承鋒智慧股份有限公司

CHENG FENG CHIH HUI CO., LTD.



立體曲面加飾科技

3D SURFACE DECORATION TECHNOLOGY

公司簡介 | COMPANY PROFILE

承鋒智慧股份有限公司創立於 1988 年，我們關注於科技趨勢方向的發展，朝著3D曲面加飾技術前進。

專營：

印刷科技膠膜、3D曲面加飾技術相關設備的供應與技術教學轉移。

為了強化我們對客戶的服務以及提升產品品質標準，承鋒智慧通過ISO 9001：2015認證。

對於廠商的選擇嚴格把關，要求各配合廠商定期提供檢測報告以確保品質的穩定性，我們的產品亦皆由具有公信力的SGS檢測，通過Rohs & Reach認證，於客戶&員工操作上安全有保障，使環境能將汙染降至最低，進而為地球環保盡一份心力，同時達成永續經營之理念。

Supply:
Pattern design, the related equipment and materials of 3D decoration technology and the complete technology transfer.

To strength the customer service and quality assurance, Cheng Feng passed the ISO 9001: 2008 quality system certification.
Approval of test reports from all material suppliers on regular basis, we guard checkpoints seriously to ensure the consistent quality of each product.
Our products comply with ROHS & REACH regulations by SGS assessment.
It's not only to ensure safety for both of our customers and our employees but also to minimize pollution to achieve our concept of sustainable development.

3D DECORATION TECHNOLOGY
CHENG FENG - CHIH HUI CO., LTD.

公司分布 | BRANCH & LOCATION



赤壁湖北承鋒汽配

Chibi Hubei
Chengfeng Auto Parts

中國東莞分公司

China Branch
Dongguan, China

OMF技術全球發展基地
宏馳新材料(昆山)有限公司

OMF Global Tech Development Base
Kunshan, China

創立於1988年
總部設立於臺灣臺中市

Taiwan Headquarters
Taichung City, Taiwan

泰國曼谷分公司

Thailand Branch
Bangkok, Thailand

越南胡志明市分公司

Vietnam Branch
Ho Chi Minh City, Vietnam

3D DECORATION TECHNOLOGY
CHENG FENG - CHIH HUI CO., LTD.

全球業務 | BUSINESS WORLDWIDE



數千種紋路供客戶選擇
客戶遍及全球各地

Thousands of pattern
designs for selection.
Customers all over the world.

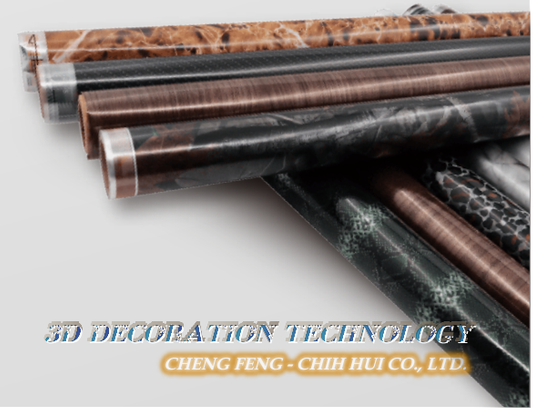
所有紋路應用於不同的薄膜技術(IMD、OMD、WTP)

根據客戶的需求，我們所有紋路皆可以應用在不同類型的薄膜上，例：IMD、OMD、WTP，以符合產品製程需求。

Pattern design available in all types of laminating sheet/film (IMD, OMD and WTP)

According to customers' needs, pattern designs can be printed onto different kinds of laminating films to meet different physical properties and processing requirements.





公司特色 | COMPANY ADVANTAGES

提供3D曲面加飾技術轉移、相關設備、原物料

生產製造各種科技膠膜（IMD、OMD、WTP）和製程中使用的接著劑、介面劑與活化劑，並協助客戶給予生產上所需的技術輔導，公司內部定期受訓上課，以確保每位工程師均能即時獲取最新的專業資訊。

Cheng Feng is able to supply customers with turnkey plant planning of 3D decoration, related processing equipment, and materials.

Not only produce film and supply related processing machines to customers all over the world, our scope includes after-sales support and training service to every customer dealing with technical issues during production.

公司特色 | COMPANY ADVANTAGES

千款紋路供選擇，創新引領新潮流

目前本公司已累計超過數千種的紋路可供客戶選擇，並定期持續開發新紋路，發表於官網站上，現有紋路包括了木紋、大理石紋、碳纖紋路、皮紋、幾何紋路及打獵市場常見的叢林迷彩...等多種特殊設計紋路；除了現有紋路外，針對不同市場需求，可客製化為產品設計合適紋路。

Thousands of patterns for selection. Keep innovating and lead the new trend.

Over thousands of patterns on different types of films including wooden, marble, carbon fiber, leather, geometry, and camouflage pattern ... the list doesn't stop here. We keep developing new designs and providing custom design services to meet every customer's need.

設計開發服務與流程 | PROCESS FOR NEW DESIGNED PATTERN



1 提出紋路設計概念或實際樣品

Propose the design concept or sample



2 與客戶討論/簽署合同

Discuss with customers & sign an agreement with customers



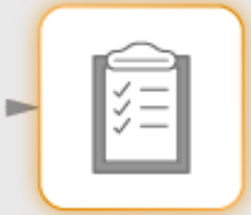
3 用專業軟體進行開發設計

Develop new patterns with the professional software



4 發出紋路紙稿

Issue the paper draft



5 客戶確認稿件

Draft confirmation from customers



6 雕刻版筒

Cylinder Engraving



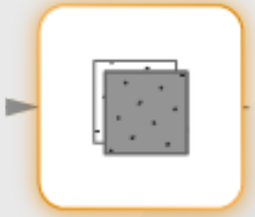
7 膠膜試產/樣膜試轉印

Films trial run and trial transfer printing



8 發送色版給客戶確認實際效果

Send customers the color panels to check the actual effect of the pattern



9 樣膜試樣

Trial run for 3D decora -tion to the workpiece



10 進入量產

Mass production

3D DECORATION TECHNOLOGY

CHENG FENG - CHIH HUI CO., LTD.

水轉印製程 | WTP PROCESS



1 工件上夾具
Fix the workpiece on the fixture



2 底漆及介面漆
Spray base coat and surface coat



3 油墨活化
Activate the ink



4 整膜
Level the film



5 轉印
Transfer printing



6 水洗(洗淨)
Water washing



7 烘乾
Drying



8 噴面漆
Spray top coat



9 烘乾
Drying



10 完成
Finished

3D DECORATION TECHNOLOGY
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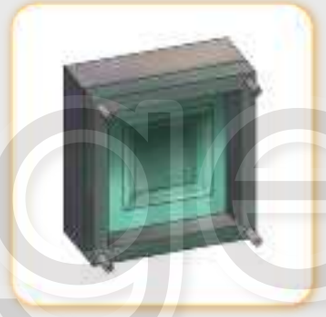
模內裝飾製程 | IMD PROCESS



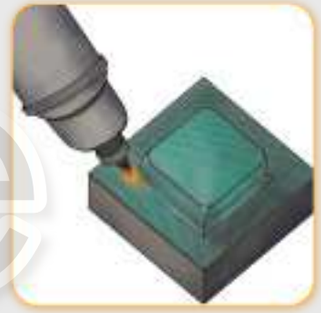
1 膜預熱
Film preheat



2 真空
Vacuum



3 真空成形
Vacuum forming



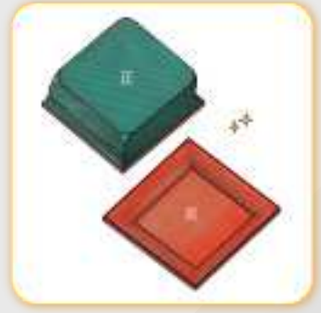
4 沖切成片材
Cutting



5 嵌入模具
Insert the film into the injection mold



6 合模注射
Inject resin into the mold



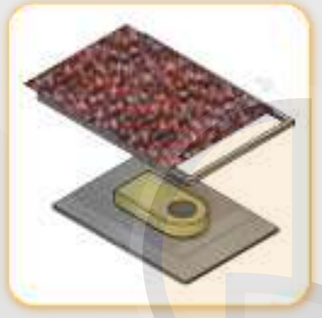
7 完成
Finished

3D DECORATION TECHNOLOGY
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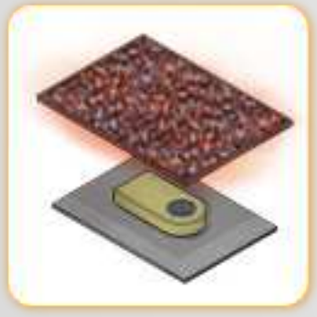
模外裝飾製程 | OMD PROCESS



1 工件放置治具
Fix the workpiece to the jig



2 放置膠膜固定
Film placement



3 膜預熱
Film preheat

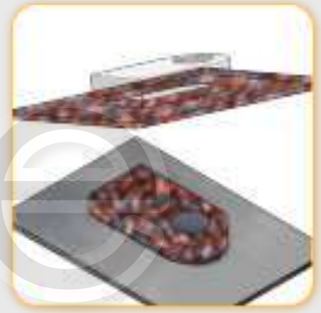


4 抽真空施加壓
Vacuum and exert pressure



5 真空高壓成型
Forming

OMR



6 撕膜+UV固化
Dystripping & UV curing

OMF

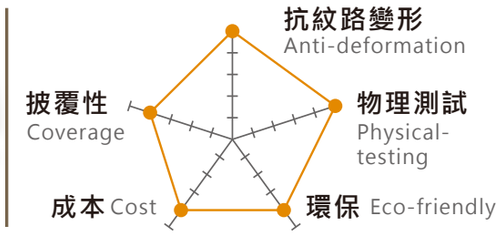
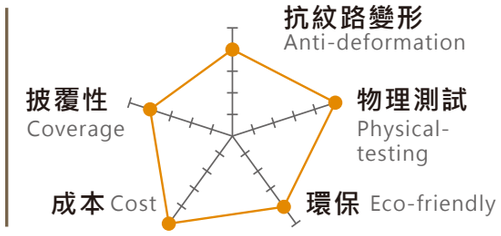
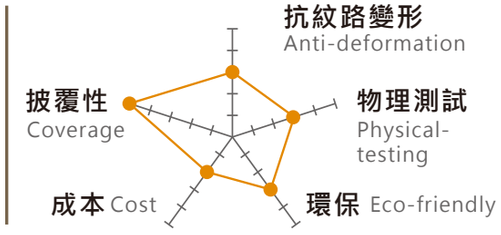


6 沖切
Trimming



7 完成
Finished

各種工藝比較 | COMPARISON OF EACH DECORATION TECHNOLOGY

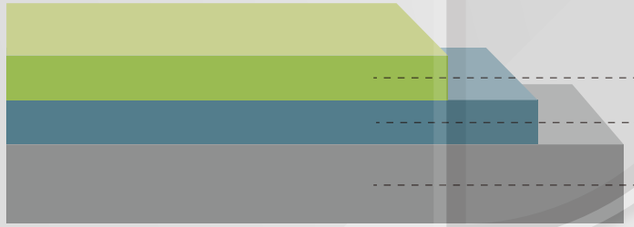
	特性 Property	應用 Application	雷達圖 Radar chart
IMD	精簡製程，提升物性，增加附加價值。 Streamline manufacturing processes, improve physical properties and increase added value.	• 塑膠類 Plastics	
OMF	運用在複雜的3D造型，實現包覆內部結構。 Apply to the complicated 3D object.	• 塑膠類 Plastics • 金屬類 Metal • 木質製品 Wooden products • 複合材料 Compound material	
WTP	水披覆轉印技術可將彩色圖紋披覆任何形狀之物件上。 The colorful pattern film can be applied to any shape of the products.	• 塑膠類 Plastics • 金屬類 Metal • 木質製品 Wooden products • 陶瓷、陶器 Ceramic and porcelain • 複合材料 Compound material	

INS工藝 | INS FILM

應用於模內注塑工藝，科技機能薄膜同時具有高延展的性能與一定強度的表面物性，對於耐熱、濕、化學都有一定的強度。常應用於汽車內裝飾產業、家電、3C產品等。

Applied in-mold injection molding processes, the functional technology film possesses high extensibility and a certain level of surface physical properties, providing strength against heat, humidity, and chemicals. It is commonly used in automotive interior decoration, home appliances, and 3C products.

產品架構 Product Structure



保護層 Protection Layer

油墨層 INK Layer

ABS 0.4mm~0.5mm

特性

吸塑&注塑前膜面無物性及耐化性，本產品屬於熱反應型，所有的表面物性及耐化性將在成型後有些微的提升，注塑後將達到完整的表面性能。膜片加熱成型時建議慢慢升溫(可讓膜片受熱均勻)，相較於快速升溫較容易產生表面氣泡或是表面外觀過熱的問題。

Properties

Before thermoforming and injection molding, the film surface lacks physical properties and chemical resistance. This product is thermosetting, and all surface properties and chemical resistance will slightly improve after molding. Complete surface performance will be achieved after injection molding. When heating the film for thermoforming, it is recommended to increase the temperature gradually to ensure uniform heating of the film. Compared to rapid heating, this method is less likely to cause surface bubbles or overheating issues.

使用方式

熱塑型溫度約在100℃~140℃
模具建議溫度約40℃~60℃

Instruction

Temperature for heating and forming within 100℃~140℃
Temperature for forming mold within 40℃~60℃

建議儲存條件

保持乾燥，建議保存條件
溫度23±2℃、濕度50%±10%RH

Recommended storage conditions

Keep in dry environment,
Temperature 23±2℃、Humidity50%±10%RH

物性試驗 (注塑後測試) Physical Property (End Product)

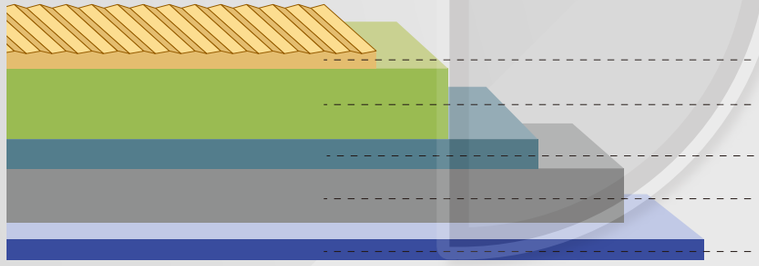
項目 Item	試驗條件 Test Method	結果 Result	項目 Item	試驗條件 Test Method	結果 Result
延伸率 Extension test	120%~200%，正常狀態下盡量控制在150%以內，若大於150%建議膜料厚度不低於0.3mm 120%~200% If the requirement is higher than 150%. It is recommended that the thickness of basement film need to greater than 0.3mm	200%延伸，無拉裂、斷裂 200% Extension Rate No crack and broken	耐熱烘烤測試 HighTemprature Thermal Aging test	105℃烘烤*168小時 (烘烤後，觀察彎折處有無分層) 105℃ Baking*120 Hr	外觀無異常 密著無剝離 Surface no defects and no peelig
鉛筆硬度 Pencil Hardness	三菱鉛筆，荷重100g MITSUBISHI Pencil with load of 100g	H	水煮測試 Boiling test	80℃水煮，待冷卻後百格測試密著。 Putting in 80℃ boiling water then move out and cold down, at the end arrange the adhen-sion test	外觀無異常 密著無剝離 Surface no defects and no peelig
收縮率 Shrinkage rate	0.5% ~ 0.7%　(建議成型後靜置12-16hr) (It is suggested to left it for 12-16 hours after forming)				
耐磨擦 Abrasion test	摩擦頭直徑(16±0.1mm)，荷重9N±0.2N。進行100次摩擦試驗 Diameter of Abrasion head (16±0.1mm)with load of 9N±0.2N for 100 rounds	無油墨或基材外露 No ink and film layer expose	耐化學品試驗 Chemical resistance	(將白布浸泡在試劑1min後取出,用濾紙將大部分介質水吸掉，將樣板固定好摩擦10次。) Soak the white cloth in the reagent for 1 minute, then remove it and use filter paper to absorbmost of the medium water. Secure the sample and rub it 10 times.	
密著測試 Adhension test	格劃法:百隔間格2mm 安德烈切劃法:十字劃痕 Cross-cut:2mm Andr’ s notch	無異常密著5B Level: 5B Surface nodefects		1.防曬乳 sunscreen lotion 2.護手霜 Hand Cream 3.車窗洗滌劑 Car Glass Cleaner 4.人工汗液 Artificial sweat	外觀無變色 光澤度無變化 Surface no defects

TOM工藝 | TOM FILM

應用於模外裝飾工藝，科技機能薄膜同時具有高延展的性能與一定強度的表面物性，對於耐熱、濕、化學都有一定的強度。常應用於汽車內裝飾產業、家電、3C產品等。適用於各種成型設備，客製化規格可依客戶需求替換基材、膠種等。

Applied in exterior decorative crafts, technology functional films simultaneously possess highly stretchable properties and certain strength in surface characteristics, offering resistance to heat, moisture, and chemicals. Commonly used in industries such as automotive interior decoration, household appliances, and 3C products. Suitable for various molding equipment, customizable to replace substrates, adhesives, etc., according to customer needs.

產品架構 Product Structure



保護層(結構層) Protection Layer
基材(改質材料) Basement Film
油墨層 Ink
膠水層 Adhesive
保護膜 Production Film

使用方式

熱塑型溫度約在100℃~160℃
(依照基材、膠種等...不同條件對應不同溫度)

Instruction

Temperature for heating and forming within 100℃~160℃
(According to the base material, glue type, etc... different conditions correspond to different temperatures.)

建議儲存條件

保持乾燥，建議保存條件
溫度23±2℃、濕度50%±10%RH

Recommended storage conditions

Temperature 23±2℃、Humidity50%±10%RH

物性試驗 (成品測試) Physical Property (End Product)

項目 Item	試驗條件 Test Method	結果 Result	項目 Item	試驗條件 Test Method	結果 Result
延伸率 Extension test	120%~200%，正常狀態下盡量控制在150%以內，若大於150%建議膜料厚度不低於0.3mm 120%~200% If the requirement is higher than 150%. It is recommended that the thickness of basement film need to greater than 0.3mm	200%延伸，無拉裂、無斷裂 200% Extension Rate No crack and broken	耐熱老化測試 Heat resistance aging test	90度c*480小時 ，取出後靜置30分鐘，測試附著力。 Conduct the test at 90°C for 480 hours. After removal, allow the specimen to rest for 30 minutes before performing the adhesion test.	外觀無異常，密著無剝離 Surface no defects and no peelig
氙燈老化 Xenon lampaing test	45小時 45 hours	外觀無異常灰度值≧4 No appearance abnormalities, gray scale > 4	剝離強度測試 Peel strength test	0.48 N/mm，外觀無變化。測試在室溫、高溫和熱循環（高低溫交替）下進行。 0.48 N/mm, with no change in appearance observed. Tests conducted under room temperature, high temperature, and thermal cycling (alternating high and low temperatures).	外觀無異常，密著無剝離 Surface no defects and no peelig
收縮率 Shrinkage rate	0.5% ~ 0.7% (建議成型後靜置12-16hr) (It is suggested to left it for 12-16 hours after forming)				
耐磨擦 Abrasion test	摩擦頭直徑(16±0.1mm)，荷重9N±0.2N。乾磨100次，濕磨酒精10次。 Diameter of Abrasion head (16±0.1mm)with load of 9N±0.2N for 100 rounds	無油墨或基材外露 No ink and film layer expose	耐濕測試 Moisture resistant	85℃ & 85%RH * 240小時 85℃ & 85% RH * 240 Hr	密著無剝離 No peelig
密著測試 Adhesion test	格劃法:百隔間格2mm 安德烈切劃法:十字劃痕 Cross-cut:2mm Andr’s notch	無異常密著5B Level: 5B Surface nodefects	耐化學品試驗 Chemical resistance	1.防曬霜 Surfactant 2.車窗洗滌劑 Car Glass Cleaner 3.酒精 Alcohol 4.汽油 Gasoline 5.人工汗液 Artificial sweat	外觀無變色，光澤度無變化 Surface no defects

產品應用 | PRODUCTS APPLICATION



大理石紋
Marble Pattern












產品應用 | PRODUCTS APPLICATION



碳纖維 / 鋁絲紋
Carbon / Hairline Pattern

















產品應用 | PRODUCTS APPLICATION



木紋
Wooden Pattern

產品應用 | PRODUCTS APPLICATION



















迷彩紋
Camouflage

產品應用 | PRODUCTS APPLICATION



Volvo - S90 T8

CD174

3D DECORATION TECHNOLOGY

CHENG FENG - CHIH HUI CO., LTD.

產品應用 | PRODUCTS APPLICATION

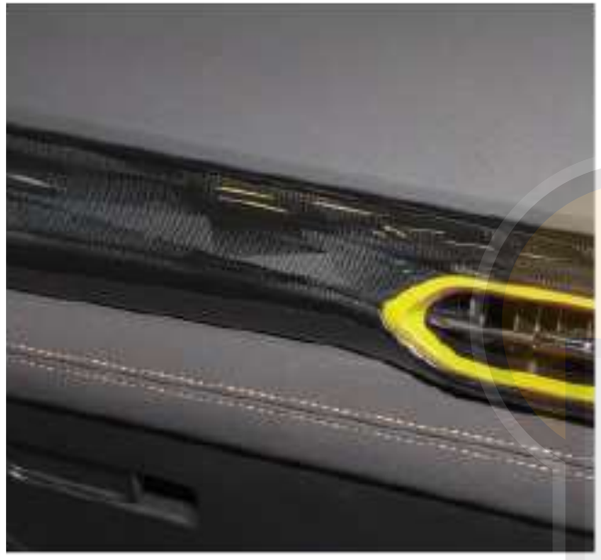


GEELY - EMGRAND GL

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3D DECORATION TECHNOLOGY
CHENG FENG - CHIH HUI CO., LTD.

CHANG'AN - UNI-T
長安 - 引力T





NISSAN - TEANA J32
日產 - 天籟





TOYOTA - CAMRY 2.5 HYBRID
豐田 - 凱美瑞





ZOTYE - DOMY X7
眾泰 - 大邁



DFM - FORTHING SX6
東風 - 風行



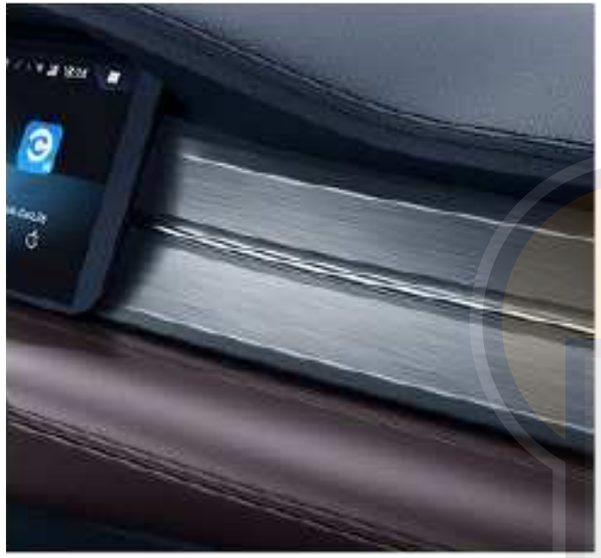
SUZUKI - ALIVIO
鈴木 - 啟悅

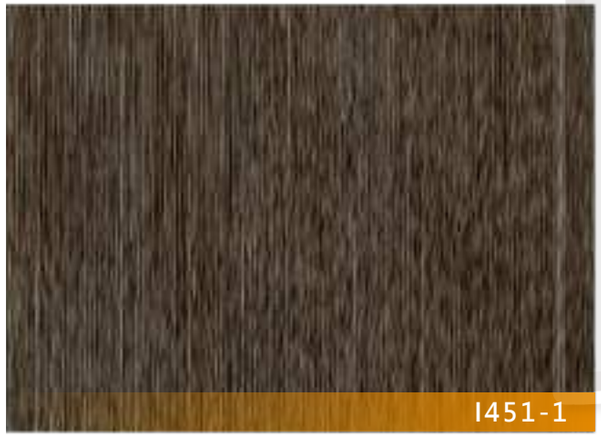






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