



# 慶泰樹脂



國際田徑協會認證



國際網球協會認證



正字標記

ISO 14001

環境管理認證



國家鑒石業

ISO 9001

國際品質認證



台灣精品



國家品質獎

# CTU-3000

## 高性能聚脲噴塗材料

### High Performance Polyurea Spray Coating





## 高性能聚脲噴塗材料

聚脲系列產品為 100% 固成份之兩液型噴塗材料，是由芳香族二苯甲烷異氰酸鹽(MDI)與端胺基聚醚樹脂所構成。具高耐磨性、伸長率、抗拉強度優、以及接著力強等特性；可耐物體熱漲冷縮的變化，且同時具有抗酸鹼及耐化學品侵蝕的特性，硬化時間短，可於 10~100 秒內快速固化。

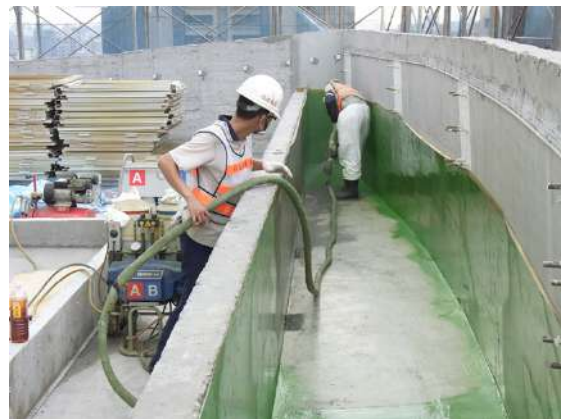
This product (CTU-3000) is a two-component, 100% solid high performance polyurea elastomer reacted aromatic MDI with amine-terminated polyether polyol. It cures in 10-100 seconds and has the high elongation, adhesion, and excellent abrasion as well as thermal expansion & contraction resistance. It also demonstrates acid, alkali and chemical resistance properties.

### ● 特性：Features

1. 物性強：Excellent physical properties  
高物理性能，高耐磨性、韌性強及彈性優。  
Excellent abrasion resistance, flexibility and elasticity.
2. 耐性廣：Excellent endurance  
耐水、耐化、耐熱、耐撞擊性優。  
Heat resistance, waterproof properties, chemical and impact resistance.
3. 防腐朽：Corrosion resistance  
防混凝土建物老化、防鋼構物腐蝕。  
Protect steels and concrete surfaces from corrosion.
4. 易施工：Easy application  
不受建物形式、氣溫影響，施工容易。  
No building restriction, wide range of working temperature.
5. 無公害：Environmentally friendly  
為 100% 固成份之無溶劑噴塗材料。  
100% solid, solvent-free spray coating material.

### ● 施工特點：Application Characteristics

1. 為環保及快速施工之新材料。  
Environmentally friendly and fast application.
2. 高固成份 99% 以上固含量。  
High solid content: 99% or above.
3. 10~100 秒內快速硬化。  
Fast curing: it cures in 10~100 seconds.
4. 不垂流、無接縫，可同時噴塗平面立面。  
Non-sagging and seamless, it can be applied to the flat and vertical surfaces at the same time.
5. 對素地底材接著能力強。  
Excellent adhesion to a wide range of substrates.
6. 固化效果不易受溫溼度影響，5 °C 低溫仍可硬化。  
Insensitive to temperature and humidity, it can be cured at the low temperature (minimum to 5°C).
7. 耐低溫耐高溫，可應用於 -40~120°C。  
Temperature resistance (from -40~120°C)



## 用途 : Usages

1. 建築物大底防潮、地下室外牆、屋面防水  
Waterproofing for buildings, external wall of basements and roofing.
2. 儲水槽體、游泳池防水  
Waterproofing for water tanks and swimming pools.
3. 建築物種植屋面及中庭阻根防水  
Waterproofing for courtyards.
4. PU 發泡之外表防護防水  
PU foam displays both waterproofing and protection functions.
5. 橋面橋墩橋柱防水防蝕防護  
Waterproofing and corrosion resistance for bridges.
6. 水壩水道水利設施等防水耐磨防護  
Waterproofing and abrasion resistance for dams.
7. 停車場、廠房耐磨地板  
Abrasion resistance for parking lots and factory flooring.
8. 體育場館看台與走道耐磨塗佈  
Abrasion resistance for stadium stands and aisles.
9. 鋼構物、鋼儲槽、鋼管防蝕防護  
Corrosion protection for steel structures, steel tanks and steel pipes.
10. 卡車車斗耐磨、防滑、防撞等防護塗佈  
Abrasion, slip, and impact resistance for truck buckets.
11. 油槽、化學槽之防蝕防護及二次防護  
Corrosion resistance and protection for chemical tanks.
12. 海岸海邊海面構造物防蝕防護  
Corrosion protection for offshore structures.

## 物理性質 : Physical properties

試驗項目 Testing items	試驗方法 Testing methods	CTU-3000 規格 Specifications
硬度 (Shore D) Hardness (Shore D)	ASTM D D2240	$\geq 40$
伸長率 (%) Elongation (%)	ASTM D D638	$\geq 300$
撕裂強度 (kgf/cm) Tear strength(kgf/ cm)	ASTM D D1004	$\geq 80$
抗拉強度 (kgf/ cm <sup>2</sup> ) Tensile strength(kgf/ cm <sup>2</sup> )	ASTM D D638	$\geq 190$
Taber 耐磨耗性 (CS-17 輪, 1000g/1000 轉) Taber abrasion (CS-17, 1000 cycles at 1000g loading)	ASTM D D4060	$\leq 0.05$
耐磨耗性 Abrasion resistance (g/H-18)	CNS6988	$\leq 0.4$
吸水率 (%) Water absorption (%)	ASTM D D570	$\leq 1.5$
比重 Specific Gravity		1.0±0.05





## 高性能聚脲噴塗材料

### 化學性質：Chemical properties

二甲苯 Xylene	優 Excellent	鹽酸 10% Hydrochloric acid-10 %	優 Excellent
氫氧化鈉 25% Sodium hydroxide-25 %	優 Excellent	醋酸 5% Acetic acid-5 %	優 Excellent
氫氧化鈉 50% Sodium hydroxide-50 %	佳 Good	氨水 10% Ammonia-10 %	優 Excellent
正己烷 Hexane	優 Excellent	機油 Motor oil	優 Excellent
硫酸 5% Sulfuric acid-5 %	優 Excellent	無鉛汽油 Unleaded gasoline	佳 Good
硫酸 10% Sulfuric acid-10 %	優 Excellent	鹽水 Salt water	優 Excellent
硝酸 50% Nitric acid-50 %	不耐 Poor	甲醇 Methanol alcohol	優 Excellent
柴油 Diesel oil	佳 Good		

### 包裝與儲存：Packaging and storage

規 格 Specification	A 劑-Isocyanate Component A	B 劑-Amine Polyol Component B
儲存溫度(°C) Storage temperature(°C)	16 ~ 32	16 ~ 32
儲存期限(月) Shelf life (months)	6	12
包 裝(Kg/T) Packaging(Kg/T)	220	200

### 使用方法：Usage method

規格 Specification	A 劑-Isocyanate Component A	B 劑-Amine Polyol Component B
黏 度(cps/25°C) Viscosity(cps/25°C)	300 ~ 400	600 ~ 800
比 重(25°C) Specific gravity(25°C)	1.12 ~ 1.15	1.00 ~ 1.02
混合比例(體積比) Mix ratio by volume	100 / A	100 / B
混合比例(重量比) Mix ratio by weight	110 / A	100 / B
膠化時間(25°C) Gel time (25°C)	10 seconds	
指觸時間(25°C) Tack free time (25°C)	12 seconds	
完全硬化(25°C) Full cure (25°C)	24 hrs	
原料溫度(°C) Application temperature(°C)	65 ~ 70	
噴塗壓力(kgf/cm <sup>2</sup> ) Application pressure(kgf/cm <sup>2</sup> )	140 ~ 176 (2000 ~ 2500psi)	

## 工程施工程序：Application procedures

### 1. 素地整理：Surface preparation

清潔、乾燥、堅實、平整

The surface should be clean, dry, firm and smooth.

### 2. 裂縫修補：Crack repair

EPOXY 樹脂砂漿(Epoxy resin mortar)、環氧樹脂修補材(Epoxy resin repair material)、單液 PU 填縫材(One-component polyurethane sealant material)、單液 PU 防水材(One-component polyurethane waterproofing material)

### 3. 界面底漆：Primer

MP-666、PR-522、PR-544、CX-322、HIPOXY-919

### 4. 聚脲噴塗：Application

塗佈量 2.1~2.5 kg/ m<sup>2</sup>，施工厚度可達 2mm

The coverage of 2.1~2.5 kg/ m<sup>2</sup> can achieve 2mm thickness.

註：易受氣候與環境影響，故風速太大或飄雨跡象發生時應立即停工。

Note: It depends on climate and environment. Do not apply when rain is imminent or when wind speed is too strong.

### 5. 面漆塗佈：Top coat

URE-007、優涼防熱漆 (UCOOL heat proofing material)、TC-991 系列 (TC-991 series)

## 注意事項：Limitation

1. 刷塗前須先確認被塗裝材質表面是否清潔與乾燥。

Make sure the surface should be clean and dry before application.

2. 實際操作上，1.3 kg 聚脲塗料可塗佈於面積 1 平方公尺。

(厚度：1mm)

The coverage of 1.3kg polyurea is 1 m<sup>2</sup>(based on 1mm thickness)





工程實例

Reference



施工前 / Before application

烏溪橋聚脲施工

新鋼構橋柱噴砂處理，噴塗防蝕防護聚脲。

Wuxi bridge polyurea spray coating system

Steel-structure bridges should be treated with sandblasting.



聚脲噴塗完成 / After application



橋墩橋柱鋼構防蝕防護工程  
Corrosion resistance polyurea spray coating for steel structure bridges



施工前 / Before application

化學儲存槽

舊油漆塗裝槽體噴砂除漆除鏽粗糙化，噴塗防腐蝕耐候聚脲 30 噸槽體 10 座。

Chemical tank

Old coating, dirt, dust and oil need to be removed by sandblasting before applying polyurea spray coating material.



聚脲噴塗完成 / After application



防腐蝕耐候聚脲噴塗  
Corrosion and weather resistance - Polyurea spray coating system.

## 科技廠房

科技廠房建築物大底防潮  
防水聚脲噴塗

## Technology plant

Polyurea spray coating for  
damp proofing and  
waterproofing of buildings.

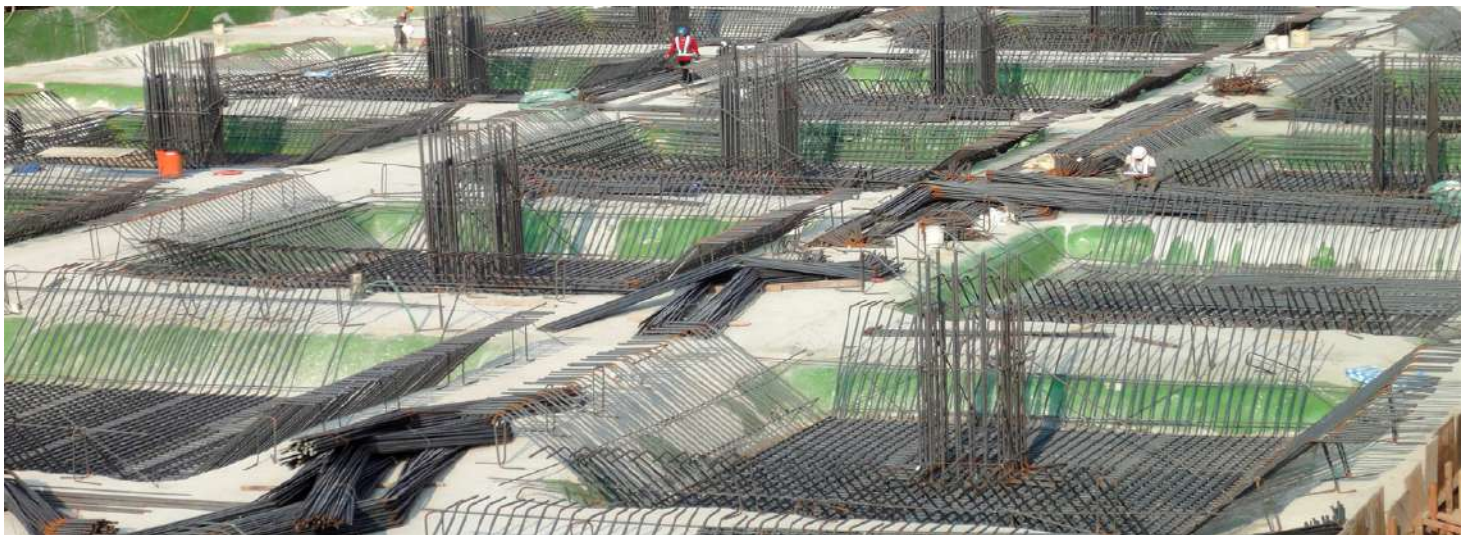


施工前 / Before application



建築物大底防潮防水聚脲噴塗

Polyurea spray coating for damp  
proofing and waterproofing of buildings.



聚脲噴塗噴塗完成 / After application



施工前 / Before application

## 舊廠房屋頂

20 年老舊廠房屋頂，表面老化泥灰磨除清除，噴塗聚脲防水、耐候、防熱塗佈

## Old factory roofs

Surfaces must be free from dirt and other forms of contaminant, and then apply the polyurea spray coating system on it to achieve the weather and waterproofing resistance.



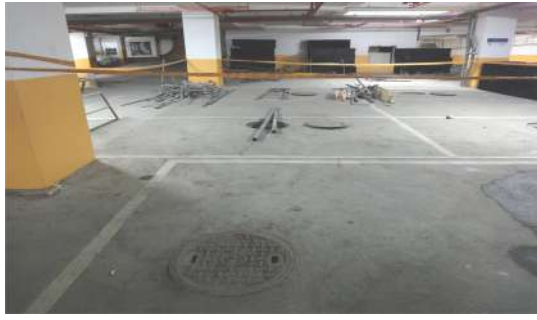
聚脲噴塗完成 / After application



屋頂防水防熱聚脲噴塗

Waterproofing and heat proofing  
polyurea spray coating for roofs.

工程實例  
Reference



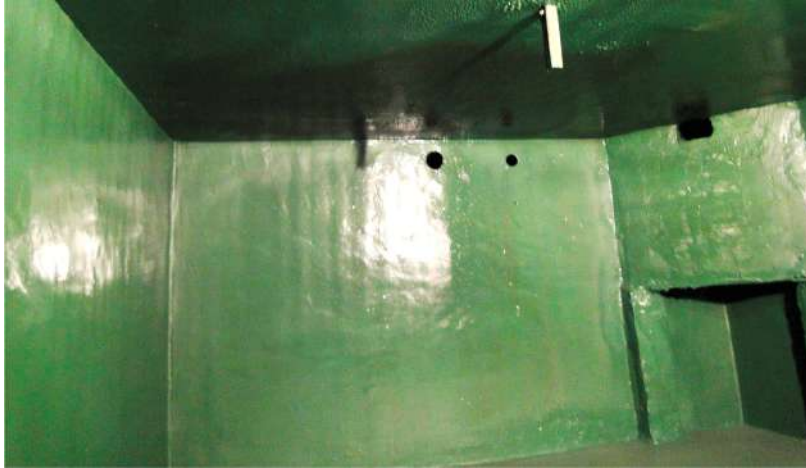
地下 2 樓停車場 / Basement parking lots.

### 地下污水槽

地下二樓停車場下方新建污水槽  
混凝土構造物噴塗防水防蝕聚脲

### Underground waste-water tank

Waterproofing and corrosion resistance  
polyurea spray coating for the  
underground waste-water tanks.



聚脲噴塗完成 / After application



施工前 / Before application

污水槽防水防蝕聚脲噴塗

Waterproofing and corrosion resistance  
polyurea spray coating for waste-water  
tanks.



### 工廠地坪

舊廠房地坪，表面原有 EPOXY 地面剷除整平，噴塗耐重壓  
耐磨聚脲地板

### Factory floor

Remove the original coating materials, and then apply  
with the compression and abrasion resistance polyurea  
spray flooring coating system.

施工前 / Before application



聚脲噴塗完成 / After application



耐重壓耐磨地板聚脲噴塗

Compression and abrasion resistance polyurea  
spray flooring coating system.

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