet called Integral Skin-foam sheets. The sheets is an integral skin-foam sheet made of rigid PVC according to the Integral foaming. Its positive characteristics make a multitude of applications possible. Practical experience has proven its quality.

Nan Ya Integral Skin-foam Sheets meet the requirements of the RoHS that is containing less than agreed levels of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants.

## ◆ 特性說明 / ADVANTAGES



- 耐候性佳，不易褪色
- 低吸水性
- Weather-proof, fast color
- Low absorption of water, no rot.



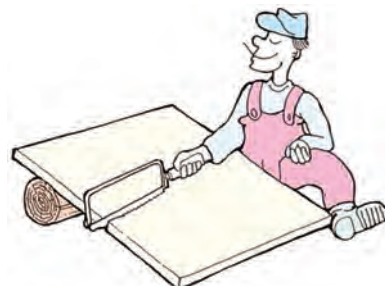
- 低比重
- 質輕

- 表面具有堅硬皮層（達2mm厚）
- 細緻的發泡結構
- Low specific gravity
- Low weight
- Firm, smooth outer skin of up to 2mm thickness
- extremely fine-celled foam structure



- 自熄性（適合美國UL94V-0規格）
- 安全性高
- Self-fire extinguishing
- High safety

- 施工容易
- 可適用於傳統加工
- Particularly easy workability
- Good for conventional re-processing



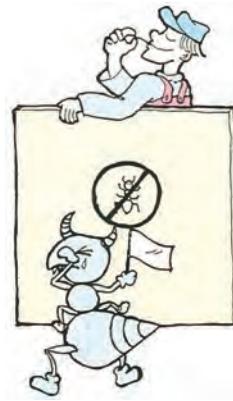


◆ 特性說明 / ADVANTAGES



- 平滑堅固
- 表面具珠光效果
- 印刷容易
- 可轉印，貼合加工
- Smooth and sturdy
- Surface with silk gloss finish
- Ideal for printing
- Good for duplicate printing, pasting, or reprocessing

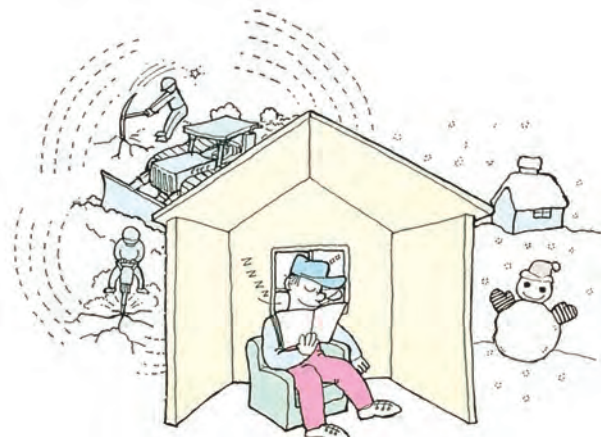
- 防蟲
- 抗白蟻
- Anti-insects
- Termite resistant



- 抗化學性
- 抗腐蝕性
- Resistant to chemical substances
- non-corroding



- 低導熱性
- 隔音
- 高絕緣性
- Low thermal conductivity
- Sound proof
- High insulation resistance

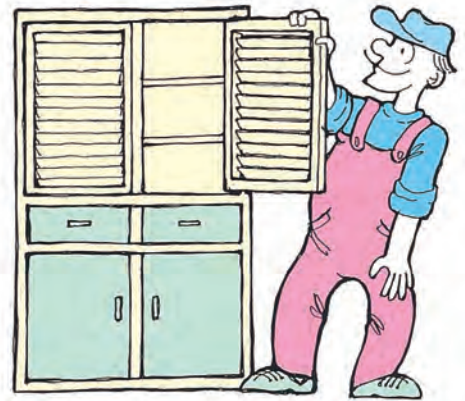


● 傢俱類

- 組合櫃
- 桌、椅、傢俱
- 流理台
- 浴廁搗擺、置物櫃
- 戶外休閒桌、椅

● Furniture:

- Assembly cabinet
- Desk, Chair, Furniture
- Kitchen stand next to the sink
- Door Panel of bathroom, bathroom cabinet.
- Outdoor leisure table, chair, etc.



· 辦公傢俱 Office furniture



· 流理台 Kitchen stand next to the sink



· 組合櫥櫃 Assembly cabinet

● 廣告類

- 廣告招牌
- 展覽會場
- 店面櫥窗裝潢
- 電腦割字

● Advertisement:

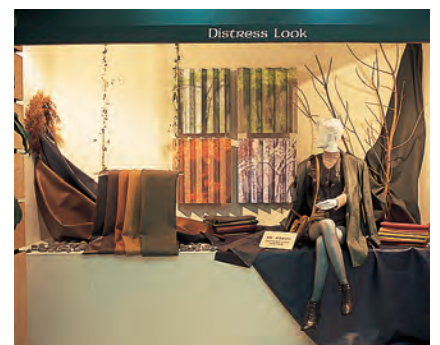
- Bulletin board
- Fair ground
- Store show window decoration
- Computer lettering



· 電腦割字 Computer lettering



· 廣告招牌 Bulletin board



· 櫥窗裝潢 Store show window decoration



● 建築裝潢類

- 浴廁隔間搗擺
- 內部裝潢
- 花台、花架
- 輕型隔間、小木屋

● Construction decoration:

- Door panel of bathroom.
- Interior decoration
- Flower stand, flower shelve
- Cabin, Convenient Partition



· 浴廁搗擺 Door panel of bathroom



· 系統櫥櫃 System cabinet



· 小木屋外牆 Convenient partition

● 其他類

- 實驗桌
- 車體底板
- 漁筏船屋及冰櫃
- 電纜、電線槽
- 工業性製品

● Otehrs

- Laboratory desk
- Automobile floor
- Boat, icebox
- Cable/wire tank
- Products of industrial nature



· 實驗室 Laboratory desk



· 車體底板 Automobile floor  
(符合ARTC規範)



· 車體外殼 Container

◆物性表／PROPERTIES

類別 Kind	項目Item	方法Method	單位Unit	試驗值Value			
				傢俱用 For furniture	傢俱用 For furniture	車體底板 For automobile floor	
機械 Mechanical	厚度 Thickness	--	mm	10~15	18~30	10~30	
	密度 Density	ASTM D792	g/cm <sup>3</sup>	0.55±0.03	0.50±0.03	0.60±0.03	
	拉力強度 Tensile strength	縱向	ASTM D638	kg/cm <sup>2</sup>	110	110	100
		橫向			80	80	70
	彎曲強度 Flexural strength	縱向	ASTM D790	kg/cm <sup>2</sup>	240	240	260
		橫向			180	180	200
	壓縮強度 Compressive strength	ASTMD695	kg/cm <sup>2</sup>	100	100	110	
	30%時之壓縮強度 Compressive stress for a compressive strain of 30%	ASTM D695	kg/cm <sup>2</sup>	180	180	190	
	拉伸時之彈性係數 Modulus of elasticity	ASTM D638	kg/cm <sup>2</sup>	10000	10000	9000	
	硬度 Hardness	ASTM D676	SHORE D	65	65	68	
耐衝擊強度 Impact strength (+20°C)	ASTM D256	kg.cm/cm <sup>2</sup>	1.5	1.5			
熱 Thermal	針入度	ASTM D1525		73	73	74	
	熱膨脹係數 (從-30°C到50°C) Coefficient of linear thermal expansion (from -30°C to +50°C)	ASTM D696	mm/m°C	0.08	0.08	0.07	
	熱變形溫度 Heating deflection temperature	ASTM D648	°C	55	55	56	
	熱傳導係數 Thermal conductivity (from 0°C + 60°C)	DIN 52616	w/mk	0.03~0.05	0.05~0.07	0.05~0.07	
	熱傳導率 Rate of heat transfer	DIN 52616	w/(m <sup>2</sup> k)	2.0~3.0	1.2~1.8	1.2~1.8	
電學 Electrical	體積固有抵抗 Volume resistivity	ASTM D257	Ω.cm	4.0×10 <sup>15</sup>	2.0×10 <sup>14</sup>	2.0×10 <sup>14</sup>	
	表面電阻抵抗 Surface resistance	ASTM D257	Ω	3.7×10 <sup>15</sup>	9.3×10 <sup>14</sup>	9.3×10 <sup>14</sup>	
	絕緣破壞程度 Dielectric strength	JI 6911	kv/cm	48	48	48	
其他 Others	隔音係數(Rw)	DIN 52210/84	dB	30	35	35	
	七天後之吸水率 Water absorption after 7 days	ASTM D570	%	0.2	0.2	0.2	
	耐燃性 Fire behaviour	UL-94	--	V-0	V-0	V-0	
CNS-7614		--	防燬1級	防燬1級	防燬1級		

## ◆耐化學藥品性 / CHEMICAL RESISTANT

藥品名稱 Name of Chemical	溫度 Temperature (°C)		
	20	40	60
濃鹽酸 Concentrated Hydrochloric Acid	△	×	×
濃硫酸 Concentrated Sulfuric Acid	△	×	×
硫酸 Sulfuric Acid 30%	◎	◎	△
濃硝酸 Concentrated Nitric Acid	△	×	×
硝酸 Nitric Acid 40%	◎	◎	△
蟻酸 Formic Acid 100%	△	×	×
乳酸 Lactic Acid	◎	△	×
苛性鈉 Caustic Soda 40%	◎	◎	◎
氨水 Ammonia Water	◎	◎	△
二硫化鈉 Sodium Disulfide	△	×	×
丙酮 Acetone	×	×	×
乙醇 Ethyl Alcohol	◎	◎	△
丁醇 Butyl Alcohol	◎	◎	△
甲苯 Toluene	×	×	×
福馬林 Formalin	◎	◎	△
二硫化碳 Carbon Disulfide	×	×	×
四氯化碳 Carbon Tetrachloride	△	×	×
醋酸 Acetic Acid 90%	△	×	×
香蕉水 Butyl Acetate	×	×	×
汽油 Gasoline	◎	◎	△
甘油 Glycerine	◎	◎	◎
噴漆溶劑 Solution of spraying paints	×	×	×
氯氣(乾性) Chlorine (Gas, dried) 100%	×	×	×
漂白液 Bleaching Solution	◎	△	×
海水鹽水 Sea water, Salt water	◎	◎	◎
澱粉(醣)溶液 Starch (carbohydrate) Solution	◎	◎	◎
釀造用水 Brewing water	◎	◎	◎

◎表安全適用(不變色、變形)，△表尚可使用(稍變色但不變形)，×表不可使用(有變色及變形)。

◎ Denotes safety applicable; △ Denotes applicable; × Denotes inapplicable

## ◆規格表 / SPECIFICATIONS

項目 Item	訂製品規格 / Ordered Products	固定製品規格 / Regular Products	
	傢俱用 / 車體底板用 For Furniture / For Automobile Floor	傢俱用 For Furniture	車體底板用 For Automobile Floor
規格 Size (L×W) mm	1220×2440	1220×2440	1220×2440
板厚 Thickness (H) mm	10, 12, 15, 18, 20, 24, 30	10, 12, 15, 18, 20, 24, 30	15, 18, 20,
色水 Color	017 019 021 089 110 300 410 530 810 B10	019	019

◆除固定色水外，可依雙方議定調配。

Colors of finished product can be adjusted by customer requirement.

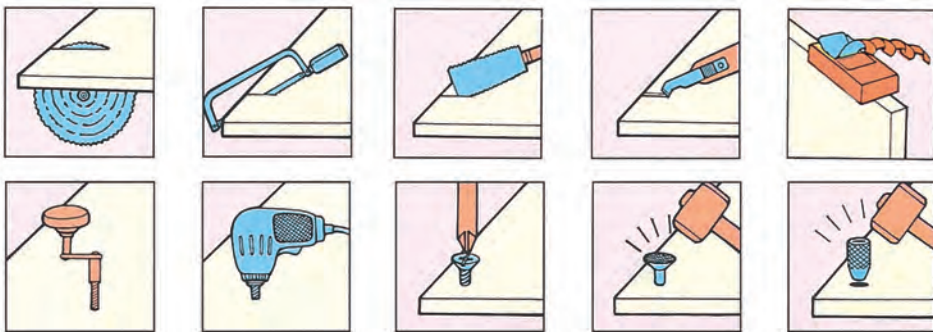
◆成品長度可依客我雙方議定作調整。

Size of finished product can be adjusted by customer requirement.



## ◆ 施工性及注意事項/HOW TO USE AND CAUTION

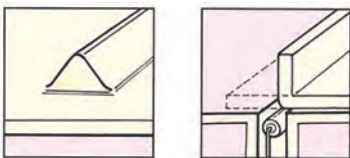
### ● 加工性 / Re-processing



- 舒美發泡板可迅速且容易地由一般工具或木材與金屬加工之機械加工。
- NAN YA Integral Skin-foam sheets can be easily and readily reprocessed by ordinary tools or materials with metally processed machinery.

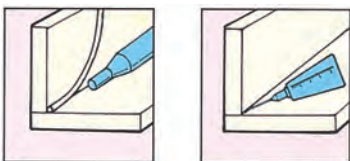


### ● 成型性 / Forming



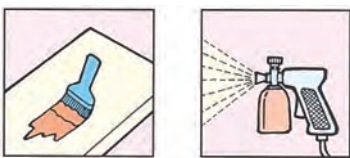
- 舒美發泡板可適用於深淺不同程度之真空成型及熱成型，且可加熱彎曲及折疊加工。
- NAN YA Integral Skin-foam sheets can be used in vacuum forming and deep-drawing up to a certain extent. The sheets can also be heated to turn curvy or folding.

### ● 印刷性 / Printing



- 舒美發泡板可根據一般焊接程序焊接，亦可與其他發泡板或不同硬質PVC材質黏接。
- NAN YA Integral Skin-foam sheets can be welded easily with ordinary welding process. The sheets can also be joined with other NAN YA Integral Skin-foam sheets or other PVC board of different hardness.

### ● 接合性 / Bonding & Welding



- 因其表面光滑平整，能容易的接受印刷，印刷前須擦拭乾淨使其表面不含油脂。
- Printing is easy on NAN YA Integral Skin-foam sheets because the surface of the sheets is smooth and even. Before printing, just wipe the sheet clean and be sure there is no grease left on the sheet.

### ● 注意事項 / Caution



- 舒美發泡板為熱塑PVC塑膠製成，因此各種長度及規格比木材與金屬材料要多，但應用於戶外用途，如廣告用板、門扇等，其板子之熱膨脹係數通常必須列入考慮，以防其熱脹冷縮，適當之安裝方式根據應用的形式而有所不同。
- NAN YA sheets are made of thermoplastic PVC and, therefore, vary more in length than e.g. timber or metal working materials (please note the coefficient of linear thermal expansion).  
When installing the sheets outdoors in e.g. screen-printed advertising boards, door boards . . . etc., a possible expansion of the sheets has always to be taken into account.  
The appropriate fixing method depends on the type of application.



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