



華夏高彈性防水膜

FLEXIBLE PVC MEMBRANE



台聚關係企業

華夏海灣塑膠股份有限公司
China General Plastics Corporation



華夏海灣塑膠股份有限公司，為台聚集團旗下十家子公司之一，向來以正派經營著稱，經轉化中國人「外圓內方」-「待人圓融、處世方正」的生活哲學概念，孕育出「誠信、關懷、紀律、創新」的經營理念，和「追求合理化、實事求是、精益求精、誠信明理、以和為貴、尊重與關懷」的企業文化特質。

- ▶ 誠信 - 誠實正直、說到做到
- ▶ 關懷 - 包容尊重、關懷和諧
- ▶ 紀律 - 積極負責、團隊守紀
- ▶ 創新 - 求新求變、追求卓越

CGPC is one of ten sister company of USI Group, which has been known for being upright in our business operation. We draw from the living philosophy of the Chinese“Round outside and square inside” which means “Harmonious with people and proper in business dealings” and develop our own business philosophy of “Sincerity, Concern, Discipline, Innovation ”and our corporate culture of “Being Rational, Practical, Constantly Improving, Sincere, Congenial, Respectful and Caring”

- ▶ Sincerity - Honesty and Integrity 、 Keep Promises
- ▶ Concern - Generosity and Respect 、 Care and Consistency
- ▶ Discipline - Proaction and Responsibility 、 Compliance Team
- ▶ Innovation - Change and Creation 、 Stirving for Excellence

特性：

PVC應用在防水膜材料的優異效果為全世界所公認的事實。在美國1988年度中以PVC為材料彈性防水膜就佔有40%的市場，該佔有率遠大於各類材質產品的襯裡材料。PVC防水膜是價格低廉又具多功能的聚合物產品，所以經常被指定使用在需要堅固、抗磨、抗化學性的地方。

◆ 耐候性

CGPC PVC MEMBRANES具有抗紫外線輻射耐天候、潮濕的功能適合於外露及埋藏型施工。

◆ 耐高溫

任何PVC防水膜在高溫時會軟化，因為PVC防水膜是熱塑性的，但CGPC PVC MEMBRANES即使在70°C高溫和低應力狀況下，其使用壽命亦可達到預期之年限。



Features :

The importance of PVC amongst membrane materials is illustrated by its worldwide acceptance as the workhorse material. In the United States, PVC enjoyed 40% of the flexible membrane market in 1988 against competition from a variety of lining materials. Due to the polymers' versatility and competition cost, PVC membranes are specified and used in a variety of applications where toughness, abrasion resistance, chemical resistance and conformability are required.

◆ Weathering resistance

CGPC flexible membranes contain varying levels of U.V. radiation resistance, weathering resistance, damp resistance and temperature differential resistance, divided into exposed buried applications.

◆ High temperature resistance

PVC membranes will be soften at elevated temperature because PVC is a thermoplastics material, but even at temperatures up to 70°C, CGPC Duraflex can perform for long period under low stress conditions.



特性：

◆ 抗化學性

CGPC PVC MEMBRANES對抵抗流體的能力較大，更重要的一點是特別適合抗化學性能：

(i) 抗酸、鹼

稀酸、鹼在室溫下影響極微，但在高溫後會導致可塑劑的水解和萃取。濃酸、鹼在低溫情況下，可塑劑會慢慢水解，但加熱後其水解作用會加速。

(ii) 抗有機物

一般有機體和PVC的接觸作用會導致可塑劑被萃取，即硬化現象，但 CGPC PVC MEMBRANES僅會較不具彈性而已。

◆ 良好的三度空間延伸

CGPC PVC MEMBRANES有明顯的三度空間延伸（三軸變形），所以防水膜系列，更具抗撕裂性及穿透性。

◆ 彈性特強

CGPC PVC MEMBRANES具有多孔的分子結構，使它具有良好的彈性，使其較能適應更大的鋪裝環境。

◆ 施工簡易、降低成本

本系列防水膜的規格齊全可依客戶所需的尺寸長度、顏色生產減少不必要的損耗，所以現場施工快速，可降低成本的開銷。



Features：

◆ Chemical resistance

The general resistance of CGPC flexible membranes to a wide range of liquids makes them particularly suitable for membrane application where chemical resistance is of primary importance.

(i) Acids and alkalis

Dilute acids and alkalis have little effect at room temperature but at elevated temperatures some hydrolysis and extraction of plasticiser may occur.

(ii) Organic liquids

The main effect of organic liquids is to extract the plasticiser and this results in some hardening but most organic liquids will make CGPC flexible membranes less flexible only.

◆ Superior 3-Dimensional elongation

CGPC flexible membranes demonstrate significantly superior 3-dimensional Elongation (triaxial deformation). This makes them more resistant to puncture and impact damage.

◆ Good flexibility

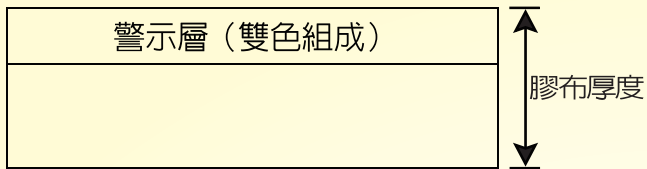
CGPC flexible membranes have an amorphous molecular structure which gives them inherent flexibility. They have a modulus of elasticity and no yield point.

◆ Quick, low cost installation

CGPC flexible membranes can be manufactured in various formulations, thicknesses, lengths and colors to meet individual customer's requirements. This results in reduced jobsite installed wastage and quick, low cost installation.



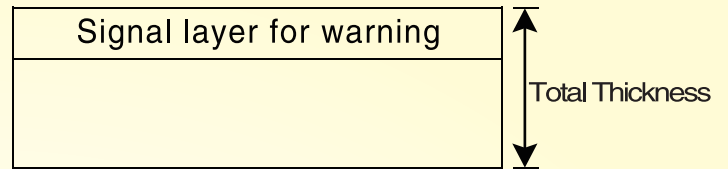
產品規格：



厚度	1.2 mm - 3 mm
寬度	81 cm - 180 cm

註：特殊規格可依客戶需求議定。

Specification :



Thickness	1.2 mm - 3 mm
Width	81 cm - 180 cm

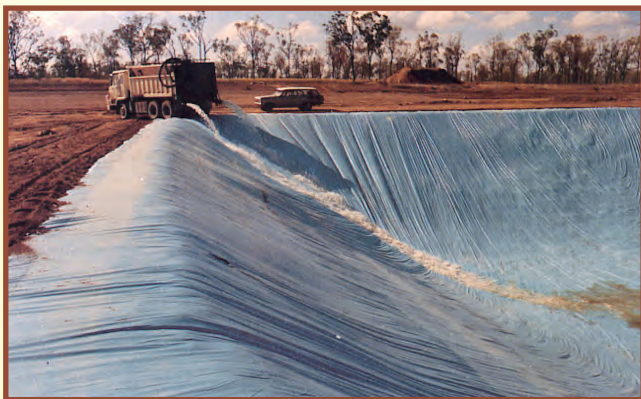
Remark: Specific specifications will be manufactured in conformance with customer's requirements.

產品用途：

- ◆ 隧道、地下道
- ◆ 捷運系統
- ◆ 人工蓄水湖
- ◆ 灌溉渠道
- ◆ 垃圾掩埋場

Applications :

- ◆ Tunnel and Underground Passage
- ◆ Mass Transit System
- ◆ Artificial Lake
- ◆ Irrigation Canal
- ◆ Garbage Burying Field



產品物性 Physical Properties

項目 Property		檢測方法 Test Method	單位 Unit	基準 Specified Value
1	厚度 Guage	ASTM D1593	mm	2
2	抗拉強度 Tensile Strength	ASTM D638	N/mm ²	≥ 14
3	延伸率 Elongation	ASTM D638	N	≥ 225
4	接縫強度 Welded Seam Strength	ASTM D638	N/mm ²	≥ 12.6
5	撕裂強度 (20%) Tearing Strength	ASTM D1004	N/mm ²	≥ 100
6	壓縮強度 Compressive Strength at 20% Strain	ASTM D695	N/mm ²	≥ 2.5
7	穿刺強度 Puncture Resistance	ASTM E154	N	小於 3500不穿刺
8	耐水壓 Hydrostatic Resistance	ASTM D751 Method A	10bar /100h	不漏水 no leakage
9	低溫耐折性 Flexibility	ASTM D146 ASTM F137	...	無裂縫 no fissures
10	老化試驗 Aging Test	烘箱 80°C/24小時 Oven 80°C/24 h		
	(a) 外觀 Appearance	目視 / Visual	...	無起泡 no blister
	(b) 尺寸變化 Dimensional Stability	微量尺量測 Micrometer	%	≤ 1
	(c) 抗拉強度變化率 Change of Tensile Strength	ASTM D638	%	≤ 5
	(d) 伸長量變化率 Change of Elongation	ASTM D638	%	≤ 10
(e) 低溫耐折性 Low Temperature Folding	ASTM F137 ASTM D146	...	-20°C 彎折180度無裂縫 bending 180° at -20°C no fissures	
11	耐水性 23±2°C14天 Behavior in Water 23±2°C 14days			
	(a) 抗拉強度變化率 Change of Tensile Strength	ASTM D638	%	≤ 10
	(b) 伸長量變化率 Change of Elongation	ASTM D618	%	≤ 10

產品物性 Physical Properties

	項目 Property	檢測方法 Standard	基準 Specified Value
1	厚度 Thickness	DIN 53370	2.0 mm
2	抗拉強度 Tensile Strength	DIN 53455	$\geq 15 \text{ N/mm}^2$
3	伸長率 Elongation at break	DIN 53455	$\geq 250\%$
4	壓縮強度 (20%) Compressive strength at 20% strain	DIN 53454	$\geq 2.5 \text{ N/mm}^2$
5	撕裂強度 Tear propagation strength	DIN 53363	$\geq 100 \text{ N/mm}$
6	水壓試驗 (10bar/10 h) Resistance under water pressure	DIN 16726	不漏水 No leakage
7	接縫強度 Tensile strength of welded seam	DIN 16726	$\geq 13.5 \text{ N/mm}^2$
8	尺度穩定性 Dimensional stability(80°C/6 h)	DIN 16726	$\leq \pm 2\%$
9	吸水率 Water absorption(23°C/24 h)	DIN 53495	$\leq 1\%$
10	耐藥品性 Resistance against acid and alkaline solutions (23°C/90 days)	DIN 16726	$\leq \pm 2\%$
11	耐燃燒性 Behavior in fire	DIN 4102/1	不易燃燒 Low combustibility

華夏海灣塑膠股份有限公司
China General Plastics Corporation

Taiwan 台灣
Head Office 總公司：
12F, 37, Ji-Hu Rd., Nei-Hu Dist., 114700 114700 台北市內湖區基湖路37號12樓
Taipei 114700, Taiwan 電話：(02)2658-2158
Tel : 886-2-2658-2158 傳真：(02)2659-9514
Fax: 886-2-2659-9514

Toufen Plant 頭份廠：
571, Min-Tsu Rd. Toufen City, 台灣 351494 苗栗縣頭份市民族路571號
Miaoli County 351494, Taiwan 電話：(037)623-391
Tel : 886-37-623-391 傳真：(037)623-109
Fax: 886-37-613-326

報驗專用章用印處

