



**PVC防蝕襯裡**

**ANTI-CORROSION LINER**



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

## 前言

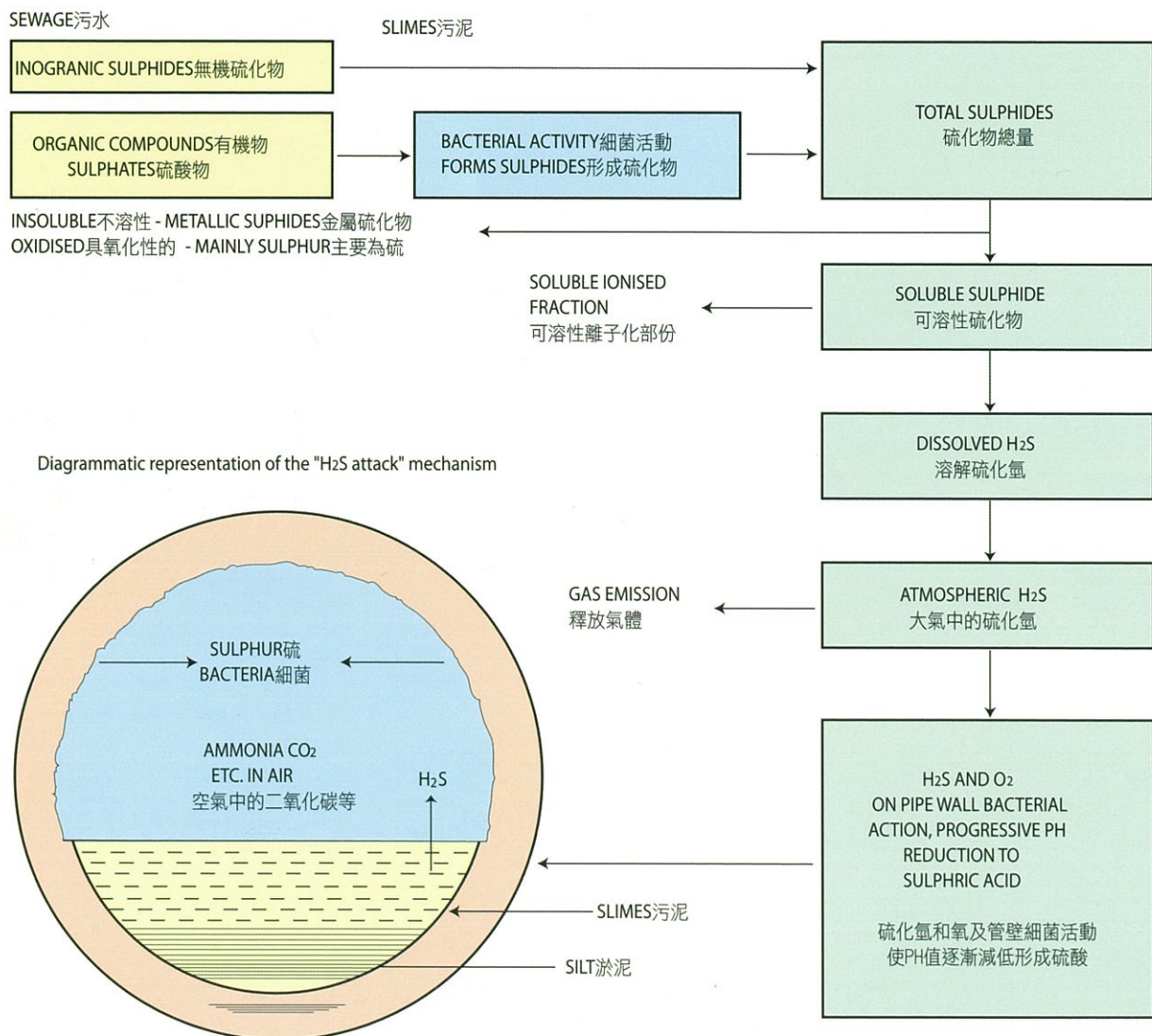
防蝕片是特別設計嵌入混凝土管、結構物以作保護面層。防蝕片之首要作用為防止污水產生之硫化氫( $H_2S$ )氣體經氧化後成為硫( $H_2SO_4$ )附著於水泥結構物而造成侵蝕，尤其當水泥結構物中鋼筋開始生鏽膨脹導致水泥結構物產生龜裂而崩塌。此外PVC防蝕片之耐酸、耐鹼特性更使之適用於污水、水處理、工業廢水、儲槽等之混凝土結構物，以確保結構物之使用年限。

華夏PVC防蝕片用於污水、廢水當襯裡，並且使用於地鐵基礎防水工程中，除台灣外，在世界多國如美國、澳洲、日本、香港、新加坡、馬來西亞、泰國、阿聯、沙烏地、土耳其、科威特、伊拉克等國已有多年之實績證明。

## Introduction

CGPC's Anti-Corrosion Liner is a plasticized PVC sheet with keys designed to be embedded in concrete pipes and structure as a surface protection. The most important function of this Anti-Corrosion Liner is to protect concrete from Hydrogen Sulphide( $H_2S$ ) attack. ( $H_2S$ ) evolved in sewer pipe results in sulphuric acid with the existence of air and humidity will corrode concrete surface and eventually spoiled steel reinforcement in concrete, and the structure may collapse finally. PVC with it's outstanding resistance to aggressive agencies, is suitable for applications to sewers, treatment plants, industrial waste line, storage tanks and thus prolong the lifespan of these concrete surface. CGPC's Anti-Corrosion Liner has been proven excellent to protect sewers and sewerage structures, and used in the subway foundation waterproofing works, with installations in Taiwan, Australia, Japan, Hong Kong, Singapore, Malaysia, Thailand, UAE, Saudi Arabia, Turkey and Iraq.

## 硫化氫侵蝕示意圖 $H_2S$ Attack Mechanism





品質規範/Data Sheet

項目 Articles		品質要求 Quality Request	檢測方式 Test Method	
縱向抗拉拔強度Mpa長(kgf/cm <sup>2</sup> ) Longitudinal Tensile Strength		23.5(240)以上 over 23.5(240)	CNS4396	
縱向伸長率% Longitudinal Elongation at break %		250以上 over 250	CNS4396	
硬度 Hardness HDD	1s	50~60	CNS12628	
	10s	35~50	CNS12628	
固定鍵拉拔強度N/cm長{kgf/cm長} Key pull-out test		176(18)以上 over 176(18)	CNS13872	
耐藥品性(註1) Chemical Resistance (Remark 1)	縱向拉拔強度Mpa(kgf/cm <sup>2</sup> ) Longitudinal Tensile Strength	23.5(240)以上 Over 23.5(240)		
	縱向伸長率% Longitudinal Elongation at break %	250以上 over 250		
	硬度變化 Hardness transformation (HDD)	1s	±5以內 Less than ±5	
		10s	±5以內 Less than ±5	
質量變化率 % Mass change %		±0.5以內 Less than ±0.5	CNS13872	

註1/Remark 1:  
耐藥品性使用下列7種試劑試驗  
There are 7 reagents will be used at chemical resistance test

- 20%(vol.)硫酸  
Sulphuric Acid 20%(vol.)
- 5%氫氧化鈉溶液  
Sodium Hydroxide 5 %
- 5%(vol.)氨水  
Aluminum Hydroxide 5 %
- 5%氯化鈉溶液  
Sodium Chloride 5%
- 1%(vol.)硝酸  
Nitric Acid 1%
- 1%氯化鐵溶液  
Ferric Chloride 1%
- 5%洗滌劑  
Soap Detergent 0.1%

Physical Properties

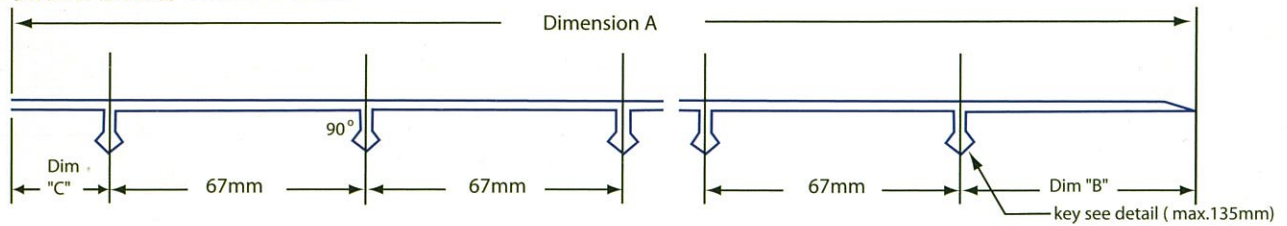
Physical Property	Test Method	Acceptable Limits
Tensile Strength (both longitudinal and Transverse to key)	A.S.T.M D.412	17.25 Mpa min
Elongation at Break (both longitudinal and Transverse to key)	A.S.T.M D.412	225% min
Hardness	Shore durometer D at 20°C	54 min – 62 max
Plasticiser Permanence (24 hours at 90°C on 50Mm diam.disc)	A.S.T.M D.1203-67 Method B	1.0% max.
Water Absorption at 24 hours(sample size 76mm x 25mm by Thickness of sheet)	A.S.T.M D.570	0.10% max.
Water Soluble matter At 24 hours	A.S.T.M D.570	0.05% max.
Tear Strength (both longitudinal and transverse to key)	A.S.T.M D.1004 (Grip Speed 8.5mm/s)	80N/mm minimum

Chemical Properties

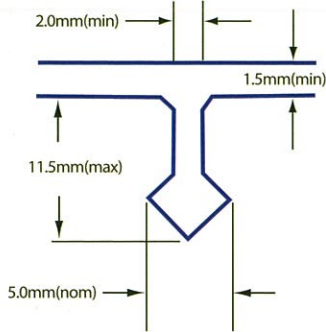
Chemical Agent	Maximum % change in Mass of Plastiline over 7 days at 20°C
Sodium Hypochlorite (1% as available chlorine)	0.20
Ferric Chloride 1%	0.60
Sodium Chloride 5%	0.15
Sulphuric Acid 20%	0.12
Nitric Acid 1%	0.20
Sodium Hydroxide 5%	0.20
Ammonium Hydroxide 5%	0.40
Soap, Detergent Solution 2%	0.40



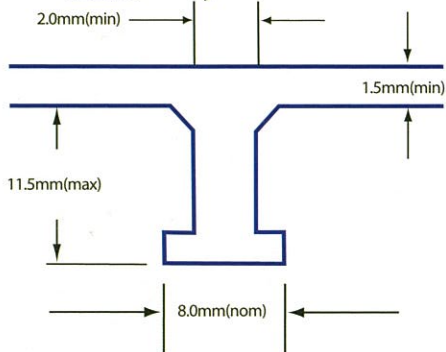
## 防蝕片規格 Sheet Details



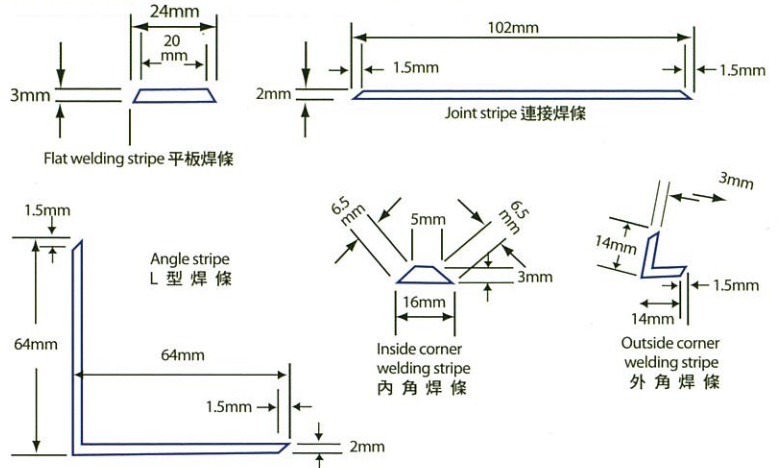
## 鑽石鍵 Diamond Key Liner



## T型鍵 T-Key Liner

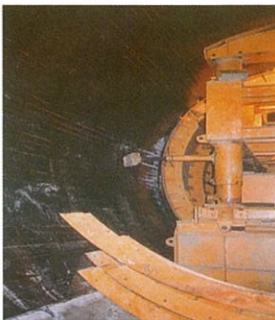


## 焊條規格 Standard Accessory Stripes



### 適用範圍/Applications :

1. 離心式灌漿水泥管襯裡/Lining of Span pipe
2. 垂直式灌漿水泥管襯裡/Lining of Vertical cast pipe
3. 現場灌漿水泥管襯裡/Lining of cast-in-place pipe
4. 人孔襯裡/Lining of manhole
5. 抽水站及水處理廠結構物襯裡/  
Lining of pumping stations and treatment plants
6. 地下室或地下結構物防水、防蝕/Basement linings
7. 化工廠儲槽襯裡/Chemical tanks lining



二次襯砌污水主幹管  
Secondary Lining of  
Sewer main truck pipe



污水處理池(建造中)  
Sewage treatment pond  
(under construction)



污水處理池  
Sewage treatment pond



曝氣池  
Exposure pond

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