



Taiwan Textile Federation

### SpringFil<sup>®</sup> Features

- Natural Look & Cottony Hand Feel Softness & Relax your tense
- Good Stretch & Recovery
   Comfortable for daily wearing
- Good Sublimation & Chlorine Resistance Withstand the chemical treatments
- Better Air Permeability
   More Breathability & Quick Dry
- Environmental sustainability
   Without spandex, garments could be fully recycled

Springfil

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Springf



TOUNG LOONG

TEXTILE MFG.



Make Your Life Better 東隆興業股份有限公司

米隆突来放け有限ならり TEL: 886-3-323-4111 FAX:886-3-323-9073 E-mail: service@tloong.com.tw http://www.toungloong.com



# LIBOLON









LI PENG ENTERPRISE CO., LTD. Constant of the second secon







#### FENC<sup>®</sup> TOPGREEN<sup>®</sup> ECO Friendly

Recycled Filament / Recycled CD Filament / Recycled Stretch Filament

#### Recycled PET Filament 聚酯回收纖維

產品簡介 以回收寶特瓶為原料,經過粉粹、清洗、分解、聚合、造粒、加熱熔融、抽絲及假撚加工製成的纖維,是對 地球生態絕對環保之素材。

TOPGREEN® recycled filament is an outstanding environment-friendly fiber based on the material of recycled post-consumer PET bottles, which were processed through grinding, washing, melting, re-polymerizing, spinning, and texturizing to yarn.

#### 產品特色

- 使用最環保技術所生產的再生纖維 Utilizes the most state-of-the-art recycling
- 減輕環境負擔,善盡地球公民責任
- Repurposes waste, reduces our reliance on petrochemicals and prevents environmental pollution
- 可追溯性

FENC<sup>®</sup> Recycling is completely traceable from post consumer to yarn

#### 認證

- GRS(CU815435GRS-04.2022)
- SCS(SCS-MC-02150)
- 台灣環保標章 Taiwan Green Mark (Issued by Taiwan EPA)
- Oeko-tex Standard 100 Approved (TPFO 042351)





回收瓶磚



rPET chips

瘤特撕 **Recycled PET Bottles** 

Bottle Bales



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Filament Div – Eddie H. Lin eddie.lin@fenc.com (O)+886-2-2737-8815 (M)+886-916-261761 Line:lbh1959tna Wechat: Rugby35NTU gloria.lien@fenc.com (O)+886-2-2737-8814 – Gloria Lien

## 將紡織品廢料 轉化成新纖維只是 一個開始

萊卡公司致力於減少紡織服飾產業對地球的影響 推出全新由100%紡織品廢料製成的 COOLMAX<sup>®</sup>與THERMOLITE<sup>®</sup> EcoMade纖維 沿正確的方向 以己之力串聯啟動循環經濟的開始

#### 攜手萊卡 循環再生

循填冉生 豪

TheLycraCompany.com/loop 品牌諮詢:Sylvia.lin@LYCRA.com







保放大鏡感溫服

#### 齋戒防疫·萬物共生

# 防疫心品 只同搞 展訪題口罩

因應新型冠狀病毒疫情,大愛感恩科技研發一系列大愛環保防疫產品,包含大愛防眩光套鏡+護目罩組、大愛 環保泡棉防疫面罩、大愛環保抗菌口罩+大愛機能濾片、大愛環保放大鏡感溫貼等,材料利用廢棄塑膠再製而 成,在疫情緊張的時刻,讓人們安定身心守護健康。政府與民間企業持續進行各項防疫工作,大愛感恩科技 提供有形的「物資關懷」,捐贈大愛還保防疫守護組合,做為人們防疫的後盾,共同防堵疫情擴散不遺餘力 ·感恩第一線防疫人員的辛苦,虔誠祈禱天下平安,提升善念來消弭災難。

DA.AI Eco Pandemic Prevention Products — Join Hands Together to Form Good Affinities

In response to the COVID-19 outbreak, DA.AI Technology developed a series of eco pandemic prevention products made of recycled PET material, including DA.Al Eco Anti-Glare Glasses with Face Shield Set, Eco Protective Face Shield, Eco Antibacterial Mask + Filter Piece, and Eco Fever Test Card + Magnifier card. To support the government and people in the fight against COVID-19, the development of DA.AI Eco Pandemic Prevention Package as personal protection equipment (PPE) for government agencies, the public, and companies at a time of the intense outbreak of COVID-19, to work together to prevent the spread of the pandemic and grateful for the hard work of the first-line pandemic prevention personnel and showing love in action.



防疫面罩

大愛感恩科技股份有限公司 | http://www.daait.com DA.AI TECHNOLOGY CO., LTD. http://shop.daait.com 11493台灣台北市內湖區洲子街65號2樓 TEL:02-26575245

## Ecological, Environmental Protection & Energy-saving Textiles

OWASTEX<sup>™</sup> Recycled Polyester & Nylon From fabrics waste •Bio-based Polyester & Polyamide •Bio-degradable •Recycled Polyester From the Ocean & Recycled Polyamide Fishing net & Recycled From Oyster Farming •Garment Recycled •Umorfil® •Lyocell •BOOMETEX® Recycled Polyester & Recycled Polyamide •BOOMETEX® Stretch Recycled Polyester & Polyamide •Renewably Sourced Fiber\* •Solution Dye •Permacool® & Perforation •Permawarm® -Thermal Insulation •Trans-Uno® One-way Moisture Transferring •AQUAOFF® Super Critical CO<sub>2</sub> Dye

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Pack'n Bag & Soft Equipment Fabric
Apparel Fabric
Solar Screen & Furnishing Fabric
Medical Textile

#### Sustainable Material

Recycled Polyester Fabric
 Recycled Nylon Fabric
 Solution Dyed Fabric
 Polypropylene Fabric

#### Eco-Friendly Processing

- PFOA/PFOS Free
   PVC-Free Lamination
  - TPU/TPE Lamination
    - Water Based Coating







GO GREE





#### : New Wide Recycled Water Treatment System

The wastewater treatment system, with more than 8 filtering steps, to generate more reusable water resource. We have saved more than **1,100 Olympic pools** of water since 2014.



#### : About New Wide

New Wide Enterprises Co. Ltd., the parent company of New Wide Group, was established in 1975 in Taiwan. Our global intelligent knitting supply chain, from market trends, R&D, knitting, dyeing, to garment manufacturing, enables us to be more resilient, agile in rapidly changing markets. For next generations, New Wide is committed to advancing textiles for a sustainable world through greener, intelligent manufacturing. We work closely with supplier partners as a pioneer on developing innovative green textiles and digital transformation. Aligned with brand clients, we strive to develop low-carbon circular supply chain for fashion and apparel industry.





System

IIII III III II IIII



Changzhou New Wide Knitting and Dyeing



Kenya New Wide Garmen



Vietnam New Wide Garmen

# The U.S. Cotton Trust Protocol

 --- brings quantifiable and verifiable sustainability goals and measurement to U.S. cotton production enabling brands and retailers around the world to more confidently source U.S. cotton.

Don't be left out, **sign up** today.

TrustUSCotton.org #TrustProtocolGrower



U.S. COTTON TRUST PROTOCOL Trust in a smarter cotton future

### 永光化學 提供安全及環境友善的染料

### 安全保證 / 認證會員

- TRCA, 中華民國化學工業責任照顧協會
- ETAD, 染料及有機顏料製造商生態和毒理學協會
- ZDHC, 有害化學物質零排放組織



### 通過第三方認證

- Bluesign, 藍色標誌標準(Bluesign standard)
- GOTS, Global Organic Textile Standard 全球有機紡織品標準
- Inditex 集團合格化藥供應商

Better Chemistry Better Life



Chemical

#### 10



永光化學追求進步創新,以滿載的研究熱情,透過不斷的加乘與連結, 創造出許許多多的可能。

永光,以化學專業給予客戶最大支持,協助客戶邁向成功,也為美好的 社會及永續的未來,做出具體貢獻。

我們相信,運用對的化學品,可以讓生活更美好!

- **色料化學品**:染料、數位列印耗材
- 特用化學品:光穩定劑、紫外線吸收劑
- 醫藥化學品:前列腺素原料藥、抗高血壓原料藥
- 電子化學品:光刻膠、顯影液、抛光液
- 📕 **全 通 科 技:**碳粉







### 臺灣環保紡織品精選專刊 出刊日期2020年10月



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### BEST CHOICE FOR ENVIRONMENT FRIENDLY NYLON FILAMENT



#### WATERLESS DYEING WITH EXCELLENT COLOR FASTNESS

Reduces resource consumption and minimizes  $CO_2$  emissions.

#### Formo**Eco**®

Pre-Consumer Nylon Filament (Made of recycled fiber and textile)



#### SEAWASTEX

Post-Consumer Nylon Filament (Made of recycled sea waste like wasted cable, box net and purse seine) Dope dyeing consumes 85% less water, 64% less power and results in 84% less CO<sub>2</sub> emissions compared to traditional piece dyeing.

#### 100% RECYCLED PRE & POST-CONSUMER NYLON FILAMENT

Certified by Control Union (The Global Recycled Standard)

Stable chemical processing method guarantees high quality of recycled filament.

OEKO-TEX® STANDARD 100





#### FORMOSA CHEMICAL & FIBRE CORPORATION

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### 編者的話

### 臺灣環保紡織品結合流行與機能

致力開創美好未來生活

臺灣紡織業歷經60餘年的發展,循序漸進地整合供應鏈體系有成,進而建立生 態保護、節省能源與資源的價值創新商業模式,並且以生產對環境友善之機能性 紡織品在全球市場領先群倫。為協助國際專業買家瞭解臺灣紡織業者長期致力於 環保領域的發展成效與競爭優勢,媒合買賣雙方找到優質合作夥伴,紡拓會特別 出版「臺灣環保紡織品精選專刊」並建置網站,彙集臺灣環保紡織品發展現況及 供應商資訊。

臺灣紡織產業不斷地研發與創新,每年每季都有創新的環保紡織品,將生活美 學、高科技、環保與創新機能完美結合,賦予紡織品新的定義。鑒於全球紡織產 業對於環保紡織品並無明確定義,本會率先依照環保紡織品

的精神、功能、技術、服務概分為六大環保產品與 服務領域:環境友善紡織品、節能減碳紡織品、 無毒或天然有機紡織品、循環再生紡織品、綠色 製程紡織品、環保檢測服務。盼望能兼顧環保 永續與社會安全責任,善用物質特性,化腐朽 為神奇。

臺灣紡織業以驚人的豐沛創新能力, 創造生活上的無限可能,致力開創未來 美好生活。

今日環保紡織品在消費市場已成為 一股不可抗拒的綠色浪潮,採用環保紡 織品已成為全球通路暨品牌商履行企 業社會責任的具體表現。紡拓會多 年來致力於推廣環保紡織品,希望 藉由產業轉型來使臺灣環保紡織品 成為繼機能性紡織品後,另一個領先 各國紡織產業的發展主流。



### **Editor's Notes**

### Taiwan Eco-Textiles: a Marriage of Fashion plus Function

Green innovation makes our life better!

Sustainable products are an integral part of the green consumerism as well as a key element to become a successful business in today's very competitive global textile market. International brands, retailers and manufacturers are taking long-term plans and actions to source and produce textiles that have the least impact on the environment and are made in a socially responsible manner. The Taiwan Textile Federation(TTF) has been working in promoting Taiwan's eco textiles for some time in order to establish the island's leading position in the eco textile market after the successful precedent in the area of functional textiles.

After more than 60 years of development, Taiwan's textile industry has evolved from a mass production textile supplier to a textile innovator equipped with a comprehensive yet integrated value chain. While traditional textiles still have an important share in Taiwan's textile output, the extraordinary performance achieved by local enterprises in the field of eco and multifunctional textiles has redefined Taiwan's status in the global textile marketplace.

The core competencies of Taiwan's textile industry lie in its R&D, technology and innovation. The industry is constantly introducing its new eco textile developments which combine high-tech, ecology, function and life aesthetics to give new definition to modern textiles.

The annual publication of Taiwan Eco Textiles serves is a compilation of the industry's achievement in eco textiles for the past year. It serves as a valuable tool for those who are looking for reliable and determined textile business partners. More information on eco textiles in Taiwan can be found at eco.textiles.org.tw

We truly believe that the abundant innovation of Taiwan's textile industry can contribute to our environment and ameliorate our daily life!

#### Cover Story Think Taiwan for Eco-Textiles

#### **Taiwan: The Best Sourcing Center for Functional + Eco Textiles**

Further to functionality, eco friendliness is now a textile DNA for Taiwan's textile industry. Whether it's material, manufacture process, technology, product or environment, our green-minded industrialists are working hard to make Taiwan the best source for eco and functional textiles.

#### **Eco-friendly Textiles**

Textiles using materials made from recycled waste such as post consumer plastic bottles and ocean waste and recycled biomass such as wood, leaves and food waste. Also including bio-degradable textiles which impose no burden to the environment.

#### **Energy-saving and Carbon-reducing Textiles**

Textiles appealing to the reduction of water/carbon footprint and energy consumption, e.g., textiles with functions like thermal, cooling and blood circulation enhancing.

#### **Organic / Non-toxic Textiles**

Textiles containing no environmental hormones; toxic-free and heavy metal free textiles; organic textiles; medical textiles.

#### **Circular Textiles**

Textiles using recycled post consumer textiles as materials and produced by way of reengineering, redesigning or redefining in order to drive resource efficiency, cut waste and prevent environmental pollution.

#### **Green Processing**

Textiles made by adopting a green process such as waterless dyeing, solution dyeing, normal pressure dyeing, etc.; or made via a production process with stricter than regular waste emission standards; or made in green/eco-labelled factories.

#### **Textile Testing and Certification Services**

Companies/organizations offering services in eco-labelling and certification, environmental testing, standards setting, etc.

#### 臺灣一最佳環保與機能性紡織品採購中心

臺灣具備環保紡織品的高度發展潛力,業者落實環保從根本做起,不僅重 視產品源頭符合綠色設計、導入環保製程,並將環保思維納入企業文化,為企 業注入綠色 DNA,堅持創新開發環保與機能兼具的多元紡織品。

#### 環境友善紡織品

產品原料來自回收廢棄物材料(如寶特瓶、海洋廢棄物等)、生質環保材料(如木 料、樹葉、廚餘等),或產品強調可自然分解、不造成環境負擔。

#### 節能減碳紡織品

產品訴求使用時能夠減少水或碳足跡、能源損耗,如:發熱、保暖、涼感、促 進血液循環等。

#### 無毒或天然有機紡織品

產品訴求不含毒性、重金屬、環境賀爾蒙,或產品本身為有機紡品、素材,或 為醫療健康用紡織品。

#### 循環再生紡織品

特別針對回收消費後的紡織製品,以重新製造、重新設計、重新定義 (Reengineering/Redesign/Redefine)等方式再生利用,促進更好的資源使 用效率、消減廢棄物、延長紡織品使用壽命及避免汙染自然環境。

#### 綠色製程紡織品

產品採用無水染色、原液染色、常壓染色等綠色製程,或製程中汙染排放採用 比常規更嚴格的標準、使用綠色節能工廠等。

#### 環保檢測服務

企業從事或提供標章驗證、環境檢測、標準制定相關等服務。

#### **Cover Story**



### **寶特瓶回收再生紡織品一** 回收、生產、銷售系統最完整

The journey where drinking water bottles turn into a beautiful dress starts from the recycle bin around the corner of your neighborhood. Once the bottles are collected and then crushed, they will be made into staple fibers for spinning or into filament yarns for weaving, and then are ready for end-product applications. The production of recycled PET bottle textiles in Taiwan benefits from a thorough reclamation scheme. Consumers are encouraged to recollect used bottles. About 90,000 tons of PET bottles are reclaimed every year in Taiwan, equivalent to 4.5 billion drinking water bottles (bottle volume: 600 ml). per year.

The production and application of recycled PET bottle polyester fibers are optimized with the upstream spinning technologies for functionality, micronization and compound effects, and the downstream finishing technologies of weaving, dyeing, coating and lamination. Taiwan's position as the most reliable source for functional and ecological textiles was further proved at various international sports events such as the 2018 FIFA World Cup Russia where many teams wore jerseys made from recycled PET bottle textiles developed by Taiwanese textile companies.



### Recycled Nylon Textiles – Reserve & Recover Resources! 尼龍回收再生紡織品一資源再利用

Threads and shreds from a textile factory are more valuable than you think. Through a process of sorting, screening, crushing, extruding, chipping and spinning, these wastes can be transformed into clothing, home and industrial textiles.

Taiwan-made nylon textiles are renowned for their "value for money" quality, an advantage now extended to recycled nylon textiles. With their advanced development in recycled nylon production technology, Formosa Chemicals & Fibre, Honmyue, and Toung Loong substantially help reserve and recover resources for the planet.

#### **Cover Story**



### Cellulosic Fibers – from Nature, Back to Nature 纖維素纖維一來自大自然的環保原料

Plant fibers such as cotton, linen, bamboo and pineapple leaves, seaweed and fibers such as rayon, Modal and Tencel, of which the materials are derived from plant fibers, are biodegradable cellulosic fibers. They do not generate any negative impact on environment when burned and are thus classified as typical eco fibers.

In the category of cellulosic textiles, Formosa Chemicals & Fibre, Formosa Taffeta, Acelon and Fabrix Plus have successfully developed various high-end fibers, yarns and fabrics using local eco materials.



### **Solution Dyed Polyester Yarn** – a Best Choice for Water Saving Textiles **原液染色聚酯纖維**一節水減碳的最佳選擇

Among the whole production process of textile industry, the dyeing sector usually plays an important role in creating special effect for and adding value to products, but is also recognized as the most environmentally unfriendly part due to the huge consumption of water and chemicals. The production process of solution dyed polyester yarn is in line with the concept of "design for environment". There is no need to go through any dyeing process once the weaving is done, which can therefore cut down water and energy consumption as well as effluents and waste gas generation by  $70 \sim 82\%$ .

Green Theme International is a company with a mission. They invent, commercialize and sell water free textile technology to create the best performing fabrics and to eliminate water pollution. their first product provides the most effective rain protection on the market without using or polluting any water.



### SAYA Rscuw Project - Closing the Loop at the Source, with SAYA Rscuw Fiber 從餘到有一SAYA織物回收再生計劃

• Brands and consumers continue to promote a circular economy. SAYA is also committed to finding a solution to provide more sustainable products in recent years. The Ellen MacArthur Foundation survey pointed out: "The global textile recycling rate is about 15%, and the remaining 85% are treated as waste, causing serious environmental harm." To provide solutions to the industrial waste problem shrouding our industry, SAYA, a subsidiary brand of Nan Ya launched SAYA Rscuw Project.

Rscuw stands for Recycled Scrap and Cutting Waste. SAYA Rscuw Fibers consist of 3 types of recycled components. Garment cutting scrap, overstock fabric, waste yarn, and post-consumer PET bottles, using key decolorization technology to create new recycling possibilities for what would typically be discarded. We aim to continuously increase the percentage of garment and overstock waste as well as the types of blended materials and mechanical stretch for a more inclusive solution. We don't shy away from more challenging endeavors as we seek to redefine what's possible in textile renewal.



### Ecological Polypropylene Fiber 聚丙烯纖維一符合生態環保訴求

Polypropylene(PP) fiber is a polymer made up of carbon and hydrogen molecules. It is biodegradable with very low environmental impact, and meets the standards on environmental safety and hazardous content.

Traditionally the fiber is colored by way of solution dyeing, which is environmentally friendly in terms of saving energy and reducing carbon dioxide emission.

Honmyue has introduced a new-generation dyeing method by using disperse dyes on PP textiles. The PP fiber not only can be dyed in relatively low temperature but also allows end products to keep multiple functions.

#### **Cover Story**



### Normal Pressure Dyeable Polyester Fiber – Environment Matters! 常**歐染色紡織品**一節能減碳高手

The molecules of a polyester polymer are strongly bound together. It requires high temperature and pressure to saturate the fibers with dye solutions. The great thing about normal pressure dyeable polyester fiber is that during the coloration, the dyeing temperature can be brought down to 95~100°C without compromising color quality.

While the lowered dyeing temperature saves our environment from heavy use of heating energy, manufacturers at the same time can benefit from the saving on cooling time and dyeing cost. Major suppliers of this eco fiber in Taiwan include Nan Ya Plastics, Honmyue, Far Eastern New Century and Formosa Taffeta.



### Solvent Spun Fiber – the Most Eco-minded Manmade Fiber 溶劑可回收纖維一符合生態平衡原則

The main ingredient of solvent spun fiber is cellulose, which is derived from woods. Up to 99.5% of solvents used during the fiber manufacturing process are recoverable and reusable, and the finished products are naturally biodegradable. What's more, less water and energy are used in the manufacture. All these environmentally sustainable characteristics win this kind of fiber a name as the most eco-minded manmade fiber in the last 50 years. Formosa Taffeta is a major supplier of eco textiles made of this kind of fiber in Taiwan.

#### **Cover Story**



### **Biodegradable Textiles** – Sustainable Textiles for the Earth **可分解紡織品**一地球永續發展

Biodegradable materials open a new window for the textile industry with environmental and business sustainability in mind. Biodegradable materials cause almost zero environmental impact even before and after their product lifecycle, making them a perfect example of green textiles.

APEXA<sup>®</sup> is a biodegradable polyester from DuPont. Formosa Taffeta and Nan Ya Plastics are using this material to make eco-friendly textiles.



### Heavy Metal Free Polyester Fiber – Safety Guarantee 無重金屬聚酯纖維一安全有保障

In the process of producing polyester, catalysts are often added to reduce the time required for polymerization in order to significantly increase the efficiency. The most common catalyst is a heavy metal called antimony (Sb). The European Union has stipulated in its legislation that only fabrics with an antimony content less than 30ppm are qualified for eco labels.

Heavy metal free polyester fiber shares similar properties to regular polyester fiber; moreover, it does not have the unfavorable yellowish problem which regular polyester fiber using Sb-free catalysts usually has. It can be applied to various textile products and PET bottles, and can also be recycled and reprocessed.

In Taiwan, major providers of heavy metal free polyester textiles include Nan Ya Plastics for filament yarn, Four Elements for spun yarn, Formosa Taffeta and Far Eastern New Century for fabrics, and Atics for zippers.

#### **Cover Story**



### **Bio-based Textiles (Bio-PET and Sorona<sup>®</sup>)** – Reducing Petrol Consumption and CO<sub>2</sub> Emission **生質環保紡織產品**一有效減少石油資源消耗與二氧化碳排放

Though still a petroleum-based material, about 30% of bio textile's composition is plant-based, effectively helping reduce the consumption of fossil energy resources. The most commonly-known bio textiles are Bio-PET and Sorona<sup>®</sup>. Bio-PET is an innovative fiber from Nan Ya Plastics. Different from the traditional PET fiber production, the material EG used to make Bio-PET fiber is from natural renewable resources, successfully reducing the dependence on petrol and effectively lowering 25% of carbon emissions.

Sorona<sup>®</sup> is a breakthrough made by DuPont in renewably sourced materials for textiles. With 37% of its basic raw material drawn from natural sugar, the production process of Sorona<sup>®</sup> reduces 30% of energy consumption and 63% of  $CO_2$  emission compared with that of nylon chips, making it an ideal choice for eco textiles.

Nan Ya Plastics, Toung Loong, Far Eastern New Century and Formorsa Chemicals & Fibre, among others, are the leading producers of bio-based textiles in Taiwan.



### **Instant Cooling Fiber** – Feel Cool in the Summer **散熱涼爽性纖維一**夏天涼爽

The performance of instant cooling textiles comes from the mineral compound powders which possess the properties of slow heating and quick cooling. The fibers with mineral powders added help wearers drive out body heat and have a comfy chilling feel.

When wearers are in instant cooling clothing, A/C temperature setting can be raised by 2°C, which helps save energy and cut carbon footprint.

Toung Loong, Da.Ai, Formosa Chemicals & Fibre, Formosa Taffeta, Four Elements, Nan Ya Plastics and GAC are all innovators in this sector.

#### **Cover Story**



### **Organic Textiles** – It's Green, It's In! **有機紡織品**一符合綠色潮流

Organic cotton refers to the cotton cultivated on fields over 3 years free from any use of pesticides and chemical fertilizers. No insecticides, herbicides and defoliators are allowed in the growth of organic cotton. It is one of the best material options for responsible brands and enterprises to realize their commitment to protect our planet.

The organic cotton yarns made by Formosa Chemicals & Fibre, Formosa Taffeta and Far Eastern New Century have passed certification from international professional bodies such as IMO of Switzerland and Control Union of the Netherlands.



### Cotton and Wool – Natural and Sustainable 棉花與羊毛一天然和永續

Cotton and Wool are natural, renewable and biodegradable. Cotton has been used to dress and protect mankind for at least 7,000 years. Today cotton textile is a global industry. After 30 years of efforts and thanks to the new agritechnology, American cotton farmers are now able to increase water-use efficiency by 80% and decrease energy consumption and pesticides use by 31% and 50% respectively.

To ensure people can continue to reap cotton's natural benefits now and in the future, U.S. cotton industry is committed to producing cotton in the most sustainable manner possible, taking into account the economy, environment and social responsibility.

80% of the global merino wool used in apparel is produced in Australia, where the production for the year 2017/18 reached 338,000 tons. The properties of Australian Merino wool plus its eco friendliness make it a most suitable apparel material for eco-conscious consumers. And the Merino Wool system introduced by The Woolmark Company further provides a series of functional fabric collections for sports activewear.

#### **Cover Story**



### Charcoal Fiber – Keep Warm in the Winter 炭類纖維一冬天保暖

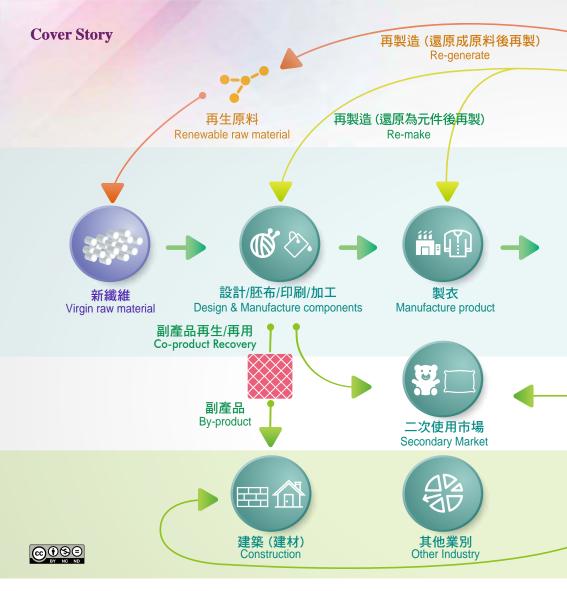
Once through fire and flame, bamboos and coconut shells are transformed into porous charcoals. The charcoals are further grounded into nano-sized powders, mixed well with polymers and then undergo a series of fabrication process–from spinning, false twisting to weaving–before ready to be made into a variety of textile products. Formosa Chemicals & Fibre, LeaLea/Li Peng, Nan Ya Plastics and Acelon are Taiwan's major manufacturers of charcoal fiber. Nan Ya Plastics transforms coffee grounds via carbonization process into coffee fibers for a wide range of applications. Formosa Taffeta has launched collections of bamboo charcoal and coconut shell charcoal fabrics. Atics uses bamboo charcoal fiber to make zippers and accessories.



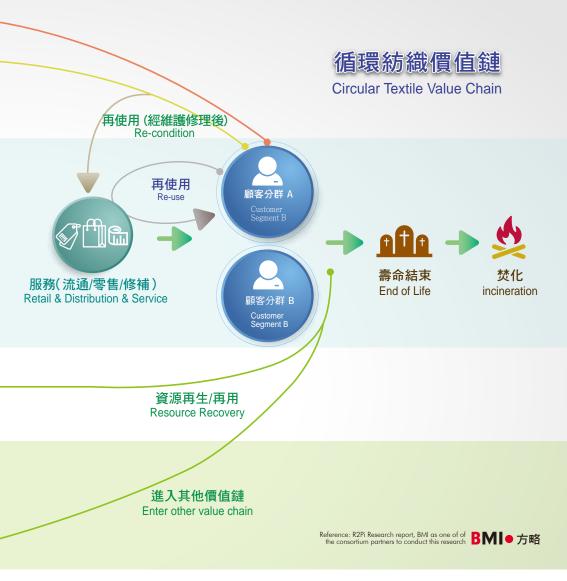
### Get Certified – a Ticket to the Global Market 驗證標章一進入市場的必要工具

Textile industry around the world has a reorientation of thinking about the environment. When ecology finally does not have to come behind economy, many textile enterprises have their green policy and green actions reinforced as a marketing force for elevating corporate/brand image and increasing sales performance as they cope with the inconvenient truth of global warming.

While the world is going green, eco textile labels and certificates issued by internationally authoritative certifying bodies have become not only the quality insurance of products but quite often the minimum criteria to enter major markets like Japan, USA and EU. As a major textile supplier in the world, over 100 textile and apparel companies in Taiwan have received international eco labels and certificates from Oeko-Tex<sup>®</sup>, bluesign<sup>®</sup>, GOTS and Organic Exchange, to name a few. Testex Swiss, Bureau Veritas, Intertek, SGS and Taiwan Functional Textiles (TFT) are well-known certifiers in Taiwan to provide testing and certification services.



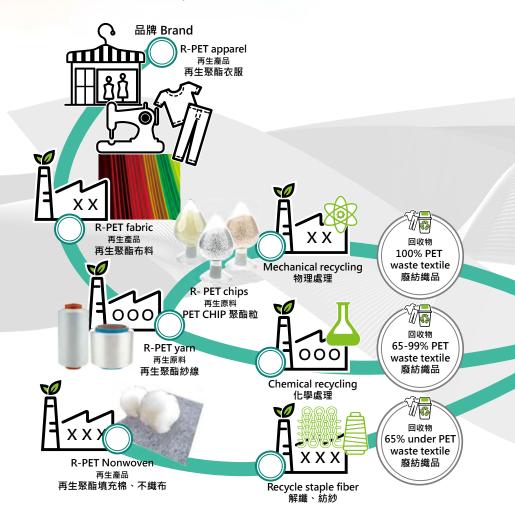
The increasing signs of resource depletion and the impact of wastes to our planet has enabled countries like Holland, Germany, Luxemburg, UK, Belgium, Finland and Japan to declare their commitment towards a circular economy. While the global industry is progressing to reach the new criteria of " high performance, low consumption, toxic free and zero waste", Taiwan's textile industry is also facing the same challenge. In order to meet both business and social demands, developing and innovating recycling technology to close the circle on textiles will be a constant goal as well as a social responsibility for Taiwan's textile industry to strive for.



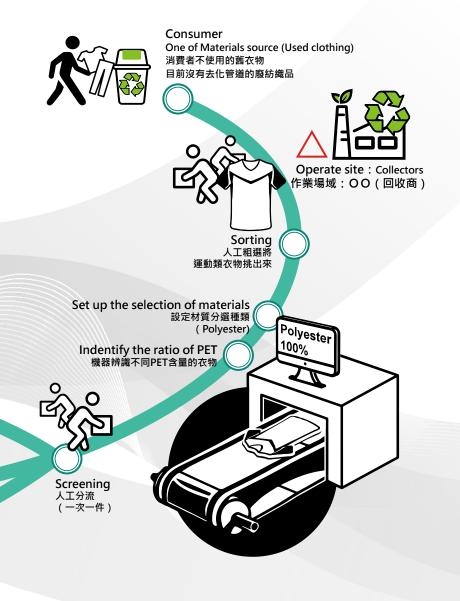
Taiwanese textile companies are now learning, sharing and exchanging their concepts, experiences and technologies in green and circular textiles to reengineer, redesign and redefine the textile product chain. The ultimate goal is to achieve a circular supply chain by collecting post consumer textiles and then recycling and regenerating into new materials as input to make textiles. This kind of new business model can optimize resource efficiency, cut waste and prevent earth pollution. Further development in this respect can boost textile R&D energy, drive the transformation of the industry and even create new business potential while moving towards the purpose of environmental protection, waste reduction and resource circulation.

## 材質分選技術推動紡織循環經濟應用情境

The senario of material screening technology for Transform to Circular Economy Textile



The Co-Innovation Lab which looks to the future of circular textile in Taiwan has joined forces with the Taiwan Circular Textile Initiative to play a guiding role in Taiwan's textile and related industries to focus on post-consumer textile waste and based on the premise that by redesigning the recycling process (collecting-sortingreprocessing).



Checking and reviewing major issues, we found that the keys to turning waste into resources lie in the sorting of textile materials, the development of sorting technologies, and the construction of waste processing and treatment sites.

The R&D team in Lab has developed the sorting technologies to quickly and effectively assort used fabrics by material, and develop the scenario of the circular economy textile system.





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> > Taiwan: Lenzing Taiwan Fibers Ltd.

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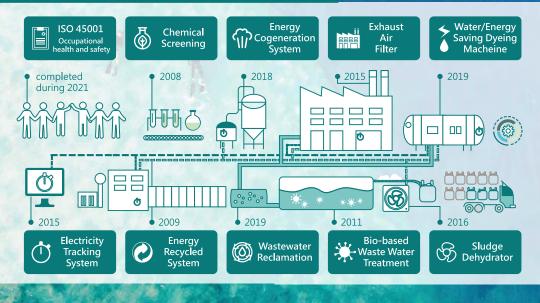


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## Eco Process in Fabric Manufacturing





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# Roadmap To Change

We guide value chains towards the use of safer chemistry for a cleaner planet, and a brighter future.

## Input



Managing chemical inputs is key to safer products, cleaner water and fresher air. The input Focus Area is the cornerstone of the work we do.

#### **Key Solutions:**

- ZDHC MRSL V2.0
- ZDHC MRSL Industry Standard Implementation Approach
- Performance InCheck Guidelines
- ZDHC MRSL Conformance Guidance

## Process

Good procedures and best practices are vital to reduce the environmental impact of production. This Focus Area helps organisations to put these elements in place.

#### **Key Solutions:**

- ZDHC Chemical Management System (CMS) Framework
- ZDHC CMS Technical
- Insudtry Guide (TIG)
- Chemical Inventory List
- ZDHC MMCF Guidelines



## Output



Outputs prove the effectiveness of safer inputs and processes. It does so by measuring indicators like wastewater, sludge and air quality.

#### **Key Solutions:**

- ZDHC Wasterwater Guidelines
- ZDHC Wasterwater and Sludge Laboratory Sampling and Analysis Plan (SAP)
- Wastewater Treatment Technologies
- Wastewater Treatment System Operator Minimum Qualifications Guidelines
- Leather Wastewater
- Guidelines Addendum
- ZDHC MMCF Guidelines





As a ZDHC implementation partner, the Implementation HUB supports organisations all over the world, by offering the solutions, training and expertise they need to put good chemical management in motion.



The global go-to training platform for sustainable chemical management. This established centre of academic and practical expertise educates the industry.



Fabrix Plus Co.,Ltd is specialize in Woven, Denim, Boardshort, Jacquard and knit fabrics, we have many textile mills to cooperate with, such as Weaving, Dyeing, Foil Printed & Paper Printed mill etc., we have the ability and plentiful resource to develop the novelty, latest quality in fashion to reach the request of our clients.

Fabrix Plus is an experienced fabric manufacturer and exporter for overseas markets. Based on the rigid quality control (QC) and cost effective, we have the confident to provide the best products with highly competitive price and punctual delivery to our clients.

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## 天然具功能性纖維 美麗諾羊毛

科學研究發現增加使用美麗諾羊毛 可有效削減塑膠微纖維污染











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創新

The Woolmark Company最新研究指出美麗諾羊毛不會造成海洋中的塑膠微粒污染。 最新科學研究「Microfibre Pollution and the Marine Biodegradation of Wool」發現,有別 於其他合成纖維,所有未經加工及可機洗的羊毛纖維,均可於海洋環境中生物降解。

> 聯繫我們: lillian.chiang@wool.com 以瞭解有關羊毛的更多資訊,或安排預約瀏覽我們的羊毛流行趨勢。







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The Most Eco-Friendly Material for Knitwear & Textile

## **GREEN RIVER**®

\* GREEN RIVER<sup>®</sup> is an eco-friendly knitwear material which is made from the postconsumer recycled PET bottles with GRS certificate. It is processed through grinding, washing, melting, re-polymerizing, spinning, texturizing and making to the yarn.















12.5

Love & Share

Recycled **PET Bottles** 

Crushing Recycled & Washing PET Chips

Making

GREEN RIVER<sup>®</sup> **Recycled Fancy Yarn** 

## Features

- \* Due to the special yarn with patented three-dimensional structure, the touch feeling of garment with GREEN RIVER® is warm and soft.
- \* GREEN RIVER<sup>®</sup> yarn is suitable for most knitwear and textile.
- \* It is easy for laundry and cleaning for the garment made of GREEN RIVER®.

## Application



## High Quality

- \* GREEN RIVER<sup>®</sup> meets the highest level of textile standard of safety & color fastness.
- \* All recycled materials of GREEN RIVER® have GRS certificates.

## Award

- dreen Product Award Selection 2019 in Germany
- 🙀 The 26th Taiwan Small & Medium **Enterprises Innovation Award in Taiwan**







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## The Best Source For TAIWAN FUNCTIONAL TEXTILES

## **Certification System**

### A bridge for global functional textile world

Taiwan Functional Textiles have been equated to premium quality. In general, the grades of functional textile are tested by the equitable laboratory according to specified requirements by the certification committee for functional and technical textiles. Meanwhile, buyers and consumers could be sure of the quality through certification and certified tags.

TFT certification has gone into the **20**th year and is moving towards becoming abridge to global functional textiles for quality assurance.

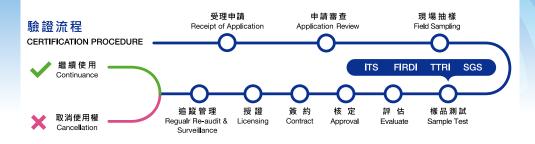
台灣機能性紡織品已成為國際品牌買主對機能性紡織品品質信賴的保 證;根據驗證評議委員會嚴格制定的標準,委由國際認證的實驗室進 行檢測,經台灣紡拓會進行等級驗證,針對通過驗證產品頒發證書及 發放產品吊牌,為通過機能性紡織產品背書。

目前TFT驗證服務與市場行銷推廣已邁入第20年·未來發展目標將以 成為"全球機能性紡織品品質保證的驗證品牌邁進"。



## 驗證流程







Taiwan Functional Textiles 台灣機能性紡織品

The Best Source For TAIWAN FUNCTIONAL TEXTILES

FTTS-FA-001	PERFORMANCE SPECIFICATION				
Antibacterial Textiles for General Use	Туре	Grade	Classification	Washing cycles	percent reduction of bacterial, R
for General Obe		AAAAA	Excellent	50 Washing	R ≥ 99.9
		AAA	Good	50 Washing	$99 \leqq R < 99.9$
		AAAAA	Excellent	20 Washing	R ≥ 99.9
		AAA	Good	20 Washing	99 ≦ R < 99.9
		ААААА	Exce <b>ll</b> ent	No washing required (disposable)	R ≧ 99.9
		AAA	Good	No washing required (disposable)	99 ≦ R < 99.9
CERTIFIED SUPPLIERS	Nan Pao Resins Chemical Co., Ltd.				

Antibacterial Textiles for Medical Use

FTTS-FA-002



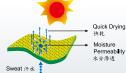
PERFORMANCE SPECIFICATION				
Туре	Grade	Classification	Washing cycles	percent reduction of bacterial, R
	AAAAA	Excellent	100 Washing	R ≧ 99.9
	AAA	Good	100 Washing	$99 \leqq R < 99.9$
	ААААА	Excellent	No washing required (disposable)	R ≧ 99.9
	AAA	Good	No washing required (disposable)	99 ≦ R < 99.9
	I			I

CERTIFIED SUPPLIERS

• Gauss • Muchuan Global International Co., Ltd.

## FTTS-FA-004

Moisture Transferring and Quick Drying Textiles



#### PERFORMANCE SPECIFICATION

g	Туре	Diffusion ability	Drying ability	Absorbency speed (Dropping)	Absorbency speed (Byreck)	Classification
		5	5	Pass	X≧130mm	Exce <b>ll</b> ent
ying		4	4	Pass	130mm > X ≧ 100mm	Very Good
oility		3	3	Pass	100mm > X ≧ 80mm	Good

**CERTIFIED SUPPLIERS** 

- Lee Ven Industrial Co., Ltd.
- S.B.Motif Co., Ltd.
- Yea Chin Co., Ltd.
- Excelassoc Co., Ltd.
- Sain Sou Co., Ltd.
- TECHLON FIBRE, CO., Ltd.
- Li Dai Industrial Co., Ltd.
- YEU-LI INTERNATIONAL DESIGN CO., LTD.

- KUSO TOP International Co, Ltd.
- Fashion Garment Ind.Co., Ltd.
- Top Line Textile Co., Ltd.

## FTTS-FA-005

#### **PERFORMANCE SPECIFICATION**

Water-Vapor Permeable	Hydrostatic Pressure (mmH2O)	Grade	Classification
and Liquid-Water Impermeable Textiles	15000 ≦ Wp	5	Excellent
eweet a #	$8000 \leq Wp < 15000$	4	Very good
wind and rain weat 升和 風和雨	4000 ≤ Wp < 8000	3	Good
- fabric 布	2000 ≦ Wp < 4000	2	Moderate
● ● ● ● ● ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	300 ≦ Wp < 2000	1	Fair

**CERTIFIED SUPPLIERS** 

## **FTTS-FA-008**

#### PERFORMANCE SPECIFICATION

• Lee Ven Industrial Co., Ltd.

• Excelassoc Co., Ltd.

Ultraviolet Protective Textiles	UPF	Erythemal ultraviolet penetration rate (%)	Grade	Classification
	40 - 50 \ 50+	≦ 2.5	А	Excellent
UV absorbed 紫外線吸收	25 - 39	2.6 ~ 4.1	В	Very Good
Ultraviolet Protective Textiles 防紫外線紡績品	15 - 24	6.7 ~ 4.2	с	Good

#### **CERTIFIED SUPPLIERS**

• Lee Ven Industrial Co., Ltd. • Hung Yi Clothing Enterprise Ltd. Yufeng Internaional Company

PERFORMANCE SPECIFICATION

• Everlight Chemical Industrial Corp.,

• Li Dai Industrial Co., Ltd.

• Yi Bao originality life accessory Co., Ltd.

### FTTS-FA-009 Antistatic Textiles

#### FTTS-FA-009 抗靜電紡織品 Antistatic Textiles



rictional charge (V)	Grade	Classification
Knitted / Woven		
warp and weft		
V<100	3	Excellent
100≦V<500	2	Good
500≦V<1000	1	Fair
Surface resistance ( $\Omega$ )	Grade	Classification
1x104≦Ω<1x106	3	Excellent
1x106≦Ω<1x109	2	Good
1x109≦Ω<1x1012	1	Fair
Decay time (Second)	Grade	Classification
S<0.01	3	Excellent
0.01≦S<0.5	2	Good
0.5≦S<2	1	Fair

#### General requirement for pretreatment

Item	General Requirement	Test Method
Washing Durability	tested in original state, after 20 washes, 50 washes (refer to note 1)	(A) woven, coated/laminated fabric and non-woven fabric: washed based on AATCC 135 (1)III (A)ii; knitted: washed based on AATCC 135 (2)III (A)ii (refer to note 2) (B)washed based on JIS L0217-103 (refer to note 2)

**CERTIFIED SUPPLIERS** 

- Horng Jing Textile Co., Ltd.
- U.S.Beryl Enterprise Co., Ltd.

PERFORMANCE SPECIFICATION		
Evaluation	Qualification	
Far Infrared Characteristics	Far Infrared Spectral Emissivity : The average emissivity of light waves with the wavelength of 2-22µm is not less than 0.80, as measured by Far-Infrared spectrophotometer.	
	Re-radiating Characteristics : Difference in temperature between the test sample and reference sample is not less than $+ 0.5^{\circ}$ and the effective difference is better than the reliable limit of 95%	
Temperature Characteristics	Thermograph / Monitor Test : Difference in average skin temperature of specific body part while wearing test sample as opposed to wearing reference sample is not less than +0.5°C.	
Туре	Scope of the requirements	
A	Qualified standard by passing far infrared characteristics.	
A+	Qualified standard by passing far infrared characteristics and temperature characteristics.	
Lee Ven Industrial Co., Ltd.     Shian Jia Meei Enterprise Co., Ltd.     Yufeng Internaional Company     Lee Ven Industrial Co., Ltd.     SiNG LONG TOWEL FACTORY CO., LT     Fashion Garment Ind.Co., Ltd.		
	Evaluation Far Infrared Characteristics Temperature Characteristics Type A A A+ Lee Ven Indus Shian Jia Mee	

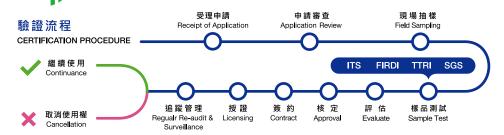
#### FTTS-FA-011 **PERFORMANCE SPECIFICATION** Water Repellent Textiles Washing Condition Туре After 20 times washing As Received After 10 times washing Usage Reference Above 90 Above 80 Durable Water Repellency Water drop 水滴 Π Above 90 Above 80 Durable Water Repellency Fabric 紡織品 Above 90 Normal Water Repellency **CERTIFIED SUPPLIERS** • Chi Hsin Weaving Factory Co., Ltd. • Hi-tex Textile Co., Ltd. NAN YA PLASTICS CORPORATION • Excelassoc Co., Ltd. • Honmyue Enterprise Co., Ltd. • Chung Ming Textiles Enterprise CO., Ltd.

Honmyue Enterprise Co., Ltd.
 Asia Fit International Co., Ltd.
 Chung Ming Textiles Enter
 Li Peng Enterprise Co. Ltd.

FTTS-FA-019 Cool Feeling Textiles		PERFORMANCE SPECIFICATION		
			Maxii	mum heat loss per unit ( W/cm2 )
Heat 熱氣		Knit		≧ 0.130
<u> </u>		Weave		≧ 0.170
	Textiles 新織品 {}}} Cool	Item	Test method	
\$\$\$\$\$		Washing durability	Washed based on CNS15140 8B for knitted fabrics.	
SKIN 皮膚		washing darability	Washed based on CNS15140 7B for woven fabrics.	
CERTIFIED SU	PPLIERS	<ul> <li>Lee Ven Industri</li> <li>Yea Chin Co., Ltd</li> <li>AOYAMA Co., Ltd</li> </ul>	l.	<ul> <li>Vision golf Co., Ltd.</li> <li>Fashion Garment Ind.Co., Ltd.</li> <li>GUANG QIAN Industrial Co., Ltd.</li> </ul>



#### TAIWAN FUNCTIONAL TEXTILES CERTIFICATION



#### 驗證頂目 CERTIFICATION ITEM



FTTS-FA-001 一般用途抗菌加工紡織品 Antibacterial Textiles for General Use



FTTS-FA-007 防縐紡織品 Wrinkle Free Textiles



FTTS-FA-013 易去污紡織品 Stain Release Textiles



FTTS-FA-020 吸濕排汗速乾多層 Liquid Moisture Management Generating Heat-Textiles Properties of Textile Fabrics by Moisture Absorption



FTTS-FA-002 醫療用途抗菌加工紡織品 Antibacterial Textiles for Medical Use



FTTS-FA-008 防紫外線紡織品 Ultraviolet Protective Textiles



FTTS-FA-015 防焰紡織品 Flame-Resistant Textiles



FTTS-FA-023 吸濕發熱紡織品



FTTS-FA-003 防電磁波紡織品 Electromagnetic Shielding Textiles



FTTS-FA-009 抗靜雷紡織品 Antistatic Textiles



FTTS-FA-016 保暖性含炭填充纖維 紡織品 Charcoal Contained Filler Fiber Textiles for Warmth Retention



FTTS-GA-024 運動用自行車衣 Cycling Clothing



FTTS-FA-004 吸濕排汗速乾紡織品 Moisture Transferring & Quick Drying Textiles



FTTS-FA-010 溒糽外線紡織品 Far Infrared Textiles



FTTS-FA-017 含炭填充材消臭性 紡織品 Deodorization for Charcoal Contained Filler Textiles



FTTS-GA-025 慢跑服 Jogaina Clothina



FTTS-FA-005 透濕防水紡織品 Water-Vapor Permeable & Liquid-Water Impermeable Textiles



FTTS-FA-011 潑水紡織品 Water Repelent Textiles



FTTS-FA-018 消臭加工紡織品 Deodorized Textiles



FTTS-GA-026 筋能衫 Specified Requirements of Energy saving Clothing



FTTS-FA-006 防黴性紡織品 Antifungal Textiles



FTTS-FA-012 撥油紡織品 Oil Repellent Textiles



FTTS-FA-019 瞬間涼感紡織品 Cool Feeling Textiles



詳情可至官網查詢 tft.ttfapproved.org.tw



通過驗證產品於全球國際紡織展覽中推廣。

Certification approved products will be promoted in international textile exhibitions.

#### TAIWAN TEXTILE FEDERATION

TTF Building, 22 AiGuo East Road, Taipei 10092, Taiwan 台北市 10092 愛國東路22號 - 紡拓大樓 Tel: 886-2-2341-7251 分機 2358 劉專員、2362 張專員 Fax: 886-2-2357-0596 E-mail : selena liu@textiles.org.tw ; ya\_ling@textiles.org.tw WebSite : https://tft.ttfapproved.org.tw





## Taiwan Innovative Wool Textiles 2021

**New Design & Innovation** 

### Fine & New Blend Yarn

#### **New Products**

Bamboo Charcoal Fiber Cashmere Extrafine Wool Merino Wool Microfiber Natural Stretch Solvent Spinning Super 80's and finer Super Wash Wool Top Winter-Gauze Wool Grease Colorful Down Apparel Bio-degradable Polyester PLA

#### New Blends Wool plus Lycra Wool/Bamboo Wool/Linen Wool/Netallic Wool/Cotton Wool/Rayon Wool/Polyester W/N/R T/W Wool/PP Tencel®/Wool Modal®/Wool

#### **New Techniques**

Burn Out Carbonized Wool Coated & Bonding Comfort and Elegance Crashed/Crinkle Finishing Felted/Boiled Wool Laser Techniques Luxury & Technology Machine Washable Quilted/Embossed Stretch Flannels Tie & Dye Total Easy Care Transfer/Pigment Print New Functionality

**New Techniques & Functionality Fabrics** 

- Antibacterial Antifungal Textiles Antistatic Deodorization Electromagnetic Shielding Far Infrared Flame-Resistant Moisture Transferring and Quick Drying Oil Repellent Stain Release Ultraviolet Protective Water Repellent Water Repellent Water-Vapor Permeable and Liquid-Water Impermeable Wrinkle Free
  - Protect Accessory Co., Ltd. Reward Wool Industry Corporation San Shing Spinning Co., Ltd. Seaward Wool Textile Co., Ltd. Sin Yo Textile Factory Co., Ltd. Sunshune Textile Co., Ltd. Tai Fu Textile Co., Ltd. Tomlong Techstile Corp.

#### Member List

3C-TEX INTERNATIONAL CO., LTD All Magic Sport Co., Ltd. Anndywell Co., Ltd. Carol Textile Co., Ltd. Chia Her Industrial Co., Ltd. Chuwa Wool Industry Co., (Taiwan) Ltd. Creative Tech Textile Co., Ltd. D.A.G. Co., Ltd. Derwel Textile Co., Ltd.

E.Textint Corp. GTM Corporation Gemloom Textile Co., Ltd. GOOD SHINE CO., LTD. Handsettex Industrial Corp. Jenn Shyang Textile Co., Ltd. Kuon Tai Textile Co., Ltd. Ming Ho Wool Industry Co., Ltd.

**DJIC Limited** 

台灣區毛紡織工業同業公會

Taiwan Wool Textile Industrial Association

會址:100台北市愛國東路22號6樓 6FI, No.22 Ai Guo E. Rd., Taipei, Taiwan Tel: 886-2-23913544, 23518774 Fax: 886-2-23518771 E-mail:wooltia@textiles.org.tw http://www.wool.org.tw





Sunshune Textile Co., Ltd. 負 責 人:陳輝耀 董事長 PRESIDENT : Chen Huei Yau 主要產品:羊毛紗、羊毛混紡紗 PRODUCTS : Woollen Yarn Blended Yarn

#### GTM Corporation 負 責 人:顧肇基 董事長

PRESIDENT : George Gu 業務代表:顧克基 協理 VICE PRESIDENT : Kenneth Gu TEL: 886-2-27415000 886-2-25523466 FAX: 886-2-27765073 主要產品:梳毛紗、梳毛布料、西服 PRODUCTS : Worsted Yam Worsted Blended Yarn Woolen/Worsted Fabric Suits E-mail : kengu@atm.com.tw Website : www.gtm.com.tw

#### 信華毛紡股份有限公司

Seaward Wool Textile Co., Ltd. 負 責 人: 簡茂男 董事長 PRESIDENT : M. N. Chien 業務代表:黃志揚 經理 MANAGER : Eddy Huang TEL: 886-2-25312161 FAX: 886-2-25362124 主要產品:純羊毛紗、成衣、梳毛混紡紗、 毛衣、紡毛混紡紗、梳毛織品(男 女裝毛料)、紡毛織品(男、女裝毛料) PRODUCTS : Worsted Spun, Garments, Wool Sweater, Woollen Yarn, Worsted Fabric (Man's & Ladies) Woolen Fabric (Man's & Ladies) E-mail : seaward@ms21.hinet.net hungsir@seawardwool.com.tw

三新紡織股份有限公司 San Shing Spinning Co., Ltd. 自 青 人:吳中堅 董事長 PRESIDENT : C. G. Wu 業務代表:吳中和 總經理 Gen Manager : C. H. Wu TEL: 886-2-2531221 FAX: 886-2-2536505 主要產品:毛混紡紗、毛混紡織物、T/R混紡 色紗、T/R格子布、聚酯加丁絲 PRODUCTS : Worsted Blended Yarn Worsted Blended Fabric T/R Check Fabric Polyester Texturized Yarn E-mail : robert@colortex.com.tw Website : www.colortex.com.tw



德鑫紡織有限公司 GOOD SHINE CO., LTD. 負 責 人:楊明達 董事長 PRESIDENT : jason Huang 聯絡電話:886-2-8201-8099 聯絡傳真: 886-2-8201-8056 主要產品:花式撚紗、絨毛紗 合撚紗、混紡紗、亞克力紗 羊毛紗、麻棉紗 PRODUCTS : Fancy yarn, fluff yarn yarn, blended yarn, ackri yarn, wool yarn, hemp yarn E-mail : yuki@goodshine.com.tw Website : www.goodshine.com.tw



瑋霖有限公司 DJIC Limited 負責人:吳正忠 董事長 PRESIDENT : Daniel Wu 業務代表:張雅華 CONTACT : Grace Chang TEL: 886-2-2516-4766 FAX: 886-2-2516-4768 主要產品:毛紡/棉紡/化纖/針織布的染整 、織造和印花 PRODUCTS : wool/cotton/polyknit fabric for dyeing/printing/knitting E-mail : sale@djic.com.tw Website : www.diic.com.tw



#### ○紡毛紡紗廠 Woolen Spinning Manufactory

網泰毛紡股份有限公司 Kuon Tai Textile Co., Ltd. 負責人:吳正宗 董事長 PRESIDENT:J.T.Wu 業務代表:吳曉玲 經理 MANAGER: Chatene H.L. Wu TEL: 886(0)916737599 主要產品:紛毛総、混紡紛、毛毯、混 紛織物、紡毛織物、對指紛 、適石紗、點子紗PRODUCTS: Woolen Hosiery Yam, Woolen Blend Yam, Woolen Blanket, Woolen Blend Fabric, Woolen Fabrics, Woolen Kniting Yam, Woolen Weaving Yam, Nep Yam



#### 中和羊毛工業股份有限公司

Chuwa Wool Industry Co., (Taiwan) Ltd. 員 貢 人: 侯嘉鎮 董事長 PRESIDENT : Michelle Hou 業務代表: 蔡紹華 協理 MANAGER: Francis Tsai TEL: 886-2-27566777 FAX: 886-2-2756777 FAX: 886-2-27531999 主要產品: 毛條、炭化毛、防縮毛條、 防縮配毛 PRODUCTS: Wool Top Carbonized Wool Wool Grease Machine Washable Loose Wool E-mail : michael.tzang@chuwa.com.tw Website : www.chuwa.com.tw





泰福紡織股份有限公司 Tai Fu Textile Co., Ltd. 負 責 人:陳順理 重事長 PRESIDENT: S. L. Chen 業務代表:陳俊賢 總經理 GRN MANGER: Chun-Hsien Chen TEL: 886-6-2703331 FAX: 886-6-2703333 主要產品:毛織布 PRODUCTS: Wool Fabric E-mail: taifu.tex@msa.hinet.net

#### ◎原料廠 Raw Material Manufactory

利華羊毛工業股份有限公司 Reward Wool Industry Corporation 負 責 人:應柔爾 董事長 PRESIDENT : King Rosa Roueel 業務代表:施耀堂 經理 GEN MANAGER : Terry Shih TEL: 886-2-27811161 FAX: 886-2-27521193 主要產品:毛條、炭化毛、防縮毛條、 防縮散毛 PRODUCTS : Wool Top Carbonized Wool Wool Grease Machine Washable Wool Top Machine Washable Loose Wool E-mail : reward@reward.com.tw Website : www.reward.com.tw



**明和羊毛股份有限公司** Ming Ho Wool Industry Co., Ltd. 負責人:楊明達 重事長 PRESDENT: Sleve Yang 業務代表:甘建民 Jason Gan TEL: 886-34989516 主要產品:紡紗:毛紗 PRODUCTS:Wool Top E-mail: gan225896@kimo.com



□功能性紡織品供應商 Functional Textil

駿賢企業股份有限公司
D.A.G. Co., Ltd. 負責人:張大鈞董事長
PRESIDENT: David Chang
TEL: 886-2-25551355
FAX: 886-2-25580067
主要董品:男裝及文裝一精約.組紡毛料
及化鑑混約面料:各種物、
而及其他紡織品
PRODUCTS: Worsted, Woolen And
Synthetic Fabric For
Men's And Ladies'
E-mail: dag.ckmain@msa.hinet.net



湯姆隆實業股份有限公司

Tomlong Techstile Corp. 負責人:吳明顯董事長 PRESIDENT:Vincent Wu TEL: 886-4-23365615 FAX: 886-4-23365615 主要產品:各種纖維紛類、紡織品、TPU 約攝品貼合業務 PRODUCTS:Fiber,Textile Fabrics, TPU Laminated Fabrics

E-mail : info@tomlong.tw Website : www.tomlong.com.tw



#### 得維紡織股份有限公司

Derwei Textile Co., Ltd. 負責人:陳金德 董事長 PRESIDENT : Chen Chin Te TEL: 886-4-23505001 FAX: 886-4-23505005 主要產品:粘扣布、萊卡印花、旅行箱用布、 嬰兒車網布、成衣用布、PET環保 紗、抗UV、吸濕排汗、防霉抗菌、 防火組燃、功能性網布、網布貼合 PRODUCTS : Velcro, Lycra Printed, Luggage Net, Baby Cart Net.Garment Fabrics, Anti-UV.Wicking, Anti-Bacterial, Flame Retardant, Functional Fabrics, PVC, TPU, PEVE, EVA And Lamniation... E-mail : derwei@derweitex.com.tw derwei@ms34.hinet



依田股份有限公司 E.Textint Corp.

負 責 人:陳清樂 董事長 PRESIDENT : CL. Chen 業務代表:王月娥 經理 MANAGER : Y. L. Wang TEL: 886-3-327-8155 FAX: 886-3-327-7027 主要產品:成衣/紡織品用熱轉印標業製 PRODUCTS : Heat Transfers for Garments & Textile etc. E-mail : transale@textint.com.tw Website : www.textint.com.tw



翰新實業股份有限公司 Handseltex Industrial Corp. 自 吉 人:蔡錦芳 董事長 PRESIDENT : Teason Tsai 業務代表:吳彥欣 Jenny Wu TEL: 886-2-25217356 FAX: 886-2-25211055 主要產品:針織布料買賣 PRODUCTS : Fancy Knits E-mail : jenny@hst.com.tw Website : www.hst.com.tw



詠祥紡織股份有限公司 Carol Textile Co., Ltd. 負 責 人:林壽山 董事長 PRESIDENT : Michael Lin TEL: 886-2-25583730 FAX: 886-2-25593016 主要產品:各種針織品、紡織品、梭織品 等各種流行布料。 PRODUCTS : Jackets,outdoor-wear, shirts, sportswear and varieby of Actire-wear. E-mail : sunny@caroltex.com Website : www.caroltex.com



#### 鼎祐國際實業有限公司

Protect Accessory Co., Ltd. 負 責 人:王金菊 董事長 PRESIDENT: 游政龍 Wayne TEL: 886-2-29860022 FAX: 886-2-29899451 主要產品:成衣輔料 PRODUCTS : Accessories for outdoor wear E-mail : service@dragon-times.com Website : www.dragon-times.com



誠佳科技紡織股份有限公司 Creative Tech Textile Co., Ltd. 負 責 人:王葉訓 董事長 PRESIDENT : Eddie Wang TEL: 886-6-2727287 FAX: 886-6-2727282 主要產品:各種紡織品、布疋,衣著… 等各種流行布料 PRODUCTS : Jackets.outdoorwear,shirts,sportswear and varieby of Actirewear. E-mail : eddie@hansglobaltextile.net Website : hansglobaltextile.net



鼎祥國際興業有限公司 **3C-TEX** INTERNATIONAL CO., LTD 負責人:游炳和 董事長 PRESIDENT : J ALVIN YU 業務代表:曾玉宜 CONTACT : YUI JENG TEL: 886-5-2348898 FAX: 886-5-2348896 主要產品:尼龍布.針織布.彈性布.聚脂布 PRODUCTS : NYLON.POLYESTER E-mail : alvin0519@gmail.com Website : www. 3c-tex.com



Sin Yo Textile Factory Co., Ltd. 負 責 人:邱岳坤 董事長 PRESIDENT : Chiu Yueh Kun 業務代表:李勇達 經理

信岳織造廠股份有限公司

MANAGER : Darren Li TEL: 886-4-26816356 FAX : 886-4-26815194 主要產品:織帶、腰帶、鬆緊帶、提花 帶、圓繩、大小帶等 PRODUCTS : Webbing, Elastic Band, Jacquard Webbing, Variable Webbing, Cord E-mail : tehgoang@ms15.hinet.net Website : sinyo.tw



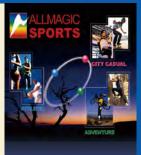
#### 庭鋒企業有限公司

Anndywell Co., Ltd. 負責人:洪振糧 董事長 PRESIDENT: Chia-Pei, Chang 業務代表:洪振糧 總經理 Gen Manager: David, Hung TEL: 886-2-22693530 886-2-22693531 FAX: 886-2-22693532 主要產品:彩色羽絨服 PRODUCTS: Colorful Down Apparel E-mail: d1@rainbowdown.com



#### 澳美針織有限公司

All Magic Sports Co., Ltd. 負 責 人 : 張裕豐 董事長 PRESDENT : Aron Chang 業務代表 : 吳美華 小姐 MANAGER : Monica TEL : 886-239956199 FAX : 886-239954580 主要產品 : 各類紡績品 : 針織布、布疋 、成衣等業務 PRODUCTS : Functional Fabrics etc. E-mail : allmagic@ms24.hinet.net Website : www.allmagicsports.com







## **Digital Transformation – Fashion Brands & Manufacturers Thriving in the Post-Pandemic World**

#### What is Product Lifecycle Management (PLM)?

Product Lifecycle Management is the foundation technology that links all people associated with making products such as merchandising, planning, design, technical design, product development, materials development, samples, fit reviews, product testing, product quality, sourcing, manufacturing, retail presentation and more.

PLM aligns manufacturers and fashion and apparel brands in a cloudbased digital environment, resulting in better collaboration, greater visibility and much faster production timelines and time to market.



Market-Driven Innovations to Support Strategic and Operation Digital Transformation



Increase collaboration

Improve accuracy of technical information



Reduce costs from duplicated work and errors.



Focus on value-



Speed sampling and production timelines.

with brand and added work and retail partners. and maintain quality. drive growth. PLM Benefits by Numbers Reduce time-to-Improve sales Reduce costs Improve market by 15% by 5% to 10%. by 5% to 15%. productivity by to 50%. 10% to 50%.

Over 450 manufacturers, retailers and brands around the world including Crystal Group, Lever Style, MAS Holdings, Hirdaramani, Brandix, Louis Vuitton, Calvin Klein and Under Armour trust Centric Software to assist them in their digital transformation. Scan the QR code to understand more about Product Lifecycle Management (PLM) in just 3 minutes.

SCAN AND WATCH NOW



**REQUEST A** DEMO

Ready to experience Centric Fashion & Manufacturing PLM? Get in touch today to book a 1-1 demo! Katharine Poon | Senior Regional Sales Manager, Centric Software Line ID : 20051207 | katherine.poon@centricsoftware.com www.centricsoftware.com



# Innovating Renewal Technologies

## **Rscuw Project**

Recycling Scraps and Cutting Waste to Fibers

從 餘 到 有 —— 織 物 回 收 再 生 計 劃



